UNITED KINGDOM AERONAUTICAL INFORMATION PUBLICATION

AIRAC 03/2017 – EFFECTIVE DATE: 2 MARCH 2017

This Amendment contains both 'AIRAC' and 'Non-AIRAC' information. Note that any NOTAM or AIP SUP used to announce the 'Non-AIRAC' changes will remain in force until the AIRAC date.

The changes shown on this coversheet are an abbreviated overview. See AIP pages for changes in detail.

1 **AIRAC** Changes incorporated in this Amendment are:

AD:

Dundee Instrument Approach Charts – MSA Values – Parachute drop area ERROL added.

Hawarden ATC Surveillance Minimum Altitude Chart – Hawarden Radio Mandatory Zone added - Obstacles.

Liverpool Control Zone an Control Area Chart – Entry/Exit Lanes and VRPs – Hawarden Radio Mandatory Zone added - Burbo Bank windfarm.

Livepool ATC Sureillance Minimum Altitude Chart – Hawarden Radio Mandatory Zone added - Burbo Bank windfarm Radio Mandatory Zone added - Obstacles.

London Heathrow STARs – BIG 1E Text – WEALD 1E Text - OCK 1H Text - TOMMO 1H Text - Airway UP7 replaced by P7 - LAM VOR recalibrated - LAM radials.

Manchester Control Zone and Control Area Chart – Hawarden Radio Mandatory Zone added.

Manchester Control Zone and Control Area Chart – Entry/Exit Lanes and VRPs – Hawarden Radio Mandatory Zone added

Manchester Barton ATZ, Helicopter Entry/Exit Points and Circuits Chart – Circuits revised.

Southhampton Control Zone and Control Area Chart – New Chart.

ENR:

2.2 **Other Regulated Airspace** – Odiham entry has the ATZ centre amending to 09/27. Publication of new ATZ, Yeovilton add Note 2, RNAS Culdrose - extend ATZ from 2nm to 2.5nm radius, Correction to lateral limits of Burbo Bank TMZ Area B and C.

3.1 **Lower ATS Routes** – Removal of U designator prefix from UM604, UP7, UP25, and transfer to ENR3.3. Re-designation of L15 IRKUN - LYD as M91 and transfer of M91 to ENR3.3, Amendment to DFL on several Lower ATS route between specified points, T420 frequencies and levels BUZAD to OLNEY. N859 frequencies and levels DIGUT to KIDLI, T420 frequencies and levels HEMEL to BUZAD, M183 frequencies and levels CPT to SILVA, SILVA to NUGBO (Between 5 nm west of NUGBO and 10 nm east of SILVA) and (Between 10 nm east of SILVA and SILVA), L10 frequencies and levels BROOKMANS PARK to BUZAD, BUZAD to WOBUN, L15 frequencies and levels BIG to BETPO, BETPO to FINMA, Q75 frequencies and levels BUZAD to UTAVA, L612 frequencies and levels COWLY to EMKUK (Between COWLY and abm WCO), N859 frequencies and levels CPT to DIGUT, T420 remove intersection Remark at Olney on OLNEY – WELIN, M189 frequencies and levels ADMIS to POTON, M605 frequencies and levels BENSU to SILVA, N57 frequencies and levels LAM to HEIDI, Q41 frequencies and levels COWLY to WCO, N601 frequencies and levels BPK to POTON, L151 frequencies and levels LINDY to KIDLI (Between 5 nm south of KIDLI and abm COWLY).

3.2 **Upper ATS Routes** – Removal of 5LNC 'DIRGI' UP612, Re-designation of L15 IRKUN - LYD as M91 and transfer of M91 to ENR3.3, Removal of U designator prefix from UL46, UL90, UL983, UM16, UM79, UM83, UM604, UN96, UN97, UN866, UP5, UP7, UP13, UP15, UP25, UP144, UT55, UZ278 and transfer to ENR3.3,

3.3 **Area Navigation (RNAV) Routes** – Re-designation of L15 IRKUN - LYD as M91 and transfer of M91 to ENR3.3, Removal of U designator prefix from UL46, UL90, UL983, UM16, UM79, UM83, UM604, UN96, UN97, UN866, UP5, UP7, UP13, UP15, UP25, UP144, UT55, UZ278 and transfer to ENR3.3.

5.2 **Military Exercise and Training Areas** – Removal of U designator prefix from UL46, UL90, UL983, UM16, UM79, UM83, UM604, UN96, UN97, UN866, UP5, UP7, UP13, UP15, UP25, UP144, UT55, UZ278.

6-1-4-1 **Chart of United Kingdom ATS Airspace Classifications** - FL 195 - FL 245 **–** UN866 Replaced With N866

6-1-4-2 **Chart of United Kingdom ATS Airspace Classifications** - FL 195 - FL 245 **–** UN866 Replaced With N866

6-1-15-3	**Southern North Sea - Aberdeen ATSU (Anglia Radar) Area of Responsibility and Anglia Offshore Safety Area (OSA) –** Notes Quadrantal Rule Replaced By Semi-Circular Rule.
6-2-1-6	**Solent CTA, Bournemouth CTR & Southampton CTR** - Visual Reference Points Amended. Lee-On-Solent & Fleetlands ATZs Added
6-2-2-1-2	**Delegation of ATS Responsibilities - Within the North Sea Upper Airspace** - U Designation Removed From UL46/UL983/UM79/UM83/UM604/UN96/UN97/UN866/UP5/UP13/UP15/UP144/UT55/UZ278.
6-2-2-1-3	**Delegation of ATS Responsibilities - Within the Southern North Sea** - UM604/UN96/UN97/UN866/UP7/UP25/UP144 Redesignated M604/N96/N97/N866/P7/P25/P144.
6-2-2-1-6	**Delegation of ATS Responsibilities - Within the Shannon UIR** - UL46/UL983/UN96/UM83 Redesignated L46/L983/N96/M83.
6-2-2-1-10	**Delegation of ATS Responsibilities - Within the North Western Corner Of The Scottish FIR/UIR and Along the Common Scottish and Reykjavik FIR/UIR Boundary** - Waypoint DIRGI Removed From UP612. Waypoint GONUT Added.
6-2-2-4-1	**NOTA, SOTA and Shannon Upper Airspace** - UM83 Redesignated M83.
6-3-0-5	**Temporary Reserved Areas (Gliding) in Class C Airspace Above FL 240 in London Area Control Swanwick** - UM79 Redesignated M79.
6-3-0-6	**Temporary Reserved Areas (Gliding) in Class C Airspace Above FL 240 in the Scottish ACC Area** - UM79/UM83 Redesignated M79/M83.
6-3-1-1	**Lower ATS Routes (South Sheet)** - L15 IRKUN-LYD RENAMED M91.
6-3-2-1	**Lower ATS Routes (North Sheet)** - UL46/UL90/UM16/UM79/UM604/UN96/UN97/UN866/UP5/UP7/UP13/ UP15/UP25/UP144 Redesignated L46/L90/M16/M79/M604/N96/N97/N866/P5/P7/P13/P15/P25/P144. M16/UN601 WAYPOINT DISAL RENAMED XAPOS.
6-3-2-2	**Upper Airspace Control Area and Upper ATS Routes (North Sheet)** - Waypoint DIRGI Removed From UP612. UL983/UM83/UM604/UN96/UN97/UN866/UP5/UP13/UP15/UP144/UT55/UZ278 REDESIGNATED L983/M83/M604/N96/N97/N866/P5/P13/P15/P144/T55/Z278.
6-5-1-3	**The Hebrides Range EG D701 and Direct Route Airspace (DRA)** - Waypoint DIRGI Removed.

2 '**Non-AIRAC'** changes incorporated affect the following:

GEN:

1.3	**Entry, Transit and Departure of Passengers and Crew** – Flying Licences and Ratings, to take into account changes to the UK ANO
1.5	**Aircraft Instruments, Equipment and Flight Documents** – Incorporate new EGNR RMZ
2.3	**Chart Symbols** – RMZ Symbol Added
3.2	**Aeronautical Charts** – 2 new Type A charts for London Heathrow, New Type A chart for Liverpool, New Type A chart for Lydd, VFR Charts - Edition Number and Aero Info Date.

ENR:

1.1	**General Rules** – New Form With Better Resolution.
1.6	**ATS Surveillance Services and Procedures** – RNAS Culdrose - extend ATZ, Incorporate new EGNR RMZ
1.10	**Flight Planning** – Update to Pipeline and Powerline Inspection Procedures section 6
2.1	**FIR UIR CTA TMA** – The Southern CTA will be re-modelled to have a unique service with a specific set of frequencies, data unchanged.
3.6	**En-Route Holding** – Reference to UP7 in En-Route hold LOGAN changed to P7. Tracks updated due to Lambourne (LAM) VOR re-calibration
4.1	**Radio Navigation Aids - En-Route** – Update to the declination setting of Lambourne (LAM) VOR.
4.4	**Name Code Designators for Significant Points** – Add existing fix 'BAMLI', Removal of 5LNC 'DIRGI'
5.3	**Other Activities of a Dangerous Nature** – Other potential hazards Culdrose airspace co-ordinates amended

AD:

Editorial changes to AD 2.16, AD 2.18 and AD 3.12 at various aerodromes/Heliports. The changes are in our database storage locations but we have taken the opportunity to standardise wording and correct punctuation, this has resulted in a number of change bars.

Alderney Aerodrome Chart – New hangar added to apron.

AD cont:

Belfast City – Two emergency frequencies are to be moved onto a single new service.

Birmingham – Handling Agents - Runway remarks.

Cambridge – Hours.

Cardiff – MET.

Carlisle – Flight Procedures

Cranfield – Hour remark - Stopbar remark deleted - Local Traffic Regulations.

Doncaster Sheffield – Handling remarks - Taxiway E surface - Apron/Taxiway remarks - Surface Movement Guidance - Ground Movement.

Doncaster Sheffield Aerodrome and Aircraft Parking/Docking Charts – Taxiway E surface – Stand co-ordinates added.

Edinburgh – Local Traffic Regulations.

Edinburgh Aerodrome and Aircraft Ground Movement/Parking/Docking Charts – Hold E2 withdrawn – Stand 12 introduced.

Farnborough – Obstacles.

Farnborough Aerdrome Chart – Obstacles

Goodwood Racecourse Heliport – Remark in ATZ moved to Flight Procedures.

Hawarden – Contact numbers – Seasonal Availability - RMZ added - ATS remarks - Local Traffic Regulations - Noise Abatement Procedures- Flight Procedures.

Hawarden Aerodrome Chart – Radar unit withdrawn.

Inverness – Hours.

Leeds Bradford – APP/RAD frequency changed.

Leeds Bradford Aerodrome and Aircraft Parking Docking Charts – APP/RAD frequency changed.

Leeds Bradford ATC Surveillance Minimum Altitude Chart – APP/RAD frequency changed.

Leeds Bradford SIDs – APP/RAD frequency changed.

Leeds Bradford Instrument Approach Charts – APP/RAD frequency changed.

Lee-on-Solent – ATS hours – Airport Regulations.

Liverpool – Use of Runways.

Liverpool STARs – TIPOD MAG Tracks - Waypoint NANTI altitude - KEGUN 2C initial MAG Track.

London City – Hour remarks - Handling - Taxiway Marking - Runway PCN and Remarks - Lighting.

London City Aerodrome and Aircraft Parking/Docking Charts – New Taxiway D - Original Taxiway D re-designated E - Taxiway F stub added.

London City RWY 09/27 BPK 5T, 5U, CPT T, 6U SIDs – LAM VOR re-calibrated - LAM radial.

London Gatwick – Lighting.

London Gatwick SIDs – LAM VOR re-calibrated - LAM radial.

London Gatwick RNAV(GNSS) RWY 08L Chart – Correction to DME callsign on plan view.

London Heathrow Aerodrome, Ground Movement, A380/Code F Aircraft Ground Movement, Parking/ Docking Charts – Runway 09R/27L turn-on adjacent to Hold S11 designated disused.

London Heathrow Ground Movement – Remot De-icing Areas Location Chart – New Chart.

London Heathrow Holding Areas for Runway 09R – Runway 09R/27L turn-on adjacent to Hold S11 designated disused.

London Luton – Flight Procedures.

London Luton SID Non-Airways Departures to Stansted – LAM VOR re-calibrated - LAM radial.

London Luton STARs – LAM VOR re-calibrated – LAM radial – EG R156 removed.

London Stansted – VRPs

AD cont:

London Stansted Noise Preferential Routeings Chart – LAM VOR re-calibrated - LAM radial.

London Stansted SIDs – LAM VOR re-calibrated - LAM radial.

London Stansted STARs – LAM VOR re-calibrated - LAM radial.

Lydd – Obstacles.

Lydd Aerodrome and Aircraft Parking/Docking Charts – Disused Areas - Obstacles - Taxiway C designated.

Manchester Aircraft Parking/Docking Chart – Stand co-ordinates amended.

Manchester Barton – Contact numbers - Helicopter Operations - Flight Procedures.

Manchester Barton Aerodrome Chart – Helicopter Training Area/Hover square added - Helipads amended.

Newcastle – Flight Procedures.

Northolt – MET – Runway PCN.

Norwich – DOC – Warning.

Pembrey – Flight Procedures.

Prestwick – Flight Procedures.

Shoreham – Warnings.

Southend - VRPs

Southend Instrument Approach Charts – LAM VOR re-calibrated - LAM radial.

Southampton – VRPs.

Sumburgh – ATS hours.

Wellesbourne Mountford Aerodrome Chart – Lighting - Pre threshold arrows removed.

White Waltham Traffic Zone Chart – Obstacles.

3 NOTAM incorporated in this amendment will be cancelled by NOTAMC:

A3978/16, A4008/16, A4040/16, A4206/16, A4268/16.
B1908/16, B1909/16, B2031/16, B2215/16.
C5646/16, C5661/16, C5834/16, C5840/16, C5857/16, C5921/16, C6255/16.
L6925/16.

4 A bar is inserted on reprint pages to indicate changes that have been incorporated. An arrow is inserted on reprint pages to indicate a change or deletion in a line of text.

Date of Publication: **19 January 2017**

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2-EGLL-7-13	17 Sep 2015	2-EGLL-7-13	2 Mar 2017
2-EGLL-7-16	17 Sep 2015	2-EGLL-7-16	2 Mar 2017
2-EGLL-7-17	5 Mar 2015	2-EGLL-7-17	2 Mar 2017
2.EGGW-13	3 Mar 2016	2.EGGW-13	3 Mar 2016
2.EGGW-14	7 Jan 2016	2.EGGW-14	2 Mar 2017
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2-EGGW-7-1	23 Jun 2016	2-EGGW-7-1	2 Mar 2017
2-EGGW-7-2	23 Jun 2016	2-EGGW-7-2	2 Mar 2017
2-EGGW-7-3	5 Jan 2017	2-EGGW-7-3	2 Mar 2017

CHECKLIST OF PAGES TO BE INSERTED AND DELETED (continued)

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2-EGGW-7-5	5 Jan 2017	2-EGGW-7-5	2 Mar 2017
2-EGGW-7-6	5 Jan 2017	2-EGGW-7-6	2 Mar 2017
2-EGGW-7-7	5 Jan 2017	2-EGGW-7-7	2 Mar 2017
2-EGGW-7-8	5 Jan 2017	2-EGGW-7-8	2 Mar 2017
2-EGGW-7-11	15 Sep 2016	2-EGGW-7-11	2 Mar 2017
2-EGGW-7-12	15 Sep 2016	2-EGGW-7-12	2 Mar 2017
2-EGGW-7-13	2 May 2013	2-EGGW-7-13	2 Mar 2017
2-EGGW-7-15	2 May 2013	2-EGGW-7-15	2 Mar 2017
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2.EGSS-20	13 Oct 2016	2.EGSS-20	2 Mar 2017
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2-EGSS-6-5	2 May 2013	2-EGSS-6-5	2 Mar 2017
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2-EGSS-7-4	5 Jan 2017	2-EGSS-7-4	2 Mar 2017
2-EGSS-7-5	5 Jan 2017	2-EGSS-7-5	2 Mar 2017
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2-EGSS-7-8	5 Jan 2017	2-EGSS-7-8	2 Mar 2017
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2.EGCB-7	8 Dec 2016	2.EGCB-7	2 Mar 2017
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2.EGCB-9	8 Dec 2016	2.EGCB-9	2 Mar 2017
-	-	2.EGCB-10	2 Mar 2017
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2-EGCB-4-1	5 Feb 2015	2-EGCB-4-1	2 Mar 2017
2.EGNT-13	5 Jan 2017	2.EGNT-13	2 Mar 2017
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2.EGSH-10	13 Oct 2016	2.EGSH-10	13 Oct 2016
2.EGFP-3	12 Dec 2013	2.EGFP-3	2 Mar 2017
2.EGFP-4	10 Dec 2015	2.EGFP-4	2 Mar 2017
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2.EGPK-12	2 Feb 2017	2.EGPK-12	2 Mar 2017
2.EGPK-13	2 Feb 2017	2.EGPK-13	2 Mar 2017
2.EGPK-14	2 Feb 2017	2.EGPK-14	2 Feb 2017
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2-EGMC-8-7	2 Feb 2017	2-EGMC-8-7	2 Mar 2017
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3.EGNP-2	13 Dec 2012	3.EGNP-2	13 Dec 2012
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3.EGNP-4	13 Dec 2012	3.EGNP-4	2 Mar 2017
3.EGNP-5	13 Dec 2012	3.EGNP-5	2 Mar 2017
3.EGLW-5	10 Nov 2016	3.EGLW-5	2 Mar 2017
3.EGLW-6	10 Nov 2016	3.EGLW-6	10 Nov 2016

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GEN 0.2 RECORD OF AIP AMENDMENTS

NR/Year	Publication Date	Effective Date	Inserted By	Date Inserted
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AIRAC 2/2011	9 Feb 2011	10 Feb 2011		
AIRAC 3/2011	9 Mar 2011	10 Mar 2011		
AIRAC 4/2011	6 Apr 2011	7 Apr 2011		
AIRAC 5/2011	4 May 2011	5 May 2011		
AIRAC 6/2011	1 Jun 2011	2 Jun 2011		
AIRAC 8/2011	16 Jun 2011	28 Jul 2011		
AIRAC 7/2011	29 Jun 2011	30 Jun 2011		
AIRAC 9/2011	14 Jul 2011	25 Aug 2011		
AIRAC 10/2011	21 Sep 2011	22 Sep 2011		
AIRAC 11/2011	19 Oct 2011	20 Oct 2011		
AIRAC 12/2011	16 Nov 2011	17 Nov 2011		
AIRAC 13/2011	14 Dec 2011	15 Dec 2011		
AIRAC 1/2012	11 Jan 2012	12 Jan 2012		
AIRAC 2/2012	8 Feb 2012	9 Feb 2012		
AIRAC 3/2012	7 Mar 2012	8 Mar 2012		
AIRAC 4/2012	4 Apr 2012	5 Apr 2012		
AIRAC 6/2012	19 Apr 2012	31 May 2012		
AIRAC 5/2012	2 May 2012	3 May 2012		
AIRAC 7/2012	17 May 2012	28 Jun 2012		
AIRAC 8/2012	1 Jun 2012	26 Jul 2012		
AIRAC 9/2012	2 Jul 2012	23 Aug 2012		
AIRAC 10/2012	30 Jul 2012	20 Sep 2012		
AIRAC 11/2012	6 Sep 2012	18 Oct 2012		
AIRAC 12/2012	24 Sep 2012	15 Nov 2012		
AIRAC 13/2012	22 Oct 2012	13 Dec 2012		
AIRAC 1/2013	19 Nov 2012	10 Jan 2013		
AIRAC 2/2013	10 Dec 2012	7 Feb 2013		
AIRAC 3/2013	14 Jan 2013	7 Mar 2013		
AIRAC 4/2013	8 Feb 2013	4 Apr 2013		
AIRAC 5/2013	8 Mar 2013	2 May 2013		
AIRAC 6/2013	5 Apr 2013	30 May 2013		
AIRAC 7/2013	3 May 2013	27 Jun 2013		
AIRAC 8/2013	31 May 2013	25 Jul 2013		
AIRAC 9/2013	28 Jun 2013	22 Aug 2013		
AIRAC 10/2013	26 Jul 2013	19 Sep 2013		
AIRAC 11/2013	5 Sep 2013	17 Oct 2013		
AIRAC 12/2013	3 Oct 2013	14 Nov 2013		
AIRAC 13/2013	31 Oct 2013	12 Dec 2013		
AIRAC 1/2014	15 Nov 2013	9 Jan 2014		
AIRAC 2/2014	28 Nov 2013	6 Feb 2014		
AIRAC 2/2014	19 Dec 2013	6 Feb 2014		
AIRAC 3/2014	23 Jan 2014	6 Mar 2014		
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AIRAC 5/2014	20 Mar 2014	1 May 2014		
AIRAC 6/2014	17 Apr 2014	29 May 2014		
AIRAC 7/2014	15 May 2014	26 Jun 2014		
AIRAC 8/2014	12 Jun 2014	24 Jul 2014		
AIRAC 9/2014	10 Jul 2014	21 Aug 2014		

GEN 0.2 RECORD OF AIP AMENDMENTS (continued)

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AIRAC 13/2014	20 Oct 2014	11 Dec 2014		
AIRAC 1/2015	30 Oct 2014	8 Jan 2015		
AIRAC 1/2015	27 Nov 2014	8 Jan 2015		
AIRAC 2/2015	18 Dec 2014	5 Feb 2015		
AIRAC 3/2015	22 Jan 2015	5 Mar 2015		
AIRAC 4/2015	19 Feb 2015	2 Apr 2015		
AIRAC 5/2015	19 Mar 2015	30 Apr 2015		
AIRAC 6/2015	16 Apr 2015	28 May 2015		
AIRAC 7/2015	14 May 2015	25 Jun 2015		
AIRAC 8/2015	11 Jun 2015	23 Jul 2015		
AIRAC 9/2015	9 Jul 2015	20 Aug 2015		
AIRAC 10/2015	6 Aug 2015	17 Sep 2015		
AIRAC 11/2015	3 Sep 2015	15 Oct 2015		
AIRAC 12/2015	1 Oct 2015	12 Nov 2015		
AIRAC 13/2015	29 Oct 2015	10 Dec 2015		
AIRAC 1/2016	26 Nov 2015	7 Jan 2016		
AIRAC 2/2016	17 Dec 2015	4 Feb 2016		
AIRAC 3/2016	21 Jan 2016	3 Mar 2016		
AIRAC 4/2016	18 Feb 2016	31 Mar 2016		
AIRAC 5/2016	17 Mar 2016	28 Apr 2016		
AIRAC 6/2016	14 Apr 2016	26 May 2016		
AIRAC 7/2016	12 May 2016	23 Jun 2016		
AIRAC 8/2016	9 Jun 2016	21 Jul 2016		
AIRAC 9/2016	7 Jul 2016	18 Aug 2016		
AIRAC 10/2016	4 Aug 2016	15 Sep 2016		
AIRAC 11/2016	1 Sep 2016	13 Oct 2016		
AIRAC 12/2016	29 Sep 2016	10 Nov 2016		
AIRAC 13/2016	27 Oct 2016	8 Dec 2016		
AIRAC 1/2017	24 Nov 2016	5 Jan 2017		
AIRAC 2/2017	15 Dec 2016	2 Feb 2017		
AIRAC 3/2017	19 Jan 2017	2 Mar 2017		

GEN 0.4 CHECKLIST OF AIP PAGES

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GEN 0.4 CHECKLIST OF AIP PAGES (continued)

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1.1-7	10 Nov 2016	1.6-14	31 Mar 2016	* 1.10-20	2 Mar 2017	2.2-30	15 Sep 2016
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1.1-10	10 Nov 2016	1.6-17	26 May 2016	1.12-1	28 May 2015	2.2-33	15 Sep 2016
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GEN 0.4 CHECKLIST OF AIP PAGES (continued)

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GEN 0.4 CHECKLIST OF AIP PAGES (continued)

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2-EGPD-8-6	21 Jul 2016
2-EGPD-8-7	21 Jul 2016
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2.EGJA-2	31 Mar 2016
2.EGJA-3	15 Sep 2016
2.EGJA-4	10 Nov 2016
2.EGJA-5	31 Mar 2016
2.EGJA-6	2 Feb 2017
2.EGJA-7	2 Feb 2017
2.EGJA-8	2 Feb 2017
2.EGJA-9	2 Feb 2017
2.EGJA-10	2 Feb 2017
* 2-EGJA-2-1	2 Mar 2017
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2-EGJA-7-1	21 Jul 2016
2-EGJA-8-1	6 Mar 2014
2-EGJA-8-2	6 Mar 2014

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2.EGGD-12	13 Oct 2016	2-EGEC-8-2	23 Jun 2016	2-EGLJ-2-1	12 Nov 2015	2.EGPG-2	8 Dec 2016
2.EGGD-13	13 Oct 2016	2-EGEC-8-3	23 Jun 2016	2.EGHR-1	8 Dec 2016	2.EGPG-3	31 Mar 2016
2.EGGD-14	5 Jan 2017	2-EGEC-8-4	23 Jun 2016	2.EGHR-2	5 Mar 2015	2.EGPG-4	28 Apr 2016
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2-EGGD-2-1	13 Oct 2016	2-EGEC-8-6	23 Jun 2016	2.EGHR-4	23 Jun 2016	2.EGPG-6	31 Mar 2016
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* 2-EGCB-4-1	2 Mar 2017	2.EGEN-1	26 May 2016	2.EGEO-7	8 Dec 2016	2.EGPK-4	8 Dec 2016
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2-EGPK-7-1	13 Oct 2016	2.EGHE-3	13 Oct 2016	2-EGHI-7-2	5 Jan 2017	2-EGPO-8-1	8 Dec 2016
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2.EGPU-7	4 Feb 2016
2-EGPU-2-1	10 Nov 2016
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2-EGPU-8-3	18 Aug 2016
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2.EGNO-7	2 Feb 2017
2.EGNO-8	2 Feb 2017
2.EGNO-9	2 Feb 2017
2.EGNO-10	2 Feb 2017
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3-EGLW-2-1	10 Nov 2016
3-EGLW-4-1	28 May 2015

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GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW (continued)

3.1.1 The Public Health (Aircraft) Regulations 1979 (England and Wales) give authorised officers and medical officers at airports a number of powers to control the spread of infectious disease, both on arrival and departure. In Scotland and Northern Ireland, broadly similar provision is made in the Public Health (Aircraft) (Scotland) Regulations 1971 (as amended in 1974 and 1978) and the Public Health (Prevention of Infections and Epidemic Diseases - Aircraft) Regulations 1971 (Northern Ireland).

3.1.2 These include powers to inspect aircraft; to de-rat or disinfect the aircraft if necessary; and under certain conditions detain the aircraft on arrival. (Regulations 7, 13, 14 and 16).

3.1.3 Medical officers, under certain conditions, have a number of powers to examine passengers on arrival, to order their isolation, to prohibit their leaving the aircraft, to require a passenger leaving an aircraft to state in writing his name and intended destination address; to cause the removal of an infected passenger from an aircraft; to place passengers under surveillance; or apply a number of additional health protection measures. (Regulations 8, 9, 18, 20, 21 and 23).

3.1.4 In addition, the Regulations impose a number of duties on the commanders of aircraft in terms of notifying cases of infectious disease on board their aircraft prior to landing, as well as supplying information as to the health conditions on board the aircraft once the aircraft has landed (Regulations 11 and 12).

3.1.5 The regulations also give medical officers a number of powers to examine passengers proposing to embark on an aircraft, to prohibit their embarkation if necessary, and under certain conditions to apply any other public health measures required by the Secretary of State for Health (Regulations 27 and 28).

4 FLYING LICENCES AND RATINGS

4.1 **Definitions**

4.1.1 A Part-FCL pilot licence means a licence granted in accordance with Commission Regulation (EU) No 1178/2011 (as amended), the 'Aircrew Regulation', by a Member State of the European Union (EU) or by a State which has a formal agreement with the EU to act in accordance with the Aircrew Regulation. Currently these are Iceland, Liechtenstein, Norway and Switzerland. These four countries, together with the EU Member States, are hereafter referred to as the 'EASA States'.

4.1.2 'EASA aircraft' means an aircraft that is subject to European rules under Regulation (EC) No. 216/2008, the 'Basic EASA Regulation'. The majority of aircraft registered in the United Kingdom are 'EASA' aircraft. A United Kingdom registered 'EASA aircraft' will have an EASA Certificate of Airworthiness or Permit to Fly granted by the CAA.

4.1.3 'Non-EASA aircraft' means an aircraft that is not subject to European rules under Regulation (EC) No. 216/2008, the 'Basic EASA Regulation'. They are aircraft that fall within the categories set out in that Regulation at Annex II or are 'State' aircraft. A United Kingdom civil registered 'non-EASA aircraft' will have a United Kingdom national Certificate of Airworthiness or Permit to Fly granted by the CAA.

4.2 **Visiting Pilots holding Part-FCL licences and flying UK registered aircraft**

4.2.1 The privileges of a Part-FCL licence issued by any EASA State are valid for EASA aircraft registered in the United Kingdom. The Air Navigation Order 2016 (the 'ANO') Article 150 also renders any Part-FCL licence valid for UK-registered non-EASA aircraft that are within the aircraft privileges of the Part-FCL licence and the ratings included in the licence. Unless the CAA directs otherwise, the holder of a Part-FCL pilot licence may exercise all of the privileges of that licence in United Kingdom registered aircraft.

4.3 **Visiting Pilots holding licences other than Part-FCL licences and flying UK registered aircraft**

4.3.1 Unless the CAA directs otherwise, the holder of a valid pilot's licence, granted under the law of a Contracting State to the ICAO Convention or a relevant Overseas Territory, may exercise the privileges of a private pilot licence in any United Kingdom registered aircraft (EASA or non-EASA) subject to the restrictions of the ratings held on the licence which are valid. This does not apply to student pilot licences and is subject to the following conditions:

(a) the licence has been issued in accordance with the relevant international standards as set out in Annex 1 (Personnel Licensing) to the ICAO Convention; and

(b) the licence does not include any extraordinary operational or medical conditions, restrictions or limitations; and

(c) no flights are made for the purpose of public transport, commercial air transport, or aerial work and the pilot does not receive remuneration; and

(d) the holder of the licence does not act as pilot of any aircraft flying in controlled airspace in circumstances requiring compliance with the Instrument Flight Rules and does not give instruction in flying.

4.3.2 Flights for other purposes in EASA aircraft - The holder of a valid pilot's licence, excluding student pilot's licences, that is granted under the law of an ICAO Contracting State or a relevant Overseas Territory, may exercise the privileges of that licence in United Kingdom registered 'EASA aircraft' for purposes other than those described in paragraph 4.3.1, **only if** the individual holds a validation issued in accordance with the Aircrew Regulation, Annex III by the UK or by another EASA State.

4.3.3 Flights for other purposes in non-EASA aircraft - The holder of a valid pilot's licence, excluding student pilot's licences, that is granted under the law of an ICAO Contracting State or a relevant Overseas Territory, may exercise the privileges of that licence in United Kingdom registered 'non-EASA aircraft' for purposes other than those described in paragraph 4.3.1, **only if** the individual holds a validation issued in accordance with the ANO, Article 169.

4.3.4 Except as may be provided for in Annex III of the Aircrew Regulation, there are no provisions for the validation of instructor or examiner privileges granted under the law of a Contracting State to the ICAO Convention or under the law of a relevant UK Overseas Territory. Any pilot who wishes to exercise instructor or examiner privileges in EASA aircraft to instruct or examine for Part-FCL qualifications must hold an appropriate Part-FCL instructor or examiner certificate. Instructor privileges may be

GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW (continued)

accepted by the UK or another EASA State in accordance with, and subject to the restrictions of the Aircrew Regulation, Annex III, paragraph 6.

4.4 **Pilots of aircraft registered in States that are not 'EASA States' (third country registered aircraft) flying within the territory of the United Kingdom.**

4.4.1 Pilots wishing to fly aircraft registered in third countries must comply with the ANO Articles 148 and 151, as applicable. This requires the pilot to hold a valid pilot licence, granted or rendered valid under the law of the State of Registry of the aircraft, issued in accordance with the relevant international standards as set out in ICAO Convention Annex 1 (Personnel Licensing).

4.4.2 The Basic EASA Regulation applies to aircraft registered anywhere in the world if they are used by an 'operator established or residing in the Community'. The Basic EASA Regulation defines an operator as 'any legal or natural person, operating or proposing to operate one or more aircraft.....'.

4.4.3 The Basic EASA Regulation also requires pilots of EASA aircraft registered anywhere in the world that are used by operators based in any of the EASA States to hold either a valid Part-FCL pilot licence or a validation issued in accordance with Aircrew Regulation Annex III, except where there is an agreement between the EU and the third country of aircraft registry to the contrary.

4.4.4 Pilots of non-EASA (Annex II) aircraft registered in third countries and flying within the United Kingdom are unaffected by Regulation (EC) No 216/2008 and remain subject to the ANO Articles 148 and 151.

4.5 **Pilots holding licences other than Part-FCL licences that are not granted in accordance with the Standards of Annex 1 (Personnel Licensing) to the ICAO Convention**

4.5.1 Pilots whose licences are not ICAO-Annex 1 compliant or include extraordinary operational or medical conditions, restrictions or limitations, must contact the CAA for advice before flying aircraft either registered in the UK (wherever the aircraft is based), or registered elsewhere (if the aircraft is based in the UK).

4.6 **Contacting the United Kingdom CAA on licensing matters**

Post: Civil Aviation Authority, Shared Services Centre (Flight Crew Licensing), Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.
Phone: +44 (0)1293-573700
Fax: +44 (0)1293-573996
Email: fclweb@caa.co.uk

GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS (continued)

Sub - para	Applicability	Requirements
	Communications Equipment	
(a)	All aircraft (except gliders and SLMGs) within Controlled Airspace below FL 195.	VHF RTF capable of 25 kHz spacing for 760 channel operation in the band 118.00 MHz to 136.975 MHz.
(b)	All aircraft within airspace at and above FL 195, or within airspace Class A, B and C.	VHF RTF capable of 25 kHz and 8.33 kHz spacing operation in the band 117.975 MHz to 137.000 MHz.
(c)	All aircraft within United Kingdom Airspace notified as a Radio Mandatory Zone (RMZ) unless in compliance with alternative provisions prescribed by the airspace Controlling Authority. ***Note:*** *Applies to airspace classes E, F and G as appropriate.*	VHF RTF capable of 25 KHz spacing for 760 channel operation.
(d)	All aircraft within the Shanwick Oceanic Control Area.	HF RTF with appropriate frequencies available.
(e)	All aircraft (including EU-OPS aeroplanes but except gliders and SLMGs) registered in the United Kingdom, wherever they may be, flying for the purpose of Public Transport.	VHF RTF capable of maintaining direct two-way communication with the appropriate air traffic control units on the intended route using the frequencies notified or otherwise designated by the competent authority for that purpose. ***Note:*** *All notified frequencies require either a 25 kHz, 760 channel radio or a 8.33 kHz radio.*
(f)	All aircraft (including EU-OPS aeroplanes but except gliders and SLMGs) registered in the United Kingdom, wherever they may be, flying under IFR.	VHF RTF capable of maintaining direct two-way communication with the appropriate air traffic control units on the intended route using the frequencies notified or otherwise designated by the competent authority for that purpose. ***Note:*** *All notified frequencies require either a 25 kHz, 760 channel radio or a 8.33 kHz radio.*
(g)	All EU-OPS aeroplanes under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks.	Two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route including diversions.
	Navigation Equipment	
(h)	All aircraft (except gliders and SLMGs) under IFR within Controlled Airspace below FL 245.	VOR receiver, DME and automatic DF[1] (except aircraft with Special VFR clearance).
(i)	All aircraft (except gliders and SLMGs) at and above FL 245.	VOR receiver, DME and automatic DF[1] (except aircraft with Special VFR clearance).
(j)	All aircraft (except gliders and SLMGs) making an approach and landing at certain aerodromes within Control Zones	ILS.
(k)	All aircraft in the Shanwick Oceanic Control Area.	Suitable long-range navigation equipment. ***Note:*** *Flights operating between FL 285 and FL 420 are required to meet the Minimum Navigational Performance Specifications (MNPS). .*
(l)	All aircraft (including EU-OPS aeroplanes but except gliders and SLMGs) registered in the United Kingdom, wherever they may be, flying for the purpose of Public Transport under IFR.	Duplicated VOR receiver, DME, automatic DF[1], and a 75 MHz marker beacon receiver[2].
(m)	All aircraft (including EU-OPS aeroplanes but except gliders and SLMGs) registered in the United Kingdom, wherever they may be, flying for the purpose of Public Transport under IFR while making an approach to landing.	Radio navigation equipment capable of receiving signals from one or more aeronautical radio stations on the surface to enable the aircraft to be guided to a point from which a visual landing can be made at the aerodrome at which the aircraft is to land.
(n)	All multi-engined aircraft (including EU-OPS aeroplanes) registered in the United Kingdom, wherever they may be, flying for the purpose of Public Transport under VFR.	Duplicated VOR receiver, DME, automatic DF[1], and a 75 MHz marker beacon receiver[2].
(o)	All single-engined aircraft (including EU-OPS aeroplanes but except SLMGs) registered in the United Kingdom, wherever they may be, flying for the purpose of Public Transport under VFR over a route on which navigation is not effected solely by visual reference to landmarks.	Radio navigation equipment capable of enabling the aircraft to be navigated on the intended route including such equipment as may be prescribed.
(p)	All aircraft on the ATS Route Structure[3 & 4]	EASA or State approved equipment, which meets the RNAV5 requirement contained in ICAO Doc 7030 Regional Supplementary Procedures (EUR RAC). ***Note:*** *The term RNP5 as given in the ANO is synonymous with the terminology RNAV5 or B-RNAV*

GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS (continued)

Sub - para	Applicability	Requirements
Communications Equipment		
1	For EU-OPS aircraft an ADF system need not be installed provided that the use of the ADF is not required in any phase of the planned flight.	
2	An aircraft may fly notwithstanding that it does not carry the equipment specified in this requirement if it carries alternative radio navigation equipment or navigational equipment approved in accordance with Article 37(9) of the Air Navigation Order 2009.	
3	The term ATS Route Structure is used to mean variously: Upper ATS Route; Airway; Advisory Route (participating aircraft only); and Arrival or Departure Route.	
4	Inbound aircraft from Oceanic Airspace are permitted to navigate to MNPS Airspace navigational accuracy requirements but are to be RNAV 5 compliant on reaching Landfall Fix.	

5.2.2 **Exemptions**

5.2.2.1 **8.33 kHz Radio Equipment.** With the exception of State aircraft, there are no exemptions to the requirements for the carriage and operation of 8.33 kHz spacing radio equipment. Non-equipped flights must flight plan to operate below FL 195, or outside Class A, B and C Airspace. Those State aircraft which are infrequent users of the FIR/UIR are permanently exempted from the requirements detailed at paragraph 5.2.1 (b) above, provided that they are capable of communicating on UHF, where available. Where UHF is not available, State aircraft not equipped with 8.33 kHz channel spacing equipment shall be excluded from 8.33 kHz Airspace. Provision for State aircraft exempted from the carriage of 8.33 kHz channel spaced communications equipment will be made on a tactical basis through the provision of an alternative UHF/VHF channel, the details of which will be given at time of use.

5.2.2.2 **Navigation Equipment.** State aircraft are exempt from the requirement for carriage of RNAV equipment. No other general exemption from these requirements will be granted, but, in very special circumstances, relaxation of the requirements, for a single flight, may be approved by the appropriate ATC Unit. Aircraft subject to the requirements specified in paragraphs 5.2.1 (k) and 5.2.1 (m), where not more than one item of equipment is unserviceable when the aircraft is about to begin a flight, may nevertheless take off on that flight if:

(a) It is not reasonably practicable for the repair or replacement of that item to be carried out before the beginning of the flight;

(b) The aircraft has not made more than one flight since the item was last serviceable; and

(c) The commander of the aircraft is satisfied that the flight can be made safely and in accordance with any relevant requirements of the appropriate air traffic control unit, taking into account the latest information available as to the route and aerodrome to be used (including any planned diversion) and the weather conditions likely to be encountered.

5.2.3 **FM Immunity**

5.2.3.1 ICAO requirements for receiver FM immunity from the adjacent sound broadcast band are defined in ICAO SARPS Annex 10, Volume I, Parts 3.1.4 and 3.3.8 (ILS/VOR) and Volume III Part 2.3.3 (VHF communications). Mandatory requirements for the carriage of radio equipment is set out in Article 39(2) and Schedule 5 to the Air Navigation Order 2009. Radio equipment not meeting the immunity standard shall not be used to comply with ANO carriage requirements.

5.2.3.1.1 All aircraft flying in the UK must have the radio equipment listed in the Schedule 5 table, irrespective of where they are registered. All required radio navigation equipment must be FM immune. If the aircraft is UK-registered then any non-immune navigation set must be identified with an appropriately worded placard.

5.2.3.1.2 All UK-registered aircraft, wherever they fly, must have the radio equipment listed in the Schedule 5 table; and all required radio navigation equipment must be FM immune. Any non-immune navigation set must be identified with an appropriately worded placard.

5.2.3.1.3 UK-registered aircraft exceeding 5700 kg must also have appropriate placards on any non-immune communications set.

5.2.4 **Radio Mandatory Zones**

5.2.4.1 **Notified 'Radio Mandatory Zone' Airspace.** For the purposes of SERA.6005, the following airspace is notified as a 'Radio Mandatory Zone':

- Hawarden Radio Mandatory Zone (permanent).

5.2.4.2 En-route Radio Mandatory Zones are detailed at ENR 2.2, subsection 5, and aerodrome specific Radio Mandatory Zones are detailed in the Aerodrome Index – Specific.

5.2.4.3 Temporary Radio Mandatory Zones put in place to meet urgent operational requirements may not be incorporated in the AIP due to their limited duration. They will be notified through appropriate means including NOTAM and AIC.

5.3 **Carriage of SSR Transponder Equipment**

5.3.1 The requirements for the carriage of Secondary Surveillance Radar (SSR) transponder equipment are hereby notified for the purposes of Article 39(2) and Schedule 5 to the Air Navigation Order 2009. Aircraft shall carry SSR Mode S transponder equipment as prescribed in sub-paragraphs (a) to (g) below. Sub-paragraphs (a) and (b) detail the requirements in notified Mode S Enhanced Surveillance Airspace, and sub-paragraphs (c) to (g) detail the requirements in all other UK airspace. For the purposes of Article 40 of the Air Navigation Order 2009, EU-OPS aeroplanes shall also be equipped in accordance with these requirements.

GEN 2.3 CHART SYMBOLS

AERONAUTICAL CHART SYMBOLOGY

AERODROME - Civil

AERODROME - Civil, limited or no facilities

HELIPORT - Civil

AERODROME - Government, available for Civil use

AERODROME - Government

HELIPORT - Government

MICROLIGHT FLYING SITES

DISUSED or ABANDONED Aerodrome

AERODROME - Training Aerodrome: flight training, including circuit training, takes place from this aerodrome. See UK AIP ENR 1

AERODROME - Unusual Activity: Unusual aerial activities including aerobatic and formation flights take place from this aerodrome. See UK AIP ENR 1.1

Aerodrome having one or more IAPs outside Controlled Airspace

UK AERODROME TRAFFIC ZONE (ATZ)

Customs Aerodromes — MANCHESTER

AERODROME LIGHT BEACON — FIG, FIR

GLIDER LAUNCHING SITES

a. Primary activity at locations showing Maximum Altitude of winch launch. AMSL — G/2.5

b. Additional activity at locations showing Maximum Altitude of winch launch. AMSL — G/2.

c. Additional activity without cables — G 5

HANG/PARA GLIDING - showing Maximum Altitude of winch launch. AMSL — /2.5

FREE-FALL PARACHUTING DROP ZONE

RADIO NAVIGATION AIDS

Distance Measuring Equipment (DME)

VHF Omnidirectional Radio Range (VOR)

Collocated, freq-paired VOR/DME

UHF Tactical Air Navigation Aid (TACAN)

Non-Directional Radio Beacon (NDB and NDB(L))

OTHER NAVIGATIONAL AIDS

VOR COMPASS ROSE
Oriented on Magnetic North

Marine Light — Fl(3)30·0secs

Lightship — FlWR12·0secs

MAXIMUM ELEVATION FIGURES (MEF) — 32

CONTROLLED AIRSPACE

Annotation of vertical limits for controlled airspace which have an upper limit of FL195 are shown with a plus (+) after their base level altitude, eg 3000'-FL195 is shown as 3000'+. Where the upper limit is below FL195 both base and upper limits are shown. Airspace vertical limits are defined by altitude/flight level unless otherwise noted.
Wide tint banding denotes the extremity of controlled airspace and narrow tint banding denotes level changes within area

A — L10 A FL45+

C — CTA C 2500'-FL185

D — CTA D 2500'-3500'

E — TMA E 2000'-6000'

All airspace not covered by classes A-E — G

Low Level Corridor or Special Route — 750'-2500'

Radar Advisory Service Zone or Area

Air Traffic Service Unit (ATSU) Area

Transponder Mandatory Zone (TMZ)

Radio Mandatory Zone (RMZ)

Reporting Point

Compulsory Reporting Point

Altimeter Setting Region (ASR) Boundary — PORTREE ASR / BELFAST ASR

AIAA and ATA areas

Lines of equal magnetic variation — 2.5°W

Special Access Lane Entry/Exit (indicates centre of lane) — E/E MERSEY LANE

Visual Reference Point (VRP) Location identified by ⊕ .... VRP SANDBACH

MILITARY AERODROME TRAFFIC ZONE (MATZ) — 5NM, MATZ LARS 126·5

Standard MATZ with two stubs and LARS

AIRSPACE RESTRICTIONS

Prohibited 'P', Restricted 'R' and Danger Areas 'D' are shown with identification number/ effective altitude (in thousands of feet AMSL) or a Flight Level.
Areas activated by Notam are shown with a broken boundary line

HIGH INTENSITY RADIO TRANSMISSION AREA (HIRTA)

BIRD SANCTUARIES

GAS VENTING OPERATIONS — GVS/3·1

LASER SITES — LASER SITE/UNL

AIR NAVIGATION OBSTACLES

Exceptionally High Obstacle (Lighted) 1000ft or more AGL — 1978 (1031)

Single Obstacle (Unlighted) — 825 (350)

Multiple Obstacle (Lighted) — 1614 (505)

Cable joining Obstacles — cables

CHANGE (3/17): RADIO MANDATORY ZONE (RMZ) SYMBOL ADDED.

AERO INFO DATE 05 DEC 16

GEN 2.3 CHART SYMBOLS (continued)

ADDITIONAL SYMBOLS FOR THE 1:250,000 TOPOGRAPHICAL AIR CHARTS

AERODROMES - Field limits with hard runway pattern... Civil..... Government.....

- Showing disused runways as solid patterns.....

HELIPORT.....

MINOR AERODROME with runway pattern unknown or not portrayable.....

DISUSED or ABANDONED Aerodrome.
Shown for navigational landmark purposes only. See AIC 56/02 (Pink 34).....

Power Transmission .....
Power Transmission Line over 200' .....

Low Level Corridor or Special..... 750'-2500' or

ADDITIONAL SYMBOLS FOR AERODROME AND AIRCRAFT PARKING/DOCKING CHARTS - ICAO

Wind Direction Indicator .....

Illuminated Wind Direction Indicator .....

Aerodrome Reference Point .....

Runway Visual Range .....

Pattern A (CAT I) Holding Position Closest to the Runway .....

Pattern B (CATII/III) Holding Position .....

Intermediate Holding Position .....

Holding Position Signs H1 D2

Helicopter Approach Aiming Point .....

Helicopter Training Area ..... HTA W

Approach Lighting, simple approach - 2 bar (spacing not to scale)

Approach Lighting ..... (spacing not to scale)

Supplementary Lighting (spacing not to scale)

Precision Approach Path Indicator (PAPI).....

Aerodrome Radar .....

Aerodrome Radar (lit) .....

Aerodrome Radar and Obstacle .....

Aerodrome Radar and Obstacle (lit) .....

Threshold and Touch-Down Zone Markings:

09

09

AD Chart Apron.....

AD Chart Operational Taxiway.....

AD and Parking/Docking Chart Disused Area.....

Parking/Docking Chart..... Apron/Taxiway/Runway

ADDITIONAL SYMBOLS FOR INSTRUMENT PROCEDURE CHARTS

Basic Procedure .....

Missed Approach Procedure .....

Alternative Procedure .....

Direct Arrival .....

Holding Pattern .....

Alternative Holding Pattern .....

Initial Approach Fix .....

Intermediate Fix .....

Final Approach Fix .....

Missed Approach Point (MAPt) .....

Step Down Fix .....

Minimum Sector Altitude ..... MSA

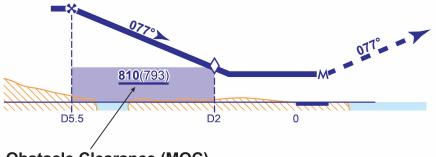
Radio Marker Beacon .....

ILS Reference Datum Height ..... RDH 54

Procedure Aerodrome .....

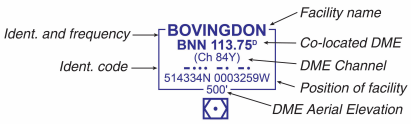
Aerodrome influencing traffic patterns of Procedure Aerodrome or of landmark value .....

Procedure Not Below heights ..... 2000(1800)

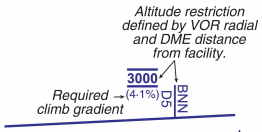


Minimum Obstacle Clearance (MOC)

Area Minimum Altitude ..... AREA MNM ALT (x100) 38



VOR/DME
Co-located



Waypoint (Fly-by) .....

Compulsory Waypoint (Fly-by) .....

Waypoint (Fly-over) .....

Co-located Waypoint (Fly-by) with VOR/DME .....

Co-located Waypoint (Fly-over) with VOR/DME .....

Speed Limiting Point ..... SLP

SID Designator and Distance to Significant Point ..... ABBOT 1D 18

CHANGE (13/16): AMENDMENT TO AERODROME SYMBOLS.

AERO INFO DATE 26 SEP 16

GEN 3.2 AERONAUTICAL CHARTS (continued)

5 Aeronautical Charts Available

5.1 Aeronautical Charts, ICAO, United Kingdom (Scale 1:500,000) (see Index at GEN 3.2 paragraph 6)

Copies of these charts are obtainable from NATS Ltd Chart Stockists - see www.ais.org.uk for details.

Sheet Ref	Chart Title	Edition	Aero Info Date
2150ABCD	Scotland	31	23 Jun 2016
2171AB	Northern England and Northern Ireland	39	26 May 2016
2171CD	Southern England and Wales	43	2 Mar 2017

5.2 Topographical Air Charts of the United Kingdom (Scale 1:250,000) (see Index at GEN 3.2 paragraph 7)

Copies of these charts are obtainable from NATS Ltd Chart Stockists - see www.ais.org.uk for details.

Sheet Ref	Chart Title	Edition	Aero Info Date
1	Northern Scotland West	9	18 Aug 2016
2	Northern Scotland East	9	21 July 2016
3	Northern Ireland	9	17 Sep 2015
4	The Borders	10	26 May 2016
5	Central England and Wales	11	23 July 2015
6	England East	12	28 May 2015
7	The West and South Wales	10	20 Aug 2015
8	England South	20	31 Mar 2016

Note: *All the above Charts (listed in para 5.1 and 5.2) are available as laminated sheets.(Postage and Packing are extra).*

5.2.1 For comments/feedback on these charts:

Post: Aeronautical Chart Section, Aeronautical Information Service (AIS), NATS Swanwick, Room 3115, Sopwith Way, Southampton, Hants, SO31 7AY.
Email: vfrcharts@nats.co.uk

5.3 Instrument Approach and Aerodrome Charts - ICAO, SID/STAR Charts, and Noise Abatement Charts

Refer to paragraph 5.6, and to Sections AD 2 and AD 3.

5.4 Aerodrome Obstacle Charts - ICAO TYPE A - Operating Limitations

(a) Copies of these charts may be obtained from Communisis UK (See GEN 3.2 paragraph 3.1).

(b) Charts are also available online from the NATS/AIS website: http://www.nats-uk.ead-it.com/public/index.php%3Foption=com_content&task=blogcategory&id=194&Itemid=280.html

Chart Title		Date
Aberdeen/Dyce	Runway 16/34	May 2015
Alderney	Runway 08/26	Jul 2015
Barrow/Walney Island	Runway 17/35	Jan 2016
Belfast/Aldergrove	Runway 07/25	Nov 2013
	Runway 17/35	Nov 2013
Belfast/City	Runway 04/22	Oct 2011
Benbecula	Runway 06/24	Jun 2016
Biggin Hill	Runway 03/21	Aug 2014
Birmingham	Runway 15/33	Apr 2016
Blackpool	Runway 10/28	Sep 2012
Bournemouth	Runway 08/26	Jun 2014
Bristol	Runway 09/27	Mar 2012
Cambridge	Runway 05/23	Aug 2011
Campbeltown	Runway 11/29	Jul 2015
Cardiff	Runway 12/30	Apr 2016
Carlisle	Runway 07/25	Sep 2016
Coventry	Runway 05/23	Aug 2016
Cranfield	Runway 03/21	Dec 2015

GEN 3.2 AERONAUTICAL CHARTS (continued)

Chart Title		Date
Doncaster Sheffield	Runway 02/20	Feb 2016
Dundee	Runway 09/27	Jun 2016
Durham Tees Valley	Runway 05/23	Sep 2016
East Midlands	Runway 09/27	Jun 2014
Edinburgh	Runway 06/24	Jun 2016
	Runway 12/30	Jun 2016
Exeter	Runway 08/26	Mar 2016
Farnborough	Runway 06/24	Feb 2016
Glasgow	Runway 05/23	Apr 2015
Gloucestershire	Runway 09/27	May 2009
Guernsey	Runway 09/27	Jul 2016
Haverfordwest	Runway 03/21	Jun 2015
Hawarden	Runway 04/22	May 2016
Humberside	Runway 02/20	Jun 2015
Inverness	Runway 05/23	Jun 2016
Islay	Runway 13/31	Nov 2015
Isle of Man	Runway 08/26	Aug 2013
	Runway 03/21	Aug 2013
Jersey	Runway 08/26	Apr 2016
Kirkwall	Runway 09/27	Nov 2015
Leeds Bradford	Runway 14/32	Mar 2016
Liverpool	Runway 09/27	Nov 2016
London/City	Runway 09/27	Apr 2010
London Gatwick	Runway 08R/26L	Mar 2015
	Runway 08L/26R	Mar 2015
London Heathrow	Runway 09L/27R	May 2016
	Runway 09R/27L	May 2016
London Luton	Runway 08/26	Sep 2013
London Stansted	Runway 04/22	Sep 2014
Londonderry/Eglinton	Runway 08/26	May 2015
Lydd	Runway 03/21	Nov 2016
Manchester	Runway 05L/23R	Feb 2016
	Runway 05R/23L	Feb 2016
Newcastle	Runway 07/25	May 2016
Newquay	Runway 12/30	Feb 2016
Norwich	Runway 09/27	Apr 2016
Oban	Runway 01/19	Feb 2016
Oxford/Kidlington	Runway 01/19	Aug 2016
Prestwick	Runway 12/30	Apr 2016
	Runway 03/21	Apr 2016
Scatsta	Runway 06/24	Mar 2011
Shoreham	Runway 02/20	Mar 2016
Southampton	Runway 02/20	Aug 2016
	Runway 20 +15° slew	Aug 2016
Southend	Runway 05/23	Sep 2016
Stornoway	Runway 18/36	Nov 2015
Sumburgh	Runway 15/33	Oct 2009
Tiree	Runway 05/23	Jun 2016
Warton	Runway 07/25	Oct 2016
Wick	Runway 13/31	Jun 2016

ENR 1.1 GENERAL RULES (continued)

4.7 Civilian Formation Flights - ATC Procedures

4.7.1 **General**

4.7.1.1 ATC will consider formations to be a single unit for separation purposes provided that:

(a) The formation elements are contained within 0.5 nm laterally and longitudinally, and within 100 ft vertically from the formation leader. Within Class G Airspace and subject to ATC approval, these limits may be increased to 3 nm and/or up to 1000 ft vertically.

(b) For the purposes of SERA.3135(d) Formation Flights: Military aircraft flying in formation must be flown at a distance not exceeding 1 nm laterally and longitudinally and 30 m (100 ft) vertically from the leading aircraft in the formation.

(c) The formation, although operating outside the parameters above, has NSF approval.

4.7.1.2 The formation leader is responsible for ensuring safe separation between aircraft comprising the formation.

4.7.1.3 In making initial contact with the ATC unit, the formation leader shall clearly state the number of aircraft in the formation.

4.7.1.4 Where a flight plan is required, the identification of the formation leader and the number of aircraft in the formation must be shown.

4.7.1.5 All ATC instructions and clearances will be addressed to the leader.

4.7.2 **Controlled Airspace**

4.7.2.1 VFR formation flights by civilian aircraft transiting CTA/CTR/TMA are subject to the normal airspace requirements as detailed at ENR 1.4. All other civilian formation flights in Controlled Airspace are subject to NSF approval.

4.7.2.2 Formations in Controlled Airspace shall be contained within 1 nm laterally and longitudinally and at the same level. Where this is not possible, the formation must be split into individual elements before entering Controlled Airspace. In the event that aircraft within the formation are unable to maintain within these parameters, the formation leader must immediately inform ATC.

4.7.2.3 Prior to entering Controlled Airspace, the formation leader shall confirm that all aircraft within the formation are within 1 nm laterally and longitudinally, and if in level flight, are at the same level.

4.7.2.4 When a formation has been cleared to climb or descend in Controlled Airspace, the formation leader shall confirm that all elements have reached the new assigned level.

4.7.2.5 All aircraft in the formation are to monitor the relevant ATC frequency.

4.8 Air tests with Swanwick(Mil) within the London FIR.

4.8.1 All civil operators wishing to file an airtest using a service provided by Swanwick(Mil) must comply with the following guidance.

4.8.1.1 Ideally, an air test request form is to be sent prior to midnight (local) the day before the test; this is to ensure that Swanwick(Mil) is able to offer a deconfliction service for the civil operator against busy military flying periods. However, should this notice period not be possible, the request to Swanwick(Mil) is to be made no less than 2 hours prior to the airtest commencing. If requests are made with only 2 hours notice then these must be made as early in the day as possible; this is to enable controller workload planning. Requests made late in the day are at risk of postponement until the following day.

4.8.1.2 Captains of test flights are also requested to call the Swanwick(Mil) Supervisor on 01489-612408 prior to engine start to ensure that the Unit has the capacity to provide an Air Traffic Service outside of the civil airways structure.

Note: *The above procedure should only be considered as a request for a service to be provided by Swanwick(Mil) and should not be construed as the filing of a flight plan. All normal flight plan procedures should be adhered to.*

ENR 1.1 GENERAL RULES (continued)

REQUEST FOR SWANWICK (Mil) TO PROVIDE AN ATS TO A CIVIL TEST FLIGHT

Civil aircraft operators, including military contractors, should inform Swanwick(Mil) of their requirements for a test flight before midnight the previous day; the minimum notice required is 2hrs on the day. The timings requested cannot be guaranteed, due to occasional high intensity periods of fast-jet flying but Swanwick(Mil) may be able to suggest an appropriate timing to both parties. Swanwick(Mil) has a very limited controlling capacity between 1700 and 0900 daily, at weekends and on UK Public Holidays; during these times operators should be aware they may be required to use the normal ATS structure as GAT, or reschedule their test flight.

Once completed, this form is to be returned to the Swanwick(Mil) Supervisor via email:
SwanwickMilitary-East@nats.co.uk, SwanwickMilitary-West@nats.co.uk
AND SwanwickMilitary-North@nats.co.uk

OPERATORS ARE TO ENSURE THAT FLIGHT PLANS ARE ADDRESSED TO EGWDZQZX - FAILURE TO DO SO MAY RESULT IN A DELAY TO THE FLIGHT

Aircraft Operator								
Contact Telephone No								
Date	**Day**	**Month**	**Year**		**Requested Date of Airtest**	**Day**	**Month**	**Year**
Callsign					**Aircraft Type**			
RVSM Status								
Departure Aerodrome					**Destination Aerodrome**			
ETD (Z)					**ETA (Z)**			
Planned Manoeuvring Area								
Flight Profile								
1	**FL (or level band)**		**Duration**	**mins**	**Remarks**			
2	**FL (or level band)**		**Duration**	**mins**	**Remarks**			
3	**FL (or level band)**		**Duration**	**mins**	**Remarks**			
4	**FL (or level band)**		**Duration**	**mins**	**Remarks**			
5	**FL (or level band)**		**Duration**	**mins**	**Remarks**			
Detail Any Special Handling Requirements / Remarks								

Captains of test flights are requested to call the Swanwick(Mil) Supervisor on (01489) 612408 prior to engine start to ensure that the Unit has the capacity to provide an Air Traffic Service outside of the civil airways structure.

CIVIL AIRTESTS ARE ALWAYS ACCEPTED SUBJECT TO MILITARY TRAFFIC LEVELS

Received at Swanwick(Mil) by at *(DTG)*

ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES (continued)

Code	Use	Conditions/Remarks
		Controllers are reminded that *7004 must be considered as unvalidated and the associated Mode C pressure-altitude reporting data unverified. Traffic information will be passed to aircraft receiving a service as follows: 'Unknown aerobatic traffic, (number) o'clock (distance) miles opposite direction/crossing left/right indicating (altitude) unverified (if Mode C pressurealtitude reporting data is displayed)'. May be selected at pilot's discretion.
*7005	High-Energy Manoeuvres	Unless a discrete Mode A code has already been assigned, outside controlled airspace below FL 195 and outwith the UK Low Flying System, pilots of military fast-jet aircraft should select *7005 prior to engaging in sustained high-energy manoeuvres. This will highlight to controllers the nature of the flight. Controllers should expect such aircraft to perform sudden and unpredictable changes in altitude and heading, and should be prepared to react accordingly. Controllers are reminded that the *7005 must be considered as unvalidated and the associated Mode C pressure-altitude reporting data unverified. May be selected at pilot's discretion.
*7006	Autonomous Operations within a TRA and TRA(G)	For use by military aircraft conducting autonomous operations within a TRA or TRA(G). May be selected at pilot's discretion.
*7010	Operating in an Aerodrome Traffic Pattern	For use by aircraft operating in an aerodrome traffic pattern, when instructed to do so by an ATS Unit or local operating instructions. Shall only be selected with ATC direction or in accordance with local aerodrome procedures.
*7401	Scottish FIS	Aircraft in receipt of a Basic Service from Scottish Information. Shall only be selected with ATC direction.

2.2.2.2.2 **Pilots are warned of the need for caution when selecting Mode A conspicuity codes in the 70xx series, due to the proximity of the Special Purposes Mode A codes.**

2.2.2.2.3 **Controllers are reminded that codes annotated with * are used for conspicuity, co-ordination or special purposes and the Mode A and associated Mode C pressure-altitude reporting data must be considered unvalidated and unverified.**

2.2.2.2.4 The use of aerodrome-specific conspicuity codes detailed in the UK SSR Code Plan (Table at paragraph 2.6 of ENR 1.6) should be strictly in accordance with local operating instructions/procedures as published by the relevant aerodrome.

2.2.3 **Transponder Testing**

2.2.3.1 Transponder testing has the potential to generate false SSR returns, thereby incorrectly triggering safety nets such as TCAS and short term conflict alert, with consequential disruption to flight crews and ATC and potential to cause an adverse safety impact. Therefore, individuals or Organisations intending to conduct ground-based transponder testing and maintenance shall take necessary precautions to ensure transponder transmissions cannot be erroneously identified as valid replies by airborne or ground interrogator systems that may detect them. Consequently, the following steps are strongly recommended:

(a) Set the Mode A code to *0002 (UK-specific ground transponder testing code);

(b) Use effective screening or absorption devices on the antennas or physically connect the ramp test set to the antenna system;

(c) Where possible, conduct the testing inside a hangar, as this may provide additional shielding;

(d) Manually set the Mode C pressure-altitude data to either a high value (eg over 60000 ft) or an unrealistically low value (eg 2000 ft below ground);

(e) Select the transponder(s) to 'OFF' or 'STANDBY' when testing is complete.

2.2.3.2 Additional guidance on transponder testing can be found in ICAO Annex 10 Vol IV, JAA TGL 13 and EUROCAE ED-73C.

2.2.4 **SSR Site Monitors/Far Field Monitors**

2.2.4.1 SSR site monitors, sometimes referred to as Far Field Monitors (FFMs) for Mode S radars, shall use Mode A codes *7776 and *7777, along with Mode C pressure-altitude data set to either a high value (eg over 60000 ft) or an unrealistically low value (eg 2000 ft below ground).

2.2.4.2 Mode S FFMs will also require an ICAO 24-bit address to uniquely identify them. These addresses shall be allocated as part of the National IFF/SSR Committee approval process. For further details contact: nisc@caa.co.uk

2.2.5 **Frequency Monitoring Codes**

2.2.5.1 In order to both prevent and mitigate the consequences of airspace infringements, pilots operating close to the peripheries of certain controlled airspace and monitoring the relevant frequency (but not requiring an Air Traffic Service) should select a local SSR conspicuity code and the Mode C pressure-altitude mode (if available) as specified to indicate they are monitoring the promulgated ATC frequency. This facility also exists for aircraft routing close to certain airfields outside controlled airspace to advise ATC that pilots are monitoring their frequency.

ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES (continued)

2.2.5.2 This will allow the appropriate Air Traffic Control Unit to attempt to establish contact with an aircraft which is displaying such a code and which is considered to be infringing, or is likely to infringe, controlled airspace in order to resolve an actual or potential infringement quickly and efficiently. For units outside controlled airspace, this will allow Air Traffic Control to attempt to establish contact with pilots in order to resolve potential conflictions. Selection of such codes does not imply the provision of any form of Air Traffic Service and the use of such codes does not prevent a pilot from requesting an Air Traffic Service at any time should they subsequently decide they require one.

2.2.5.3 In such circumstances, blind transmissions will be made by Air Traffic Control on the appropriate frequency including the code, position, level (if appropriate) and direction of flight of the observed contact. The Mode S-derived callsign may also be used. A pilot monitoring the frequency who suspects, on the basis of the information provided, that theirs is the aircraft being referred to should contact Air Traffic Control accordingly. At this point a discrete code may be assigned to confirm identity. The controller will establish the requirements of the pilot and will confirm the type of Air Traffic Service available. Exceptionally, Air Traffic Control may issue immediate instructions or advice to resolve a particular situation. For aircraft outside controlled airspace, Air Traffic Control may request the pilot's compliance to achieve coordination. If, after positive identification or on the basis of additional information provided by the pilot it is felt that the aircraft responding is not the aircraft concerned, the pilot will be informed accordingly and may continue to monitor the frequency and if necessary revert to the appropriate monitoring code.

2.2.5.4 Use of monitoring codes does not imply that any form of Air Traffic Service is being provided. The code and any associated Mode C pressure-altitude reporting data is considered to be unvalidated and unverified. Pilots remain responsible for their own navigation and in particular for obtaining permission to enter controlled airspace and Aerodrome Traffic Zones from the appropriate agency.

2.2.5.5 Any pilot who believes they are flying in the vicinity of the aerodromes listed below who is lost or temporarily uncertain of position should immediately seek navigational assistance from the appropriate radar unit. Alternatively, they should select code 0030 and contact either London or Scottish Centre on 121.500 MHz for assistance.

2.2.5.6 **Codes in Use**

2.2.5.6.1 *** 0010** - This code may be used when flying in the vicinity of the Birmingham Control Zone/Area when the pilot is monitoring Birmingham Radar frequencies.

2.2.5.6.2 *** 0011** - This code may be used when flying in the vicinity of Southampton/Bournemouth Zones/Areas and monitoring Solent Radar frequencies.

2.2.5.6.3 *** 0012** - This code may be used when flying in the vicinity of London Heathrow/London City/London Gatwick Control Zones/Areas and monitoring Thames (132.700 MHz) or Gatwick (126.825 MHz) frequencies.

2.2.5.6.4 *** 0013** - This code may be used when flying in the vicinity of London Luton/London Stansted Control Zones/Areas and monitoring either Luton Radar or Essex Radar frequencies.

2.2.5.6.5 *** 0440** - This code may be used when flying in the vicinity of Edinburgh Control Zones/Areas and monitoring the Edinburgh Approach Frequency 121.200 MHz.

2.2.5.6.6 *** 2620** - This code may be used when flying within 40 nm of Glasgow Airport and monitoring the Glasgow Approach Frequency 119.100 MHz.

2.2.5.6.7 *** 2677** - This code may be used when flying in the vicinity of Leeds Bradford Control Zones/Areas and monitoring Leeds Bradford Radar frequencies. Pilots should refer to UK AIP EGNM AD 2.22 - FLIGHT PROCEDURES for further details.

2.2.5.6.8 *** 3660** - This code may be used when flying within 20 nm of Warton Aerodrome, outside controlled airspace, and monitoring the Warton Radar Frequency 129.525 MHz.

2.2.5.6.9 *** 4517** - This code may be used when flying within 20 nm of Oxford Airport between the hours of 0800-1800 (local time) and monitoring the Oxford Frequency 127.750 MHz.

2.2.5.6.10 *** 4572** - This code may be used when flying in the vicinity of the East Midlands Control Zones/Areas and monitoring the East Midlands Approach frequency. Pilots should refer to UK AIP EGNX AD 2.22 – FLIGHT PROCEDURES for further details.

2.2.5.6.11 *** 4572** - This code may be used when flying in the vicinity of Farnborough and monitoring the LARS West Frequency.

2.2.5.6.12 *** 4607** - This code may be used when flying in the vicinity of Hawarden and monitoring the Hawarden Radar Frequency.

2.2.5.6.13 *** 5077** - This code may be used when flying within 40 nm of Bristol Airport and monitoring the Bristol LARS Frequency 125.650 MHz.

2.2.5.6.14 *** 6170** - This code may be used when flying in the vicinity of Doncaster Sheffield Control Zone/Area when the pilot is monitoring Doncaster Sheffield Radar frequencies. Pilots should refer to UK AIP EGCN AD 2.22 - FLIGHT PROCEDURES for further details.

2.2.5.6.15 *** 7045** - This code may be used when flying within 40 nm of Belfast/Aldergrove CTR and monitoring Belfast/Aldergrove Approach frequencies. Pilots should refer to UK AIP EGAA AD 2.22 - FLIGHT PROCEDURES for further details.

2.2.5.6.16 *** 7366** - This code may be used when flying in the vicinity of the Manchester CTR and monitoring the Manchester Approach frequency. Pilots should refer to UK AIP EGCC AD 2.22 - FLIGHT PROCEDURES for further details.

2.3 Mode S Aircraft Identification

2.3.1 To comply with ICAO airborne equipment requirements, all Mode S transponder equipped aircraft engaged in international civil aviation must incorporate an Aircraft Identification Feature (sometimes referred to as Flight Identity or Flight ID). Correct setting of Aircraft Identification is essential for the correlation of radar tracks with flight plan data in Air Traffic Management (ATM) and

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Airport Operator ground systems. Data analysed by the Eurocontrol AMP has shown that many Mode S compliant aircraft are transmitting an incorrect Aircraft Identification, for example, incorrectly setting ABC_123 instead of ABC123.

2.3.2 **Incorrect Aircraft Identification settings compromise the safety and ATM benefits of Mode S and will prohibit automatic flight plan correlation, which could affect subsequent ATC clearances and sequencing.**

2.3.3 In accordance with ICAO Doc 8168 (PANS-OPS) Vol I, Part III, Section 3, Chapter 1, paragraph 1.3, flight crew of aircraft equipped with Mode S having an Aircraft Identification Feature shall set the Aircraft Identification in the transponder. This setting shall correspond to the Aircraft Identification specified in item 7 of the ICAO flight plan, or if no flight plan has been filed, the aircraft registration or as detailed in paragraph 2.3.4.1.

2.3.4 Aircraft Identification, not exceeding 7 alphanumeric characters, is to be entered in item 7 of the flight plan and set in the aircraft as follows:

2.3.4.1 Either,

(a) The ICAO three letter designator (not the IATA two letter designator) for the aircraft operating agency followed by the flight identification, for example, BAW213 or JTR25, when:

(i) In radiotelephony, the callsign used consists of the ICAO telephony designator for the operating agency followed by the flight identification, for example, SPEEDBIRD 213 or HERBIE 25.

Or,

(b) The registration marking of the aircraft, for example, G-INFO or EIAKO, when:

(i) In radiotelephony, the callsign used comprises the registration marking alone, for example, G-INFO, or is preceded by the ICAO telephony designator for the operating agency, for example, SVENAIR EIAKO;

(ii) the aircraft is not equipped with radio.

Or,

(c) The callsign determined by the military authorities if this will be used to identify the aircraft in radiotelephony during flight.

Note 1: *When the Aircraft Identification consists of less than 7 characters, no zeros, dashes or spaces are to be added, either before or between the characters. Only alphanumeric characters are to be used. Nothing should be added after the final character of the registration. For example, an aircraft registered 'G-INFO' would be input as 'GINFO'.*

Note 2: *Appendix 2 to ICAO Doc 4444 (PANS-ATM) refers. ICAO designators and telephony designators for aircraft operating agencies are contained in ICAO Doc 8585.*

2.3.5 Flight crew of aircraft which have the capability to change the downlinked aircraft identification feature when airborne shall not change the downlinked aircraft identification feature during the flight unless requested by the air navigation service provider.

2.4 Transponder Failure

2.4.1 Failure before intended departure

2.4.1.1 If the transponder fails before intended departure and cannot be repaired pilots shall:

(a) Plan to proceed as directly as possible to the nearest suitable aerodrome where repair can be made;

(b) inform ATS as soon as possible preferably before the submission of a flight plan. When granting clearance to such aircraft, ATC will take into account the existing and anticipated traffic situation and may have to modify the time of departure, flight level or route of the intended flight;

(c) insert in item 10 of the ICAO flight plan under SSR the letter N for complete unserviceability of the transponder or in the case of partial failure, the letter corresponding to the remaining transponder capability, including unserviceability of any Mode S functionality, as specified in ICAO Doc 4444, Appendix 2.

2.4.2 Failure after departure

2.4.2.1 If the transponder fails after departure or en-route, ATS Units will endeavour to provide for continuation of the flight in accordance with the original flight plan. In certain traffic situations this may not be possible particularly when the failure is detected shortly after take-off. The aircraft may then be required to return to the departure aerodrome or to land at another aerodrome acceptable to the operator and to ATC. After landing, pilots shall make every effort to have the transponder restored to normal operation. If the transponder cannot be repaired then the provisions in paragraph 2.4.1.1 apply.

2.4.3 At present the temporary failure of Mode C alone would not restrict the normal operation of the flight.

2.5 Radio Telephony Phraseology For Use With SSR.

This is in accordance with ICAO Doc 4444, Chapter 12, para 12.4.3.

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2.6 UK SSR Code Allocation Plan

(as detailed in the table at ENR 1.6-9 (See also notes below)).

Note 1: *Pilots are not to preselect Mode A code settings for discrete codes until instructed to do so by the appropriate controlling agency.*

Note 2: *The codes or series annotated * are used for conspicuity, co-ordination or special purposes and, unless procedures have been agreed with UK CAA Directorate of Airspace Policy, the Mode A code and associated Mode C pressure-altitude reporting data must be considered unvalidated and unverified.*

Note 3: *These codes are assigned by Aberdeen for helicopters operating in Northern North Sea Off-shore area and out to 5° West.*

Note 4: *Non-discrete assignment to military aircraft operating within the Vale of York AIAA. Leeming and Linton-on-Ouse are authorised by UK CAA Directorate of Airspace Policy, to apply standard vertical separation between military aircraft under service and military aircraft assigned this code.*

Note 5: *Ground based transponder equipment.*

Note 6: *For use within a 25 nm radius of Colerne in the FIR, up to FL 100, outside of Controlled Airspace.*

Note 7: *This code is allocated to Transit (ORCAM) UK and is temporarily assigned for use by London Control (Swanwick) FIS. Notwithstanding, it retains all the properties and protection of an ORCAM Transit code.*

Note 8: *These codes will be assigned to aircraft on air policing missions within the UK FIR/UIR operating under Air Defence Priority Flight (ADPF) status. NATO Air Surveillance and Control System (ASACS) units, NATO Airborne Early Warning aircraft or military ATCCs will normally control the aircraft. The actual controlling unit for a particular flight will be notified by the relevant NATO ASACS unit to the military ATC supervisor whose area of responsibility contains the intended route of the ADPF aircraft. The military ATC supervisor will then inform the relevant civil ATCC. Where any doubt about the controlling agency exists, the relevant military ATC supervisor with the responsibility for the area within which the ADPF aircraft is operating should be contacted in the first instance.*

Note 9: *This code is assigned by the FISO to aircraft requesting entry into Controlled Airspace for the purpose of joining or crossing the ATS Route network. Pilots shall only select the code when they are within two-way communication with the London FIS. Where available, the Mode C pressure-altitude reporting mode of the transponder should also be selected. If communication is lost or the aircraft leaves the FIS frequency, pilots shall deselect this special purpose code. The assignment of this code does not imply the provision of a radar service and the code and any associated Mode C pressure-altitude reporting data must be considered to be unvalidated and unverified.*

Note 10: *All Spadeadam squawks indicating flight above FL 50 will be validated and verified by Spadeadam ATC.*

Note 11: *This conspicuity code shall be used by aircraft operating in an Off-shore Safety Area (OSA) when contact with the Area Air Traffic Service Provider (ATSP) has not been established and no other code has previously been allocated.*

Note 12: *Unless otherwise instructed by ATC, Mode S transponder equipped aircraft on the aerodrome surface should select Mode A code 2000 when under tow; or parked and prior to selecting OFF or STDBY.*

Note 13: *These codes will be assigned to Unmanned Aeronautical Vehicles operating within an active danger area, which will be validated but may be unverified.*

Note 14: *Aircraft operating within, and in the vicinity of, EG D123, D124, D125, D126, D128.*

Note 15: *This conspicuity code shall be used by Unmanned Aerial Systems/Remotely Piloted Aircraft that have lost communications with their remote pilot and are following a pre-programmed Lost Link flight profile.*

Note 16: *This code may also be used for Blackpool Instrument Training.*

Note 17: *For use within a 20 nm radius of Lands End up to 4000 ft amsl.*

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Codes / Series	Controlling Authority / Function
4000	NATO Aircraft receiving a service from AEW aircraft
4001 — 4077	Transit (ORCAM) France
4100	NATO Aircraft receiving a service from AEW aircraft
4101 — 4177	Transit (ORCAM) Germany
4200	NATO Aircraft receiving a service from AEW aircraft
4201 — 4214	Assigned by CAA
4215 — 4247	Assigned by CCAMS
4250 — 4257	Belfast City Approach
4250 — 4267	Aberdeen Approach
4250 — 4277	Humberside Approach
4300	NATO Aircraft receiving a service from AEW aircraft
4301 — 4306	Assigned by CAA
4307 — 4317	London Control Non-Standard Flights
4320 — 4327	Ireland Domestic
	RNAS Yeovilton
4330 — 4337	UK Domestic (Prestwick Centre Special Sector Codes)
4340 — 4353	UK Domestic (Scottish Special Sector Codes)
* 4354 — 4356	Westland Helicopters Yeovil
4357	Ireland Domestic
* 4357	RNAS Yeovilton Conspicuity
* 4360 — 4361	Coventry Airport Conspicuity
4360 — 4361	Oil Survey Helicopters - Faeroes/Iceland Gap
* 4360 — 4367	Westland Helicopters Yeovil
4360 — 4367	RAF Northolt
4362 — 4367	Coventry Approach
4370 — 4377	Anglia Radar
	Ireland Domestic
	RNAS Yeovilton
4400	NATO Aircraft receiving a service from AEW aircraft
4401 — 4427	Transit (ORCAM) Brussels
4430 — 4477	Assigned by CCAMS
4500	NATO Aircraft receiving a service from AEW aircraft
* 4501	Lands End GNSS Approach **(See note 17)**
* 4501	Wattisham Conspicuity
4501 — 4505	RAF Linton-on-Ouse
4501 — 4516	Oxford Approach
4501 — 4517	Prestwick Approach
4502 — 4547	Wattisham Approach
*4506	RAF Linton-on-Ouse Conspicuity
4507 — 4527	RAF Linton-on-Ouse
* 4517	Oxford SSR Frequency Monitoring Code **(Refer to ENR 1.6, paragraph 2.2.5).**
* 4520	Prestwick Conspicuity
* 4520	Oxford Approach Basic Service
* 4521 — 4527	West Wales Radar (NQY)

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Codes / Series	Controlling Authority / Function
* 4530	RAF Linton-on-Ouse Conspicuity
* 4530	MoD Aberporth Conspicuity
4530 — 4546	Plymouth (Military) Radar
4531 — 4537	RAF Linton-on-Ouse
4531 — 4537	MoD Aberporth
* 4540	RAF Linton-on-Ouse Conspicuity
* 4540 — 4542	MoD Aberporth **(See note 13)**
4541 — 4547	RAF Linton-on-Ouse
* 4543	West Wales Airport UAS Conspicuity Code. Shall only be selected with AFIS direction.
* 4547	Plymouth (Military) Radar conspicuity
4550 — 4567	Plymouth (Military) Radar
4550 — 4567	Isle of Man
4550 — 4571	East Midlands Approach
* 4572	Aircraft operating outside of East Midlands Controlled Airspace/Zone and monitoring East Midlands Radar frequency **(Refer to ENR 1.6, paragraph 2.2.5)**
* 4572	Farnborough LARS West SSR Monitoring Code **(Refer to ENR 1.6, paragraph 2.2.5)**
* 4573	East Midlands Approach Conspicuity
* 4574	Not currently allocated for use in the UK FIR
* 4575	RAF Leeming/RAF Linton-on-Ouse **(See note 4)**
	Southend Airport Conspicuity
* 4576	RAF Colerne Conspicuity **(See note 6)**
* 4576	Vale of York AIAA Conspicuity
4577	Vale of York AIAA Conspicuity
4600	NATO Aircraft receiving a service from AEW aircraft
* 4601	Hawarden Conspicuity
* 4601	MoD Ops in Salisbury Plain Training Area **(See note 14)**
4602 — 4606	Hawarden Approach
4602 — 4607	Anglia Radar
* 4607	Hawarden Frequency Monitoring Code **(Refer to ENR 1.6 para 2.2.5)**
4610 — 4667	Swanwick (Military)
4670 — 4676	TC Stansted/TC Luton
* 4677	Carlisle Airport Conspicuity
	Luton Airport Tower Conspicuity
4700	NATO Aircraft receiving a service from AEW aircraft
4701 — 4777	Assigned by CCAMS

ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES (continued)

3 Automatic Dependent Surveillance - Broadcast (ADS-B)

3.1 To be developed.

4 Other Relevant Information and Procedures

4.1 Lower Airspace Radar Service (LARS)

4.1.1 **Availability of Service**

4.1.1.1 The service is available to all aircraft flying outside Controlled Airspace up to FL 100, within the limits of radar/radio cover. The service will be provided within approximately 30 nm of each participating ATS Unit. Unless a participating ATS Unit is H24, the service will normally be available between Winter 0800 and 1700, Summer 0700 and 1600, Mondays to Fridays. However, as some participating Units may remain open to serve evening, night or weekend flying, pilots are recommended to call for the service irrespective of the published hours of ATS. If no reply is received after three consecutive calls, it should be assumed that the service is not available.

4.1.1.2 LARS will not normally be available from non-H24 Units at weekends and during public holidays.

4.1.1.3 Pilots intending to operate at or above FL 100 may be advised to contact an appropriate ATCRU and request a Deconfliction Service or a Traffic Service. However, as VHF frequencies at Military ATCRUs are not continuously monitored, unless in use, civil pilots may ask controllers to arrange a frequency on which to call the appropriate Unit.

4.1.2 **Description of Service**

4.1.2.1 The service provided will be a Deconfliction Service or Traffic Service as detailed at ENR 1.1, subsection 2 (UK Flight Information Service).

4.1.3 **Procedures**

4.1.3.1 Pilots intending to use the Lower Airspace Radar Service should note the participating ATS Units close to their intended track and establish two-way RTF communication on the appropriate frequency using the phraseology: '. . . .(Participating ATS Unit), ...(Aircraft callsign), request (Basic/Traffic/Deconfliction Service)'. Pilots may be asked to 'stand-by'. When asked to pass your message, pilots should pass the following information:

(a) Callsign and type of aircraft;

(b) departure aerodrome;

(c) destination aerodrome;

(d) present position;

(e) level;

(f) additional details/intentions as necessary (next route point, squawk code).

4.1.3.2 Aircraft will be identified and pilots so informed before radar service is given.

4.1.3.3 Under a Deconfliction Service or Traffic Service, participating LARS aircraft will be given the service in accordance with ENR 1.1, subsection 2 (UK Flight Information Service).

4.1.3.4 Whenever possible, aircraft will be handed over from controller to controller in an area of overlapping radar cover and pilots told to 'Contact' the next Unit. When this cannot be effected, pilots will be informed of their position and advised which Unit to call for further service.

4.1.3.5 If a pilot wishes to enter regulated airspace, even though he may be in receipt of a LARS beforehand, he remains responsible for obtaining the required clearances before entry. LARS Controllers may assist in obtaining clearance, if workload permits, but pilots must be prepared to carry out this task independently.

4.1.4 **Terrain Clearance**

4.1.4.1 Terrain clearance will be the responsibility of pilots. However, LARS Units will set a level or levels below which a Deconfliction Service is to be refused or terminated.

4.1.5 **Advice to Pilots**

4.1.5.1 The provision of LARS is at the discretion of the controllers concerned because they may be fully engaged in their primary tasks. Therefore, occasionally, the service may not be available.

4.1.5.2 Farnborough and Boscombe Down Service Limitations

4.1.5.2.1 Due to periodic traffic congestion and high ATC workload, traffic information provided under a Deconfliction or Traffic Service (ENR 1.6, paragraph 1.2) may be limited by the following ATS Units:

(a) **Farnborough** - Limited Traffic Service - At all altitudes/Flight Levels. Aircraft inbound to Farnborough should contact Farnborough Approach on 134.350 MHz. On weekdays (excluding PHs) LARS/MATZ service is not normally available on 125.250 MHz after 2000 hrs (one hour earlier in summer). Traffic inbound to Odiham should contact Odiham Approach on 131.300 MHz;

(b) **Boscombe Down** - Limited Traffic Service - At and below FL 40. Subject to ATC workload, pilots, will be informed of any limitations to Deconfliction Service and standard separation will be provided whenever possible.

ENR 1.6 ATS SURVEILLANCE SERVICES AND PROCEDURES (continued)

4.1.5.3 Warton Service Limitations

4.1.5.3.1 Warton PSR is suppressed in certain sectors to mitigate interference from ground clutter and wind turbines. Pilots will be advised of reduced service by Warton Radar.

4.1.6 **ATS Units Participating in the Lower Airspace Radar**

Unit	Position	Frequency To Be Used (MHz)	Service Radius (nm)	Availability/ Remarks
Boscombe Down	510912N 0014504W	126.700	30	Mon-Thu 0830-1700, Fri 0830-1630 Winter (Summer 1hr earlier). Opening hours may vary subject to operational flying requirements.
Bournemouth	504648N 0015033W	119.475	30	0800-2000 Winter (Summer 1hr earlier).
Bristol	512258N 0024309W	125.650	40	1000-1800 Winter (Summer 1hr earlier).
Brize Norton	514500N 0013500W	124.275	40	0900-1700 Winter (Summer 1hr earlier).
Cardiff	512348N 0032036W	119.150	40	0600-2300 Winter (Summer 1hr earlier).
Coningsby	530535N 0000958W	120.800	30	Mon-Fri 0800-1700 Winter (Summer 1hr earlier).
Culdrose	500507N 0051515W	134.050	30	Mon-Thu 0830-1700 or SS, Fri 0830-1400 Winter (Summer 1hr earlier).
Durham Tees Valley	543033N 0012546W	118.850	40	0800-1800 Winter (Summer 1hr earlier).
Exeter	504404N 0032450W	128.975	30	Mon 0001-0100 & 0700-2359; Tue-Fri 0001-0200 & 0700-2359; Sat 0001-0200 & 0800-1700; Sun 0830-2359 (Winter). Mon 0600-2359; Tue-Fri 0001-0100 & 0600-2359; Sat 0001-0100 & 0530-2000; Sun 0700-2359 (Summer).
Farnborough (West)	511633N 0004635W	125.250	See ENR 6-1-6-3	0800-2000 Winter (Summer 1hr earlier). (See paragraph 4.1.7).
Farnborough (East)	511633N 0004635W	123.225		
Farnborough (North)	511633N 0004635W	132.800		
Humberside	533428N 0002103W	119.125	30	0630-2115 (Summer 1hr earlier)
Leeming	541733N 0013207W	133.375	30	Mon-Thu 0800-1800, Fri 0800-1700 Winter (Summer 1hr earlier).
Leuchars	562229N 0025140W	126.500	40	H24.
Linton-on-Ouse	540258N 0011513W	118.550	30	Mon-Thu 0730-1715, Fri 0730-1700 Winter (Summer 1hr earlier).
Lossiemouth	574225N 0032015W	119.575	40	Mon-Fri 0900-1700 Winter (Summer 1hr earlier).
Marham	523854N 0003302E	124.150	30	Mon-Thu 0800-2359, Fri 0800-1800 Winter (Summer 1hr earlier).
Newcastle	550217N 0014123W	124.375	40	H24.
Newquay	502627N 0045943W	133.400	60	0730-2130 Winter (Summer 1hr earlier).
Norwich	524033N 0011658E	119.350	30	0900-1700 Winter (Summer 1hr earlier).
Plymouth Military (West)	501900N 0040700W	121.250	40	Mon-Thu 0800-1700, Fri 0800-1400 Winter (Summer 1hr earlier).
Plymouth Military (East)	503405N 0022659W	124.150	40	The East and West LARS areas are divided at the western edge of AWYs N864/N862.
Shawbury	524737N 0024004W	133.150	40	Mon-Fri 0830-1700 (Winter), Mon-Fri 0730-1630 (Summer).
Southend	513417N 0004144E	130.775	25	0900-1800 Winter (Summer 1hr earlier).
Valley	531450N 0043201W	125.225	40	Mon-Thu 0800-1800, Fri 0800-1700 Winter (Summer 1hr earlier).
Waddington	530958N 0003126W	119.500	30	Mon-Thu 0800-2000, Fri 0800-1800, Sat & Sun 1000-1700 (Summer 1hr earlier).
Warton	534442N 0025302W	129.525	40	Mon-Thu 0730-1900; Fri 0730-1700 Winter (Summer 1hr earlier).
Yeovilton	510029N 0023845W	127.350	30	Mon-Thu 0830-1700, Fri 0830-1400 Winter. Mon-Thu 0830-1600, Fri 0830-1300 Summer (Btn Easter Bank HOL and August Bank HOL).

4.1.7 **Farnborough LARS**

ENR 1.10 FLIGHT PLANNING (continued)

5.3.6 **Cancellation**

5.3.6.1 Every reasonable attempt should be made to inform the LFBC as soon as it becomes obvious that an activity previously notified will no longer take place, or that the activity has been completed. Notification of a completed activity should be made irrespective of the time remaining on the CANP.

5.4 **Comments / Recommendations**

5.4.1 Users are invited to forward comments on CANP, or recommend improvements to the procedure to the CAA Safety and Airspace Regulation Group (SARG) at the following address:

Post: Airspace Section, SARG, CAA House, 45-59 Kingsway, London WC2B 6TE
Phone: 020-7453 6543
Fax: 020-7453 6565.

6 PIPELINE AND POWERLINE INSPECTION PROCEDURES

6.1 **Introduction**

6.1.1 Pipeline and powerline inspection aircraft that operate in the airspace below 1000 ft agl are not normally able to predict their movements with sufficient accuracy to utilise the CANP system for advising military aircraft of their activities.

6.1.2 To reduce the potential for confliction between pipeline and powerline inspecting aircraft and low-flying aircraft, a number of measures were introduced in October 1993. The system is continually monitored and updated to allow for changes to inspection procedures and profiles.

6.2 **Centralised Aviation Data Service (CADS)**

6.2.1 The use of Centralised Aviation Data Service (CADS) enables users, in the route-planning stage of a sortie, to both identify potential conflicts with the routes of other CADS users and submit and assess low level booking information to the Low Flying Booking Cell (LFBC). It is very much an 'early Situational Awareness (SA)' tool, providing a prompt for further action to ensure that aviators reduce the risk of Mid Air Collision (MAC) as far as is reasonably practicable. It provides a detailed route summary to all users.

6.2.2 Before any flight, pipeline and powerline inspection operators are encouraged to input their route into CADS*. Training on the system and the detailed procedures for using CADS are available from the Low Flying Operations Flight (LFOF) based at RAF Wittering. They can be contacted at cas-ascadssptgmb@mod.uk. Best endeavour is to be used to employ CADS on every sortie.

Note: ** CADS and potentially any subsequent replacement.*

6.2.3 Users should submit routes as early as practicable to maximise visibility of their plan to other users. Route detail may be updated before flight if required. Users should ensure that their route on CADS is plotted as accurately as practicable; the accuracy of each waypoint's position and the time of overflight should allow a subsequent user to gain SA of the plan and identify any potential conflict.

6.2.4 Crews should be aware that CADS only provides SA on flying activity planned by other CADS users. Furthermore, it does not allow for airborne route/timing changes due to weather or other constraints. Crews must ensure that effective lookout remains a fundamental discipline for avoiding MAC.

6.3 **Pipeline/Powerline Inspection Notification System (PINS)**

6.3.1 Pipeline/Powerline Inspection Notification System (PINS) allows for the collation of information on pipeline/powerline inspection programmes and its distribution by NOTAM.

6.3.2 Pipeline/powerline inspection aircraft pilots or their representatives should notify details of all inspection flights to LFBC at RAF Wittering. For this purpose, the PINS E-mail, Freefax and Freephone facilities are available during the following times:

Monday to Thursday 0700-2300 (Local);
Friday 0700-1700 (Local).

Note: *The Low Flying Booking Cell (LFBC) does not operate on a 24 hour basis.*

6.3.3 E-mail or Fax notification is preferred for PINS as this allows LFBC to E-mail, 'faxback' or telephone confirmation of E-mail or fax receipt to the aircraft operating authority. Operators are advised that, in the interests of safety and accuracy, all telephone calls to the LFBC are recorded. The contact details for the LFBC are as follows:

Phone: 0800-515544 or 01780-781581;
Fax: 01780-416206;
Email: cas-aslfoflfbc@mod.uk

6.3.4 Details of planned inspection activity may be notified up to one month in advance. However, to ensure maximum effectiveness of the system, any changes to the pre-planned schedules should be passed to the LFBC by 1800 (Local) on the preceding weekday. Monday's schedules should be passed by 1700 on the preceding Friday. These details will be promulgated to military crews during the evening preceding the day of activity by means of a NOTAM for each weekday. The NOTAM will include a consolidated list of all PINS activity by area for the day between 0800-1700. The areas notified, shown at ENR 6-1-10-3, are coincident with the Low Flying Areas of the military UKLFS with LFAs 7, 11 and 14 each subdivided into 2 further areas, but exclude military low flying Avoidance Areas and Dedicated User Areas.

6.4 **Recommended Height Profiles**

ENR 1.10 FLIGHT PLANNING (continued)

6.4.1 Aircraft engaged on pipeline inspection flights are likely to operate in the height band 500 ft to 700 ft agl (typically 70-90 kts) where they will be above, and skylined to, the majority of military low flying aircraft that operate below 500 ft. Aircraft engaged on powerline inspection flights are likely to operate in the height band 50 ft to 200 ft agl (typically <40 kts).

6.4.2 Since both inspection and military aircraft can be expected to operate outside of these height bands, pilots are not absolved from maintaining a good lookout and applying visual avoidance criteria. In particular, it should be noted that helicopters involved in inspections will continue, when required by the inspection, to descend in accordance with any permissions granted by the CAA in relation to the provisions of SERA.3105 Minimum Heights, SERA.5001 VMC Visibility and Distance from Cloud Minima and/or SERA.5005 Visual Flight Rules. Where circumstances dictate, helicopters may land to permit further investigation.

6.4.3 The nature of powerline inspections and the height at which they are flown is such that aircraft engaged on these duties are unlikely to conflict with the majority of low flying fast jet military aircraft except in certain specific areas shown at ENR 6-1-10-3. Inspection pilots intending to fly in these particular areas are reminded that military aircraft are authorised to fly down to 100 ft Minimum Separating Distance and that they should therefore plan their sortie accordingly. Military helicopter low flying traffic regularly conduct wires crossings at powerlines and therefore there is a requirement to notify and be vigilant, particularly in the areas shown at ENR 6-1-10-3 for helicopter activity.

6.4.4 Pipeline/Powerline inspection sorties which are able to operate within a limited area, may apply for warning status under CANP (ENR 1.10-13). This procedure is encouraged in known areas of conflict between military aircraft and inspection helicopters; 5 such areas have been specifically identified in paragraph 5. Any request for such protection should be made as far in advance as is possible through the E-mail, Freefax or Freephone numbers shown at paragraph 6.3.3. The manager of the UKLFS, Low Flying Operations Flight (LF Ops Flt) at RAF Wittering, will consider requests of this nature on a case-by-case basis.

6.5 **Conspicuity**

6.5.1 Discrete Radiotelephony (RTF) callsigns and a dedicated Secondary Surveillance Radar (SSR) code have been allocated to aircraft on power and pipeline inspection flights. Thus the nature of flight will be immediately apparent to the Air Traffic Service Unit and to other aircraft operating on the frequency as soon as the initial radio transmission using the dedicated callsign is made. The differing height profile (as per paragraph 6.4.1) and callsign should allow ATC units to understand and identify the likely inspection profile. Similarly, radar controllers will be able to detect the presence of an inspection aircraft which might not be in radio communication with that unit.

6.5.2 **RTF Callsigns**

6.5.2.1 Aircraft conducting inspection flights will use the callsign ‘pipeline’ or ‘powerline’, depending upon the nature of the task, followed by a unique numerical suffix. Hence, a helicopter carrying out a powerline inspection might use the callsign ‘Powerline12’.

6.5.2.2 A list of operators and their allocated RTF numerical suffixes are listed in the table below. The WPD Helicopter Unit and the National Grid Company plc's licensed contracted operators only use callsign prefix ‘Electricity’ and ‘Grid’ respectively.

PINS Conspicuity Callsign Allocation	
Company	**Callsign Suffix**
HeliAir	44 to 47 inclusive, 66 and 100
Helicentre Aviation	81 to 85 inclusive
National Grid Company plc (Fixed & Rotary Wing)	GRID
PLM Dollar Helicopters Limited	40, 50 to 65 inclusive and 69
Ravenair (Fixed Wing)	33 and 34
WPD Helicopter Unit	ELECTRICITY

6.5.3 **SSR Operating Procedures**

6.5.3.1 The special purpose SSR Code 0036 has been allocated to pipeline/powerline operations. Pilots should select this code, with Mode C, throughout the period that the aircraft is engaged in inspection activities. Unless there are overriding requirements, ATC Units should permit retention of the dedicated squawk by PINS aircraft for the benefit of adjacent radar equipped units. When in transit between the operating base and the region pilots should comply with the SSR Operating Procedures published at ENR 1.6, paragraph 2.1.3.

6.5.3.2 Air Traffic Controllers are reminded that, in accordance with Note 2 to the UK SSR Code Allocation Plan (ENR 1.6, paragraph 2.6), code 0036 must be considered as unverified and unvalidated.

6.6 **Conclusion**

6.6.1 It must be emphasised that the procedures detailed herein are advisory and that the promulgation of the activities will be in the form of warnings not avoidances. Both CADS and PINS should be used to inform all low flying traffic of potential conflictions. Failure to make pre-flight booking, either through CADS or PINS will not prevent inspection sorties taking place. Similarly, deviation from the booking is at the discretion of the helicopter pilot. The only consequence would be the inability to provide greater clarity to military crews of inspection activity.

6.6.2 Users are invited to forward comments or recommended improvements on pipeline and powerline inspection procedures to the CAA Safety and Airspace Regulation Group (SARG) at the following address:

Post: Airspace Section, SARG, CAA House, 45-59 Kingsway, London WC2B 6TE
Phone: 020-7453 6543
Fax: 020-7453 6565.

ENR 1.10 FLIGHT PLANNING (continued)

7 MILITARY LOW FLYING TRAINING IN THE UNITED KINGDOM

7.1 Introduction

7.1.1 The United Kingdom Military Low Flying System (UKLFS) is sponsored by the MoD. The Safety and Airspace Regulation Group and the MoD co-sponsor this section to inform civilian pilots about military low flying training operations in the UK in the interest of mutual flight safety.

7.1.2 Low flying training remains an essential element in the tactical inventory of an effective air force and regular training in a realistic environment is essential to maintain operational capabilities. Over the UK, low flying is carried out by the Royal Air Force, Royal Navy, Army Air Corps and the UK based 16th United States Air Force. To a much lesser degree, training is also conducted by other NATO air forces.

7.2 The United Kingdom Military Low Flying System (UKLFS)

7.2.1 The UKLFS extends across the whole of the UK and surrounding overseas areas, from the surface to 2000 ft. This permits a wide distribution of activity, which contributes to flight safety and reduces the environmental impact of low flying. Military pilots are directed to avoid major conurbations, built up areas, Controlled Airspace (CAS), Aerodrome Traffic Zones (ATZ) and other sensitive locations. Inevitably, the protection given to these areas creates unavoidable concentrations of military low flying activity where corridors are formed between them. Where necessary, military pilots follow directional flows below 2000 ft to reduce the risk of confliction. These flow structures are published at ENR 6-5-2-1.

7.2.2 The UKLFS comprises the airspace vertically from surface to 2000 ft agl/amsl extending laterally to the FIR boundary. For ease of management the airspace is sub-divided into Low Flying Areas (LFA) by day and a different structure of Night LFAs/Sectors at night (see charts at ENR 6-1-10-3 and 6-1-10-4). The Low Flying Booking cell (LFBC) based at RAF Wittering is responsible for the day-to-day management of the majority of the UKLFS. Certain LFAs, nominated as Dedicated User Areas (DUA), are allocated for special use (such as concentrated helicopter training) and are managed under local arrangements. Civil pilots should be aware that Unusual Air Activity (UAA) and night exercises are frequently conducted in DUAs including aircraft operating without, or with reduced lighting particularly when in formation. A limited amount of UAA is conducted in other areas of the UKLFS, which will usually be promulgated by AUS NOTAM.

7.2.3 In the North of Scotland, the Highlands Restricted Area (HRA) is used for special training, often in Instrument Meteorological Conditions (IMC). To ensure safety, entry by civilian and non-participating military aircraft is normally prohibited during the promulgated operating hours. The HRA is not permanently active. Activation times will be promulgated via NOTAM. See ENR 5.1.

7.2.4 UK Danger Areas are regularly used for weapons training. This can lead to an increased amount of low flying in the surrounding airspace. Details of Danger Areas can be found at ENR 5.1.

7.3 Military Low Flying Activity

7.3.1 Military fixed wing aircraft (except light aircraft) are considered to be low flying when less than 2000 ft Minimum Separation Distance (MSD), which is the authorised minimum separation, in all directions, between an aircraft and the ground, water or any obstacle. The lowest height at which military aircraft normally fly is 250 ft MSD. However, in three specially designated areas, known as Tactical Training Areas (TTA), located in Mid-Wales, in the Borders of Scotland and in the North of Scotland, a small number of flights may be authorised to fly down to 100 ft MSD. Military light propeller aircraft and helicopters are considered to be low flying when operating below 500 ft MSD. In practice, most military low flying takes place between 250 ft and 500 ft MSD, decreasing in intensity up to 1000 ft MSD and reducing further in the 1000 ft to 2000 ft height band. Occasionally, however, military aircraft perform high-energy manoeuvres between 250 ft and 2000 ft, during which rapid changes in height, speed and direction of the aircraft will occur.

7.3.2 The vast majority of low flying training is conducted on weekdays between 0700 and 2300 (Local), although a limited amount may take place outside these times or at weekends. Fast jet aircraft are normally limited to a cruising speed of 450 kt, although speeds of up to 500 kt can be authorised for short periods during simulated attacks and practice interceptions. Of course, light propeller aircraft and helicopters operate at much lower speeds.

7.3.3 Most low flying takes place in the UK Flight Information Regions (FIR), outside CAS, where ground radio and radar coverage is not adequate to provide a radar service to military aircraft flying at low level. It would be equally impractical for military jet aircraft to achieve deconfliction by contacting ATC units. Military low flying is only conducted in Visual Meteorological Conditions (VMC), where pilots not only fly with visual reference to the surface, but also apply the ‘see and avoid’ principle regarding other aircraft. The exception to this rule is low flying in the HRA, when active, which is regularly conducted in limited visibility using terrain following radar.

7.3.4 The LFBC based at RAF Wittering disseminates information on hazards and restrictions, including Civil Aircraft Notification Procedure (CANP) and some recreational aviation activities, to military aircrews via a military NOTAM distribution network. It is also possible for some late warnings to be passed to aircrew by telephone before flight, but once airborne, because of high transit speeds, frequency distribution and terrain screening, there is a limit on the extent to which ground to air communications can be maintained.

7.4 Civilian Low Flying

7.4.1 Civilian pilots engaged in low level aerial work might be subject to aircraft manoeuvring limitations and/or restricted lookout. CANP exists to provide military aircrews with information on civil aircraft below 1000 ft agl engaged in crop spraying, photography, surveys or helicopters carrying under-slung loads. Military aircraft flying at speeds in excess of 140 kt will avoid the notified CANP areas of operation either laterally or vertically, with a separation of not less than 500 ft. Recreational activities will not normally attract CANP avoidance areas, but military aircrew will take account of some specified activities when planning low flying sorties. Information on the use of CANP is published at ENR 1.10, paragraph 5.

ENR 1.10 FLIGHT PLANNING (continued)

7.4.2 To reduce the risk of confliction with low flying military aircraft, civilian pilots conducting transit flights under Visual Flight Rules (VFR) during the working week are recommended to fly above 2000 ft agl if possible. In particular, they should avoid operating in the 250 ft to 1000 ft height band. When departing from aerodromes in the FIR, pilots should endeavour to reach 1000 ft as quickly as possible, and to delay descent below 1000 ft for as long as possible when approaching such aerodromes. Military pilots are directed to avoid ATZs. Where an ATZ is established, civilian pilots are recommended to fly circuits and procedures within the ATZ as far as they can. In the vicinity of aerodromes without an ATZ military pilots will apply the 'see and avoid' principle.

7.5 **Conclusion**

7.5.1 In UKLFS airspace, as elsewhere in the FIR, deconfliction depends on pilots seeing and avoiding other aircraft. Civilian pilots can make a considerable contribution to flight safety by flying above 1000 ft whenever possible and remaining aware that some military flying occurs in the 1000 ft to 2000 ft height band.

ENR 2.1 FIR, UIR, TMA (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
SOUTHERN CTA 522632N 0003702W - 522511N 0012817E - 523412N 0015410E - 522842N 0023414E - 522819N 0024644E - 513000N 0020000E - 510700N 0020000E - 510000N 0012800E - 504000N 0012800E - 500000N 0001500W - 500000N 0003155W - 501347N 0001511W - 504626N 0004942W - 504626N 0002908W - 505739N 0004104W - 505728N 0004224W - 510652N 0004829W - 510329N 0011312W - 512348N 0010822W - 512435N 0011444W - 513423N 0011138W - 514420N 0010041W - 515745N 0011126W - 520421N 0003712W - 520316N 0003441W - 521126N 0002220W - 522632N 0003702W Upper limit: FL245 Lower limit: FL195 Class: C	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	118.480 MHz (Note 1)	The following ATS Routes are wholly incorporated within the CTA: L6, L613, M8, M84, M85, M87, M91, M140, M733, N16, N20, P7, P25, P44, P49, P137, P155, P166, Q3, Y4, Y6, Y47, Y311, Y312 and Y803. Parts of the following ATS Routes are incorporated within the CTA: L9, L10, L15, L151, L179, L608, L610, L612, L620, L980, M20, M183, M185, M189, M604, M605, N57, N601, N859, N866, Q41, Q70, Q295, T420, T421, Y8, Y76 and Y321. ***Note 1:*** *GAT overflying the Worthing and Clacton CTAs and/or inbound/ outbound to/from and/or overflying the LTMA.* ***Note 2:*** *Service on one or more of these may be withdrawn by ATC approximately during the hrs 2100-0630 (1 hr earlier in Summer).*
		H24	121.025 MHz As directed. (Note 1)	
		H24	121.225 MHz (Note 1)	
		H24	127.105 MHz (Note 1)	
		H24	127.955 MHz (Note 1)	
		H24	128.425 MHz (Note 1)	
		H24	129.425 MHz (Note 1)	
		H24	130.925 MHz (Note 1)	
		H24	132.165 MHz (Note 1)	
		H24	132.605 MHz (Note 1)	
		H24	133.940 MHz (Note 1)	
		H24	134.900 MHz (Note 1)	
		H24	135.050 MHz (Note 1)	
		H24	135.425 MHz (Note 1)	
		H24	135.800 MHz As directed. (Note 1)	

ENR 2.1 FIR, UIR, TMA (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
STRANGFORD CTA 1 540805N 0044053W - 543542N 0051444W - 540636N 0053913W - 535956N 0045043W - 540805N 0044053W Upper limit: FL245 Lower limit: FL75 Class: C	SCOTTISH CONTROL (PRESTWICK)	SCOTTISH CONTROL English H24	123.775 MHz	FL 245 / FL 195 : Class C FL 195 / FL 75 : Class D The CTA includes a part of AWY L10 between BEL VOR and IOM VOR, part of AWY L15 between DUFFY and MAKUX, part of AWY L603 between LISBO and IOM VOR and part of AWY P6 between BEL and 541920N 0044847W. Parts of the following AWYs are incorporated within the CTA: P600 and P620.
STRANGFORD CTA 2 543542N 0051444W - 544449N 0052608W - 543119N 0053735W - 542534N 0052320W - 543542N 0051444W Upper limit: FL245 Lower limit: 3500 ft ALT Class: C	SCOTTISH CONTROL (PRESTWICK)	SCOTTISH CONTROL English H24	123.775 MHz	FL 245 / FL 195 : Class C FL 195 / 3500 ft ALT : Class D The CTA includes a part of AWY L10 between BEL VOR and IOM VOR and part of AWY P6 between BEL and 541920N 0044847W. Parts of the following AWYs are incorporated within the CTA: P600 and P620. Airspace within CTA 2 (excluding AWY P600) is subject to airspace sharing agreements and ATS from Scottish Control may not be avbl.
STRANGFORD CTA 3 545715N 0051530W - 541100N 0055428W - 542139N 0060517W - 545346N 0053810W - 545418N 0053000W - 545715N 0051530W Upper limit: FL195 Lower limit: FL105 Class: D	SCOTTISH CONTROL (PRESTWICK)	SCOTTISH CONTROL English H24	123.775 MHz	The CTA includes a part of AWY L10 between BEL VOR and IOM VOR and part of AWY P6 between BEL and 541920N 0044847W. Parts of the following AWYs are incorporated within the CTA: P600 and P620.
STRANGFORD CTA 4 541100N 0055428W - 543119N 0053735W - 542534N 0052320W - 540636N 0053913W - 541100N 0055428W Upper limit: FL195 Lower limit: FL55 Class: D	SCOTTISH CONTROL (PRESTWICK)	SCOTTISH CONTROL English H24	123.775 MHz	The CTA includes a part of AWY L10 between BEL VOR and IOM VOR and part of AWY P6 between BEL and 541920N 0044847W. Parts of the following AWYs are incorporated within the CTA: P600 and P620.
STRUMBLE CTA 1 515144N 0062442W - 522000N 0053000W - 524418N 0053000W - 520401N 0045652W - 515517N 0035758W - 514535N 0040150W - 515440N 0050309W - 515144N 0062442W Upper limit: FL195 Lower limit: FL145 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	129.375 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Strumble CTA 1: L9, M17, N546, P2 and Q63. ***Note 1:*** *GAT overflying the Strumble CTA 1.* ***Note 2:*** *Traffic shall not flight plan through this airspace unless via P2.*
STRUMBLE CTA 2 520049N 0060720W - 522000N 0053000W - 524418N 0053000W - 520401N 0045652W - 515517N 0035758W - 514535N 0040150W - 515440N 0050309W - 515233N 0060430W - 520049N 0060720W Upper limit: FL245 Lower limit: FL195 Class: C	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	129.375 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Strumble CTA 2: L9, M17, N546, P2 and Q63. ***Note 1:*** *GAT overflying the Strumble CTA 2.* ***Note 2:*** *Traffic shall not flight plan through this airspace unless via the routes listed above.*

ENR 2.1 FIR, UIR, TMA (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
WORTHING CTA 1 512247N 0011549E - 512130N 0012140E - 512106N 0013052E - 512053N 0013611E - 511826N 0013519E - 511929N 0013040E - 511422N 0013004E - 510600N 0014138E - 510354N 0014545E - 510000N 0012800E - 505842N 0010227E - 512247N 0011549E Upper limit: FL195 Lower limit: FL65 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	134.125 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Worthing CTA 1: L6, L9, L10, L151, L612, L613, L620, M91, M140, M189, M605, M733, N57, Q70, T420, Y8, Y47, Y311, and Y803. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 1.*
		H24	134.900 MHz (Note 1)	
WORTHING CTA 2 504000N 0002220W - 504000N 0003000E - 504507N 0004500E - 505842N 0010227E - 510000N 0012800E - 504000N 0012800E - 500320N 0000639W - 501027N 0001143W - 501347N 0001511W - 501717N 0001053W - 502605N 0000746W - 504000N 0002220W Upper limit: FL195 Lower limit: FL75 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	134.125 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Worthing CTA 2: L6, L9, L10, L151, L612, L613, L620, M91, M140, M189, M605, M733, N57, Q70, T420, Y8, Y47, Y311, and Y803. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 2.*
		H24	135.050 MHz (Note 1)	
WORTHING CTA 3 511929N 0013040E - 511251N 0020000E - 510700N 0020000E - 510354N 0014545E - 510600N 0014138E - 511422N 0013004E - 511929N 0013040E Upper limit: FL195 Lower limit: FL75 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	133.175 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Worthing CTA 3: L9, L10, L151, L612, L620, M140, M189, M605, N57, N859, Q70, T420, Y47 and Y803. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 3.*
		H24	135.050 MHz (Note 1)	
WORTHING CTA 4 503606N 0003840W - 504012N 0002904W - 504132N 0002357W - 502605N 0000746W - 501717N 0001053W - 501347N 0001511W - 503606N 0003840W Upper limit: FL195 Lower limit: FL85 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	133.175 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Worthing CTA 4: L151, N20 and N859. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 4.*
		H24	135.050 MHz (Note 1)	
WORTHING CTA 5 512053N 0013611E - 511948N 0020000E - 511251N 0020000E - 511826N 0013519E - 512053N 0013611E Upper limit: FL195 Lower limit: FL105 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	133.175 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Worthing CTA 5: L9, L10, L15, L151, L612, L613, L620, M140, M189, M605, M733, N859, Q70, T420, Y8, Y47 and Y803. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 5.*
		H24	134.900 MHz (Note 1)	
WORTHING CTA 6 500000N 0003155W - 501347N 0001511W - 501027N 0001143W - 500320N 0000639W - 500000N 0001500W - 500000N 0003155W Upper limit: FL195 Lower limit: FL75 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	135.050 MHz (Note 1)	Part of ATS Route M189 is incorporated within Worthing CTA 6. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 6.*

ENR 2.1 FIR, UIR, TMA (continued)

Name **Lateral Limits** **Vertical Limits** **Class of Airspace**	**Unit Providing Service**	**Callsign** **Language** **Hours of Service,** **Conditions of Use**	**Frequency/** **Channel** **Purpose**	**Remarks**
1	**2**	**3**	**4**	**5**
WORTHING CTA 7 504626N 0004942W - 504626N 0002908W - 504132N 0002357W - 504012N 0002904W - 503606N 0003840W - 503700N 0003938W - 504626N 0004942W Upper limit: FL195 Lower limit: FL65 Class: A	LONDON CONTROL (SWANWICK)	LONDON CONTROL English H24	133.175 MHz (Note 1)	Parts of the following ATS Routes are incorporated within Worthing CTA 7: L151, N20, N859, and Y8. ***Note 1:*** *GAT inbound/outbound LTMA and/or overflying Worthing CTA 7.*
		H24	135.050 MHz (Note 1)	
		H24	135.800 MHz (Note 1)	

ENR 2.2 OTHER REGULATED AIRSPACE

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
BARKSTON HEATH ATZ A circle, 2 nm radius centred at 525747N 0003337W on longest notified runway (06/24) Upper limit: 2000 ft Class: G	CRANWELL	CRANWELL APPROACH English Mon-Fri 0730-1730 Winter (Summer 1hr earlier).	124.450 MHz	Elevation: 367 ft. Runway length: 1831 m. Government Aerodrome.
BENSON ATZ A circle, 2 nm radius centred at 513654N 0010545W on longest notified runway (01/19) Upper limit: 2000 ft Class: G	BENSON	BENSON ZONE English H24	120.900 MHz	Elevation: 203 ft. Runway length: 1825 m. Government Aerodrome. ***Note 1:*** *ATZ crossing service only available to meet operational requirements, which may include night flying.* ***Note 2:*** *All aircraft are to avoid the ATZ if no contact with Benson Zone (120.900 MHz) as recreational flying, Air Ambulance & Police Heli ops H24.*
BOSCOMBE DOWN ATZ A circle, 2.5 nm radius centred at 510911N 0014504W on longest notified runway (05/23) Upper limit: 2000 ft Class: G	BOSCOMBE DOWN	BOSCOMBE ZONE English Mon 0730 - Fri 2359 Winter (Summer 1hr earlier); Sat-Sun SR-SS + 30. Other times by NOTAM.	126.700 MHz ATC	Elevation: 407 ft. Runway length: 3212 m. Government Aerodrome. ***Note:*** *When EGDM MATZ is active, special arrangements exist for flight in the EGLS ATZ, see AD 2 EGLS 2.17. When EGDM MATZ is inactive, the EGLS & EGDM ATZs overlap. The bdry between them is the median line of the overlapping portion.*
BRIZE NORTON ATZ A circle, 2.5 nm radius centred at 514500N 0013501W on longest notified runway (08/26) Upper limit: 2000 ft Class: D	BRIZE NORTON	BRIZE ZONE English H24	119.000 MHz ATC	Elevation: 288 ft. Runway length: 3050 m. Government Aerodrome. ***Note:*** *Within Brize Norton CTR.*
COLERNE ATZ A circle, 2 nm radius centred at 512630N 0021646W on longest notified runway (07/25) Upper limit: 2000 ft Class: G	COLERNE	COLERNE APPROACH English Wed-Sun 0900-1700 Winter (Summer 1hr earlier). Mon-Fri 0800-1600 during Easter and summer school holidays.	120.075 MHz ATC	Elevation: 593 ft. Runway length: 1786 m. Government Aerodrome. ***Note:*** *Flying and other aerial activities may take place outside published hours.*
CONINGSBY ATZ A circle, 2.5 nm radius centred at 530535N 0000958W on longest notified runway (07/25) Upper limit: 2000 ft Class: G	CONINGSBY	CONINGSBY APPROACH English H24	124.675 MHz ATC	Elevation: 25 ft. Runway length: 2743 m. Government Aerodrome.
COSFORD ATZ A circle, 2 nm radius centred at 523824N 0021820W on longest notified runway (06/24) Upper limit: 2000 ft Class: G	COSFORD	COSFORD APPROACH English Sat-Wed (Sep-May) SR-SS. Mon-Fri (Jun-Aug) SR-SS. Other times by NOTAM.	135.875 MHz ATC	Elevation: 272 ft. Runway length: 1118 m. Government Aerodrome. ***Note 1:*** *Air Ambulance and other aerial activity outside of these times.* ***Note 2:*** *Airfield and ATZ active outside of these times.*
CRANWELL ATZ A circle, 2.5 nm radius centred at 530147N 0002934W on longest notified runway (09/27) Upper limit: 2000 ft Class: G	CRANWELL	CRANWELL APPROACH English Mon-Fri 0730-2359, Sat-Sun 0730-SS+1hr Winter (Summer 1hr earlier). Other times by NOTAM.	124.450 MHz	Elevation: 218 ft. Runway length: 2082 m. Government Aerodrome.
CULDROSE ATZ A circle, 2.5 nm radius centred at 500507N 0051515W on longest notified runway (12/30) Upper limit: 2000 ft Class: G	CULDROSE	CULDROSE APPROACH English H24	134.050 MHz ATC	Elevation: 267 ft. Runway length: 1899 m. Government Aerodrome.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
FAIRFORD ATZ A circle, 2.5 nm radius centred at 514101N 0014725W on longest notified runway (09/27) Upper limit: 2000 ft Class: D	BRIZE NORTON	BRIZE RADAR English H24	119.000 MHz	Elevation: 286 ft. Runway length: 3046 m. Government Aerodrome. ***Note:*** *Airspace Class: D/G. Partly within Brize Norton CTR.*
HALTON ATZ A circle, 2 nm radius centred at 514733N 0004416W on longest notified runway (02/20) Upper limit: 2000 ft Class: G	HALTON	HALTON RADIO English 0900-2000 or SS + 15 (1 hr earlier in Summer).	130.425 MHz A/G	Elevation: 370 ft. Runway length: 1130 m. Government Aerodrome.
HONINGTON ATZ A circle, 2 nm radius centred at 522036N 0004648E on longest notified runway (08/26) Upper limit: 2000 ft Class: G	LAKENHEATH	LAKENHEATH RADAR English Sat-Sun 0830-1700 (1hr earlier in Summer). Other times by NOTAM.	128.900 MHz ATC	Elevation: 174 ft. Runway length: 1800 m. Government Aerodrome. ***Note 1:*** *Western side of ATZ overlaps the Lakenheath/Mildenhall CMATZ.* ***Note 2:*** *Traffic may be transferred to 122.100 MHz, callsign 'Honington Radio'.*
KINLOSS ATZ A circle, 2.5 nm radius centred at 573858N 0033338W on longest notified runway (07/25) Upper limit: 2000 ft Class: G	LOSSIEMOUTH	LOSSIE RADAR English H24	119.575 MHz ATC	Elevation: 22 ft. Runway length: 2375 m. Government Aerodrome.
LAKENHEATH ATZ A circle, 2.5 nm radius centred at 522433N 0003340E on longest notified runway (06/24) Upper limit: 2000 ft Class: G	LAKENHEATH	LAKENHEATH RADAR English H24	128.900 MHz ATC	Elevation: 32 ft. Runway length: 2743 m. Government Aerodrome.
LEEMING ATZ A circle, 2.5 nm radius centred at 541733N 0013207W on longest notified runway (16/34) Upper limit: 2000 ft Class: G	LEEMING	LEEMING ZONE English Mon-Thu 0800-1800, Fri 0800-1700 Winter (Summer 1hr earlier). Other times by NOTAM.	127.750 MHz ATC	Elevation: 132 ft. Runway length: 2292 m. Government Aerodrome.
LEUCHARS ATZ A circle, 2.5 nm radius centred at 562230N 0025129W on longest notified runway (09/27) Upper limit: 2000 ft Class: G	LEUCHARS	LEUCHARS RADAR English H24	126.500 MHz ATC	Elevation: 38 ft. Runway length: 2588 m. Government Aerodrome.
LINTON-ON-OUSE ATZ A circle, 2 nm radius centred at 540258N 0011511W on longest notified runway (03/21) Upper limit: 2000 ft Class: G	LINTON-ON-OUSE	LINTON ZONE English Mon-Thu 0800-1715, Fri 0800-1700 Winter (Summer 1hr earlier). Other times by NOTAM.	118.550 MHz ATC	Elevation: 53 ft. Runway length: 1834 m. Government Aerodrome.
LOSSIEMOUTH ATZ A circle, 2.5 nm radius centred at 574218N 0032021W on longest notified runway (05/23) Upper limit: 2000 ft Class: G	LOSSIEMOUTH	LOSSIE RADAR English H24	119.575 MHz ATC	Elevation: 42 ft. Runway length: 2847 m. Government Aerodrome.
LYNEHAM ATZ A circle, 2.5 nm radius centred at 513019N 0015936W on longest notified runway (06/24) Upper limit: 2000 ft Class: G	LYNEHAM	English By NOTAM.	ATC By NOTAM	Elevation: 513 ft. Runway length: 2386 m. Government Aerodrome.
MARHAM ATZ A circle, 2.5 nm radius centred at 523854N 0003302E on longest notified runway (06/24) Upper limit: 2000 ft Class: G	MARHAM	MARHAM DIRECTOR English H24	124.150 MHz ATC	Elevation: 75 ft. Runway length: 2786 m. Government Aerodrome.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
MERRYFIELD ATZ A circle, 2.5 nm radius centred at 505747N 0025613W on longest notified runway (09/27) Upper limit: 2000 ft Class: G	MERRYFIELD	MERRYFIELD TOWER English Mon 0800-Fri 1600 Winter (Summer 1hr earlier). Other times by NOTAM.	122.100 MHz ATC	Elevation: 146 ft. Runway length: 1831 m. Government Aerodrome.
MIDDLE WALLOP ATZ A circle, 2 nm radius centred at 510822N 0013407W Upper limit: 2000 ft Class: G	BOSCOMBE DOWN	BOSCOMBE ZONE English H24	126.700 MHz ATC	Elevation: 297 ft. Government Aerodrome.
MILDENHALL ATZ A circle, 2.5 nm radius centred at 522142N 0002911E on longest notified runway (11/29) Upper limit: 2000 ft Class: G	LAKENHEATH	LAKENHEATH RADAR English H24	128.900 MHz ATC	Elevation: 33 ft. Runway length: 2810 m. Government Aerodrome.
MONA ATZ A circle, 2 nm radius centred at 531533N 0042226W on longest notified runway (04/22) Upper limit: 2000 ft Class: G	VALLEY	VALLEY RADAR English Mon-Thu 0800-2359 Fri-Sun 0800-2200 Winter (Summer 1hr earlier).	125.225 MHz ATC	Elevation: 202 ft. Runway length: 1656 m. Government Aerodrome.
NETHERAVON ATZ A circle, 2 nm radius centred at 511450N 0014515W on longest notified runway (11/29) Upper limit: 2000 ft Class: G	NETHERAVON	NETHERAVON INFORMATION English H24	128.300 MHz AFIS & A/G	Elevation: 455 ft. Runway length: 1092 m. Government Aerodrome.
ODIHAM ATZ A circle, 2 nm radius centred at 511403N 0005634W on longest notified runway (09/27) Upper limit: 2000 ft Class: G	ODIHAM	ODIHAM APPROACH English H24	131.300 MHz ATC	Elevation: 405 ft. Runway length: 1838 m. Government Aerodrome. ***Note:*** *Odiham Approach, except weekends and PH, when the task may be carried out by Farnborough on Frequency 125.250 MHz.*
PORTSMOUTH/FLEETLANDS ATZ 504828N 0010920W - thence clockwise by the arc of a circle radius 2 nm centered on 504857N 0011224W to 504810N 0010929W - thence anti-clockwise by the arc of a circle radius 2 nm centered on 505007N 0011010W to 505054N 0011304W - thence clockwise by the arc of a circle radius 2 nm centered on 504857N 0011224W to 505047N 0011110W - 504828N 0010920W Upper limit: 2000 ft Class: G	FLEETLANDS	FLEETLANDS INFORMATION English Mon-Thu 0830-1730, Fri 0830-1530 (1 hour earlier in summer) (see notes)	135.700 MHz AFIS	Elevation: 27 ft. Government Aerodrome. ***Note:*** *Aircraft operations may be encountered outside of published hours.*
PREDANNACK ATZ A circle, 2 nm radius centred at 500006N 0051355W on longest notified runway (05/23) Upper limit: 2000 ft Class: G	CULDROSE	CULDROSE APPROACH English Mon 0800-Fri 1600 Winter (Summer 1hr earlier). Other times by NOTAM.	134.050 MHz ATC	Elevation: 295 ft. Runway length: 1814 m. Government Aerodrome.
SAINT ATHAN ATZ A circle, 2 nm radius centred at 512419N 0032600W on the mid-point of the longest runway (08/26) except that part of circle east of a straight line joining 512532N 0032328W and 512241N 0032410W. Upper limit: 2000 ft Class: D	ST ATHAN	ST ATHAN TOWER English 0900-1700 Winter (Summer 1hr earlier).	118.125 MHz	Elevation: 163 ft. Runway length: 1825 m. Government Aerodrome. ***Note:*** *Class of Airspace: D within Cardiff CTR. Outside of St Athan Tower opening times ATZ under Control of Cardiff Approach, Frequency: 119.150 MHz.*
SCAMPTON ATZ A circle, 2.5 nm radius centred at 531828N 0003303W on longest notified runway (04/22) Upper limit: 2000 ft Class: G	WADDINGTON	WADDINGTON ZONE English May-Oct (incl): Mon-Sun 0700-2200, Nov-Apr (incl): Mon-Fri 0815-1715 (1 hr earlier in Summer).	119.500 MHz ATC	Elevation: 202 ft. Runway length: 2740 m. Government Aerodrome.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
SHAWBURY ATZ A circle, 2 nm radius centred at 524737N 0024004W on longest notified runway (18/36) Upper limit: 2000 ft Class: G	SHAWBURY	SHAWBURY ZONE English H24	133.150 MHz	Elevation: 249 ft. Runway length: 1834 m. Government Aerodrome.
SYERSTON ATZ A circle, 2 nm radius centred at 530124N 0005442W on longest notified runway (06/24) Upper limit: 2000 ft Class: G	SYERSTON	SYERSTON RADIO English 0830-SS+15 Winter (Summer 1hr earlier).	128.525 MHz A/G	Elevation: 228 ft. Runway length: 1827 m. Government Aerodrome.
TERNHILL ATZ A circle, 2 nm radius centred at 525225N 0023155W on longest notified runway (05/23) Upper limit: 2000 ft Class: G	SHAWBURY	SHAWBURY ZONE English Mon-Thu 0830-0230, Fri 0800-1700 Winter (Summer 1hr earlier). Sat-Sun SR-SS+15.	133.150 MHz	Elevation: 272 ft. Runway length: 980 m. Government Aerodrome. ***Note:*** *Weekend and out of hours, contact Ternhill Radio for traffic information freq 122.100 MHz.*
TOPCLIFFE ATZ A circle, 2 nm radius centred at 541220N 0012254W on longest notified runway (02/20) Upper limit: 2000 ft Class: G	LEEMING	TOPCLIFFE APPROACH English H24	125.000 MHz	Elevation: 91 ft. Runway length: 1826 m. Government Aerodrome. ***Note:*** *Leeming Zone to be contacted outside of Topcliffe Approach published hours.*
VALLEY ATZ A circle, 2.5 nm radius centred at 531453N 0043207W on longest notified runway (13/31) Upper limit: 2000 ft Class: G	VALLEY	VALLEY RADAR English H24	125.225 MHz ATC	Elevation: 36 ft. Runway length: 2290 m. Government Aerodrome.
WADDINGTON ATZ A circle, 2.5 nm radius centred at 530958N 0003126W on longest notified runway (02/20) Upper limit: 2000 ft Class: G	WADDINGTON	WADDINGTON ZONE English H24	119.500 MHz ATC	Elevation: 231 ft. Runway length: 2743 m. Government Aerodrome.
WATTISHAM ATZ A circle, 2.5 nm radius centred at 520738N 0005723E on longest notified runway (05/23) Upper limit: 2000 ft Class: G	WATTISHAM	WATTISHAM APPROACH English HO	125.800 MHz ATC	Elevation: 284 ft. Runway length: 2283 m. Government Aerodrome. ***Note:*** *Police Helicopter and other aerial activity H24.*
WITTERING ATZ A circle, 2.5 nm radius centred at 523647N 0002833W on longest notified runway (07/25) Upper limit: 2000 ft Class: G	WITTERING	WITTERING ZONE English Mon-Fri 0800-1900, Sat 0800-1700 Winter (Summer 1hr earlier). Other times by NOTAM.	119.675 MHz ATC	Elevation: 273 ft. Runway length: 2758 m. Government Aerodrome.
WOODVALE ATZ A circle, 2 nm radius centred at 533456N 0030324W on longest notified runway (03/21) Upper limit: 2000 ft Class: G	WOODVALE	WOODVALE APPROACH English Tue-Sun 0800-1800 (See note 1) (1 hr earlier in Summer). (See note 2).	121.000 MHz ATC and A/G	Elevation: 37 ft. Runway length: 1647 m. Government Aerodrome. ***Note 1:*** *AD may close earlier by NOTAM, AD status available from: Warton APP 129.525 MHz; Blackpool APP 119.950 MHz; Liverpool APP 119.850 MHz.* ***Note 2:*** *Police helicopter and other aerial activity H24. Aircraft requested to announce intentions and make standard R/T calls on 121.000 MHz.*

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

Name Lateral Limits Vertical Limits Class of Airspace	Unit Providing Service	Callsign Language Hours of Service, Conditions of Use	Frequency/ Channel Purpose	Remarks
1	2	3	4	5
YEOVILTON ATZ A circle, 2.5 nm radius centred at 510029N 0023845W on longest notified runway (09/27) (See note). Upper limit: 2000 ft Class: G	YEOVILTON	YEOVIL RADAR English H24	127.350 MHz ATC	Elevation: 75 ft. Runway length: 2292 m. Government Aerodrome. ***Note 1:*** *Except that part of the circle south of a straight line joining: 505817N 0024037W & 505804N 0023744W.* ***Note 2:*** *Recreational flying and gliding takes place outside of published hours. Police/SAR/Air Ambulance are approved to transit the ATZ outside published hours. They should call Yeovil Tower 120.800 MHz which is monitored when activity is taking place.*

1 AIRSPACE WITHIN WHICH ATS IS DELEGATED

1.1 The Areas Involved in the Transfer of ATS Responsibility Within the Northern North Sea at FL 85 and Below

1.1.1 **North Sea Area I** — Class G Airspace.

In this part of the Stavanger FIR, the United Kingdom will provide Air Traffic Services to all aircraft at FL 85 and below. Procedures and communications will be as if this airspace is an integral part of the Scottish FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
590504N 0013916E - 600000N 0000000E - 630000N 0000000E - 630000N 0003120E - 625328N 0003821E - 622219N 0010622E - 614410N 0013329E - 612122N 0014718E - 595346N 0020430E - 591722N 0014236E - 590504N 0013916E.

1.1.2 **North Sea Area II** – Class G Airspace (includes two areas of Class D Airspace).

In this part of the Scottish FIR, Norway will provide Air Traffic Services to all aircraft at FL 85 and below. Procedures and communications will be as if this airspace is an integral part of the Stavanger FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
590504N 0013916E - 570000N 0050000E - 563500N 0050000E - 560510N 0031455E - 563540N 0023642E - 575416N 0015748E - 582546N 0012854E - 590504N 0013916E.

1.1.2.1 **Balder CTA** – Class D Airspace.

In this airspace, contained within the North Sea Area II, a CTA of airspace Classification D has been established, in which Norway will provide Air Traffic Services to all aircraft at 1500 ft to FL 85. Procedures and communications will be as if this airspace is an integral part of the Stavanger FIR. For lateral limits, please refer to CTA entry detailed in ENR 2.1.

1.1.2.2 **Ekofisk CTA** – Class D Airspace

In this airspace, contained within the North Sea Area II, a CTA of airspace Classification D has been established, in which Norway will provide Air Traffic Services to all aircraft at 1500 ft to FL 85. Procedures and communications will be as if this airspace is an integral part of the Stavanger FIR. For lateral limits, please refer to CTA entry detailed in ENR 2.1.

1.1.3 **North Sea Area III** — Class G Airspace.

In this part of the Scottish FIR, Denmark will provide Air Traffic Services to all aircraft at FL 85 and below. Procedures and communications will be as if this airspace is an integral part of the Copenhagen FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
563500N 0050000E - 550000N 0050000E - 551958N 0041955E - 554552N 0032208E - 555004N 0032355E - 555458N 0032055E - 560510N 0031455E - 563500N 0050000E.

1.1.4 **North Sea Area IV** — Class G Airspace (See Note).

In this part of the Reykjavik FIR/OCA, the United Kingdom will provide Air Traffic Services to all aircraft at FL 85 and below during the notified times of the Sumburgh Radar (Aberdeen ATSU) as listed at ENR 1.6, paragraph 4.5.2.2. Procedures and communications will be as if this airspace is an integral part of the Scottish FIR. This area is bounded by rhumb lines joining points (1) to (2) and points (3) to (4) and the arcs of Great Circles joining points (2) to (3) and points (4) to (1). The points within the Reykjavik FIR/OCA are:
(1) 610000N 0000000E -
(2) 610000N 0040000W -
(3) 630000N 0012637W -
(4) 630000N 0000000E -
(1) 610000N 0000000E.

Note: *Class A FL 55 and above outside notified times.*

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

1.2 The Area Involved in the Transfer of ATS Responsibility Within the Southern North Sea at FL 55 and Below

1.2.1 **North Sea Area V** — Class G Airspace.

In these parts of the London and Scottish FIRs the Netherlands will provide Air Traffic Services to all aircraft at FL 55 and below (FL 45 and below, beneath EG D323C). Procedures and communications will be as if this airspace was an integral part of the Amsterdam FIR. This area is bounded (excluding the extreme south-eastern fillet of EG D323C) by the arcs of Great Circles joining in succession the following points:
550000N 0050000E - 551958N 0041955E - 554552N 0032208E - 543715N 0025349E - 542245N 0024543E - 535745N 0025155E - 534003N 0025719E - 533503N 0025913E - 532809N 0030055E - 531803N 0030319E - 525551N 0030936E - 550000N 0050000E.
Aircraft operating within Area V are strongly encouraged to contact Amsterdam ACC (on published frequencies, providing their position, altitude, squawk, heading and intentions) and strongly encouraged to ensure that transponders are switched on and operational in Mode 3/A and C/ALT.

1.3 The Area Involved in the Transfer of ATS Responsibility Within the North Sea High Area between FL 195 and FL 660 (inclusive)

1.3.1 **North Sea High Area - FL 195 - FL 660** — Class C Airspace.

In these parts of the London and Scottish UIRs/FIRs Denmark will provide Air Traffic Services to all aircraft between FL 195 and FL 660 (inclusive) in parts of the London and Scottish FIRs/UIRs to Denmark. Procedures and communications will be as if this airspace was an integral part of the Copenhagen FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
570000N 0050000E - 550000N 0050000E - 543000N 0043209E - 543843N 0042000E - 544927N 0041110E - 550252N 0040000E - 555116N 0033000E - 563035N 0033000E - 572000N 0042958E - 570000N 0050000E.

1.4 The Area Involved in the Transfer of ATS Responsibility Within the Southern North Sea between FL 175 and FL 245 (inclusive).

1.4.1 FL 195 - FL 245 — Class C Airspace.
FL 175 - FL 195 — Class A Airspace.
In these parts of the London FIR the Netherlands will provide Air Traffic Services to all aircraft between FL 175 and FL 245 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Amsterdam FIR. The areas are bounded by straight lines joining in succession the following points:

(a) **CTA 2 (GODOS)**
534148N 0030000E - 533411N 0034222E - 531029N 0032158E - 531441N 0031102E - 531608N 0030000E - 534148N 0030000E.

(b) **CTA 3 (MOLIX)**
532000N 0023000E - 531441N 0031102E - 531029N 0032158E - 523704N 0025356E - 524010N 0023000E - 532000N 0023000E.

1.5 The Area Involved in the Transfer of ATS Responsibility Within the Amsterdam FIR - REFSO Areas.

1.5.1 **REFSO Area A** - FL 215 - FL 660 — Class C Airspace (ATS - London Area Control (Swanwick)).

In these parts of the Amsterdam FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 215 and FL 660 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. This area is bounded in succession by the following points:
515702N 0022123E - 515756N 0031019E - 512850N 0031019E - 514245N 0021001E - 515702N 0022123E.

1.5.2 **REFSO Area B**

FL 195 - FL 215 — Class C Airspace (ATS - London Terminal Control (Swanwick)).
FL 55 - FL 195 — Class A Airspace (ATS - London Terminal Control (Swanwick)).

In these parts of the Amsterdam FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 55 and FL 215 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. This area is bounded in succession by the following points:
515702N 0022123E - 515725N 0024001E - 513555N 0024001E - 514245N 0021001E - 515702N 0022123E.

1.6 The Area Involved in the Transfer of ATS Responsibility Within the Amsterdam FIR - SASKI Areas.

1.6.1 **SASKI Area B** - FL 215 - FL 660 — Class C Airspace (ATS - London Area Control (Swanwick)).

In these parts of the Amsterdam FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 215 and FL 660 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. This area is bounded in succession by the following points:
514245N 0021001E - 513813N 0023000E - 512720N 0023000E - 513000N 0020000E - 514245N 0021001E.

1.6.2 **SASKI Area C**

FL 195 - FL 215 — Class C Airspace (ATS - London Terminal Control (Swanwick)).
FL 55 - FL 195 — Class A Airspace (ATS - London Terminal Control (Swanwick)).

In these parts of the Amsterdam FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 55 and FL 215 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. This area is bounded in succession by the following points:

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

514245N 0021001E - 513813N 0023000E - 512720N 0023000E - 513000N 0020000E - 514245N 0021001E.

1.7 The Area Involved in the Transfer of ATS Responsibility Within the Southwestern Corner of the London UIR between FL 245 and FL 660 (inclusive)

1.7.1 **PEMAK Triangle** - FL 245 - FL 660 — Class C Airspace.

In this part of the London UIR, France will provide Air Traffic Services to all aircraft between FL 245 and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the France UIR. This area is bounded by arcs of Great Circles joining in succession the following points:
493323N 0065617W - 492841N 0045513W - 485542N 0073430W - 493323N 0065617W.

1.7.2 **TAKAS Box** - FL 245 - FL 660 — Class C Airspace.

In this part of the London UIR, the Irish Republic will provide Air Traffic Services to all aircraft between FL 245 and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Irish Republic UIR. This area is bounded by arcs of Great Circles joining in succession the following points:
493500N 0080000W - 493323N 0065617W - 485542N 0073430W - 485000N 0080000W - 493500N 0080000W.

1.8 The Area Involved in the Transfer of ATS Responsibility Within the Irish Sea

1.8.1 **Airway L975 (between LIFFY and GINIS)** Base levels to FL 245 — Class C Airspace.

In this part of the London FIR, the Irish Republic will provide Air Traffic Services to all GAT within Airway L975 between the LIFFY and GINIS Reporting Points, between the base levels and FL 245 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Irish Republic FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
533548N 0053000W - 533438N 0045050W - 532247N 0045322W - 532315N 0051017W - 531500N 0053000W - 533548N 0053000W.

1.8.2 **Airway L70 (between BAGSO and RAMOX)** Base levels to FL 245 — Class C Airspace.

In this part of the London FIR, the Irish Republic will provide Air Traffic Services to all GAT within Airway L70 between the BAGSO and RAMOX Reporting Points, between the base levels and FL 245 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Irish Republic FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
534545N 0053000W - 534436N 0044955W - 533438N 0045050W - 533548N 0053000W - 534545N 0053000W.

1.8.3 **Airway Y124 (between DEXEN and 5 nm west of LUTIP)** Base levels to FL 245 — Class C Airspace.

In this part of the London FIR, the Irish Republic will provide Air Traffic Services to all GAT within Airway Y124 between the reporting point DEXEN and 5 nm west of LUTIP, between the base levels and FL 245 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Irish Republic FIR. This area is bounded by arcs of Great Circles joining in succession the following points:
531042N 0045250W - 532240N 0045147W - 532350N 0053000W - 531147N 0052959W - 531042N 0045250W.

1.8.4 **Airway L18 (between BADSI and LIPGO)** Base levels to FL 245 — Class C Airspace.

In this part of the London FIR, the Irish Republic will provide Air Traffic Services to all GAT within Airway L18 between the BADSI and LIPGO Reporting Points, between the base levels and FL 245 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Irish Republic FIR.

1.8.5 **BANBA CTA** FL 195 - FL 660 — Class C Airspace.

In this part of the London FIR/UIR, the Irish Republic will provide Air Traffic Services to all GAT, between FL 195 and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Shannon UIR. This area is bounded by arcs of Great Circles joining in succession the following points:
520049N 0060720W - 514034N 0060027W - 512400N 0065305W - 512528N 0071351W - 520049N 0060720W.

1.9 The Area Involved in the Transfer of ATS Responsibility Within the Shannon FIR/UIR

1.9.1 **Donegal Area -** FL 245 - FL 660 — Class C Airspace.

In this part of the Shannon UIR, the United Kingdom (Scottish AC (Prestwick)) will provide Air Traffic Services to all aircraft between FL 245 and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Scottish UIR. This area is bounded by arcs of Great Circles joining in succession the following points:
542500N 0081000W - 552000N 0065500W - 552500N 0072000W - 552000N 0081500W - 544500N 0090000W - 543858N 0093320W - 542500N 0081000W.

1.9.2 **EGLINTON CTA (CTA 1)** 1500 FT ALT - FL 75 - Class C Airspace (ATS - EGAE).

In this part of the Shannon FIR, the United Kingdom will provide Air Traffic Services to all aircraft between 1500 ft altitude and FL 75 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Scottish FIR. This area is bounded in succession by the following points:
550527N 0071520W - 545506N 0072926W - 550205N 0073332W - 550527N 0071520W.

1.9.3 **EGLINTON CTA (CTA 2)** 2000 FT ALT - FL 75 — Class C Airspace (ATS - EGAE).

In this part of the Shannon FIR, the United Kingdom will provide Air Traffic Services to all aircraft between 2000 ft altitude and FL 75 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Scottish FIR. This area is bounded in succession by the following points:

550205N 0073332W - 545506N 0072926W - 545212N 0073329W - 550114N 0073807W - 550205N 0073332W.

1.9.4 **EGLINTON CTA (CTA 3)** 3000 FT ALT - FL 75 - Class C Airspace (ATS - EGAE).

In this part of the Shannon FIR, the United Kingdom will provide Air Traffic Services to all aircraft between 3000 ft altitude and FL 75 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Scottish FIR. This area is bounded in succession by the following points:
551217N 0070547W - 550527N 0071520W - 550317N 0072703W - Arc 10 nm radius centred on EGAE ARP (550234N 0070943W) - 551217N 0070547W.

1.9.5 Outside the published hours of operation of Eglinton ATC (or NOTAM extensions thereof), the blocks of Airspace CTA1, CTA2, CTA3, revert to Class G Airspace under the authority of Shannon ACC.

1.10 The Area Involved in the Transfer of ATS Responsibility Within the North Atlantic

1.10.1 **RATSU Triangle**

SFC - FL 195 — Class G Airspace.
FL 195 - FL 660 — Class C Airspace.

In this part of the Scottish FIR/UIR, Iceland (Reykjavik ACC) will provide Air Traffic Services to all aircraft between the surface and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Reykjavik FIR. The area is bounded by straight lines joining in succession the following points:
610000N 0070000W - 604000N 0100000W - 610000N 0100000W - 610000N 0070000W.

1.10.2 **The Common Boundary Line (61N)**

SFC - FL 195 — Class G Airspace.
FL 195 - FL 660 — Class C Airspace.

At the Scottish and Reykjavik FIR/UIR boundary, Iceland (Reykjavik ACC) will provide Air Traffic Services to all aircraft between the surface and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Reykjavik FIR. The area is a straight line joining the following points:
610000N - 0000000E - 610000N 0070000W.

1.10.3 **MOLAK Triangle**

FL255 - FL660 — Class C Airspace.

In this part of the Scottish UIR, the Irish Republic (Shannon ACC) will provide Air Traffic Services to all aircraft between FL 255 and FL 660 (inclusive). Procedures and communications will be as if this airspace were an integral part of the Shannon UIR. The area is bounded by straight lines joining in succession the following points:
544311.750N 0100000.000W - 543857.730N 0093320.029W - 543400.000N 0100000.000W - 544311.750N 0100000.000W.

1.11 The Area Involved in the Transfer of ATS Responsibility Within the Paris FIR – La Manche Low.

1.11.1 La Manche East (Low) 1 – FL 115 - FL 265.

FL 115 - FL 195 — Class D Airspace (ATS - London Area Control (Swanwick)).
FL 195 - FL 265 — Class C Airspace (ATS - London Area Control (Swanwick)).

In these parts of the Paris FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 115 and FL 265 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. The area is bounded by arcs of Great Circles joining in succession the following points:

504000N 0012800E - 503606N 0013218E - 501017N 0015131E - 500331N 0013906E - 501629N 0010108E - 502517N 0004917E - 504000N 0012800E.

1.11.2 La Manche East (Low) 2 – FL 195 - FL 265.

FL 195 - FL 265 — Class C Airspace (ATS - London Area Control (Swanwick)).

In these parts of the Paris FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 195 and FL 265 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. The area is bounded by arcs of Great Circles joining in succession the following points:

501629N 0010108E - 500331N 0013906E - 495656N 0012709E - 501629N 0010108E.

1.11.3 La Manche East (Low) 3 – FL 115 - FL 265.

FL 115 - FL 195 — Class D Airspace (ATS - London Terminal Control (Swanwick)).
FL 195 - FL 265 — Class C Airspace (ATS - London Area Control (Swanwick)).

In these parts of the Paris FIR the United Kingdom will provide Air Traffic Services to all aircraft between FL 115 and FL 265 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. The area is bounded by arcs of Great Circles joining in succession the following points:

505419N 0012754E - 504244N 0014405E - 503925N 0013811E - 503606N 0013218E - 504000N 0012800E - 505419N 0012754E.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

1.12 The Area Involved in the Transfer of ATS Responsibility Within the Reims UIR – La Manche High Area.

1.12.1 La Manche East (High 1) - FL 265 - FL 285 — Class C Airspace.

In this part of the Reims UIR, the United Kingdom will provide Air Traffic Services to all aircraft between FL 265 and FL 285 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. The area is bounded by arcs of Great Circles joining in succession the following points:

505419N 0012754E - 504244N 0014405E - 503925N 0013811E - 503606N 0013218E - 501346N 0015706E - 501017N 0015131E - 500659N 0014527E - 495656N 0012709E - 495951N 0012317E - 495841N 0011944E - 502405N 0004611E - 502517N 0004917E - 504000N 0012800E - 505419N 0012754E.

1.12.2 La Manche East (High 2) - FL 285 - FL 660 — Class C Airspace.

In this part of the Reims UIR, the United Kingdom will provide Air Traffic Services to all aircraft between FL 285 and FL 660 (inclusive). Procedures and communications will be as if this airspace was an integral part of the London FIR/UIR. The area is bounded by arcs of Great Circles joining in succession the following points:

505419N 0012754E - 504244N 0014405E - 503925N 0013811E - 503606N 0013218E - 501346N 0015706E - 501017N 0015131E - 500659N 0014527E - 495656N 0012709E - 495519N 0012412E - 495841N 0011944E – 502405N 0004611E - 502517N 0004917E - 504000N 0012800E - 505419N 0012754E.

1.13 The Area Involved in the Transfer of ATS Responsibility Within the London FIR – South-eastern Section of the English Channel.

1.13.1 Part of Lille TMA Area 7 - 1500ft AMSL - FL 65 Class E Airspace (ATS Lille Approach).

In this part of the London FIR, France will provide Air Traffic Services to all aircraft between 1500ft AMSL – FL 65 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Paris FIR. The area is bounded by arcs of Great Circles joining in succession the following points:

503800N 0011500E - 504526N 0012800E - 504000N 0012800E - 503608N 0011744E - 503800N 0011500E.

1.14 The Area Involved in the Transfer of ATS Responsibility Within the London FIR – The Channel Islands.

1.14.1 Channel Islands CTA 1 (North) - FL 55 - FL 80 — Class D Airspace.

In this part of the London FIR, Jersey will provide Air Traffic Services to all aircraft between FL 55 and FL 80 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Channel Islands airspace which is delegated to Jersey from France during the opening hours of Jersey ATC. The area is bounded by arcs of Great Circles joining in succession the following points:

500000N 0030000W - 494951N 0030000W - 494802N 0031023W - 500000N 0032000W - 500000N 0030000W.

1.14.2 Channel Islands Control Zone (North) - SFC - FL 80 — Class D Airspace.

In this part of the London FIR, Jersey will provide Air Traffic Services to all aircraft between SFC and FL 80 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Channel Islands airspace which is delegated to Jersey from France during the opening hours of Jersey ATC. The area is bounded by arcs of Great Circles joining in succession the following points:

500000N 0020000W - 494951N 0030000W - 500000N 0030000W - 500000N 0020000W.

1.14.3 Channel Islands TMA (North) - FL 80 - FL 195 — Class A Airspace.

In this part of the London FIR, Jersey will provide Air Traffic Services to all aircraft between FL 80 and FL 195 (inclusive). Procedures and communications will be as if this airspace was an integral part of the Channel Islands airspace which is delegated to Jersey from France during the opening hours of Jersey ATC. The area is bounded by arcs of Great Circles joining in succession the following points:

500000N 0020000W - 494802N 0031023W - 500000N 0032000W - 500000N 0020000W.

1.15 The Areas involved in the Transfer of ATS Responsibility are marked on the charts at ENR 6-2-2-1-1 to ENR 6-2-2-1-14 and ENR 6-2-2-4-1.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

2 MILITARY AERODROME TRAFFIC ZONES

2.1 Description

2.1.1 At certain military aerodromes, Military Aerodrome Traffic Zones (MATZ) have been established to provide a volume of airspace within which increased protection may be given to aircraft in the critical stages of circuit, approach and climb-out. A MATZ acquires the status of the airspace classification within which it lies; however, additional mandatory ATC requirements are invariably specified for military pilots. In the airspace outside the Aerodrome Traffic Zone (ATZ), observation of MATZ procedures is not compulsory for civil pilots.

2.1.2 MATZ are established at the locations listed at paragraph 4 and shown on the chart at ENR 6-2-2-3-1.

2.1.3 In general, the dimensions of a MATZ are as follows:

(a) The airspace within 5 nm radius of the mid-point of the longest runway, from the surface to 3000 ft aal.

(b) The airspace within a stub or stubs projected from the above airspace, having a length of 5 nm along the centre-line(s) aligned with the selected final approach path(s), and a width of 4 nm (2 nm either side of the centre-line) from 1000 ft aal to 3000 ft aal.

(c) Exceptions to the above exist; however, for details of the dimensions of specific zones and the associated stub(s) see paragraph 4 and ENR 6-2-2-3-1 (chart).

2.1.4 Where two or more MATZs are grouped together and one aerodrome is designated the Controlling Aerodrome, the upper limit of each MATZ within the Combined MATZ (CMATZ) is determined with reference to the elevation of the higher (or highest) aerodrome in the CMATZ.

2.1.5 An ATZ, as defined in Article 258 of the Air Navigation Order 2009, exists within a MATZ and is based upon the same reference point as defined in paragraph 2.1.3 and detailed at paragraph 2.4. Although civil recognition of a MATZ is not mandatory, pilots are to comply with the provisions of Rule 11 of the Rules of the Air Regulations 2015 in respect of the ATZ. The notified hours of operation of an ATZ may vary from the notified hours of watch of a MATZ.

2.1.6 A MATZ is operative when the aerodrome concerned, or in the case of a CMATZ, any one of the aerodromes, is open. Normally, the Controlling Aerodrome ATC Unit for a CMATZ is to remain open while any one of the aerodromes in the CMATZ is open for flying. Alternatively, the Controlling Aerodrome is to delegate overall responsibility to the aerodrome remaining open, in cluding arrangements for operating the CMATZ frequency.

2.2 Procedures for Penetration of a MATZ

2.2.1 A MATZ Penetration Service is available from the controlling aerodromes listed at paragraph 4 for the provision of increased protection to RTF equipped aircraft. Pilots wishing to penetrate a MATZ, and where required the associated ATZ, are requested to observe the following procedures:

(a) When 15 nm or 5 minutes flying time from the zone boundary, whichever is the greater, establish two-way RTF communication with the controlling aerodrome on the appropriate frequency using the phraseology:

'..... (controlling aerodrome), this is ..... (aircraft callsign), request MATZ (and ATZ) penetration.'

(b) when the call is acknowledged and when asked to 'pass your message', the pilot should pass the following information:

(i) Callsign;

(ii) Type of aircraft;

(iii) Position;

(iv) Heading;

(v) Altitude;

(vi) Intentions (eg destination and the intention to route through one or more ATZ);

(c) comply with any instructions issued by the controller;

(d) maintain a listening watch on the allocated RTF frequency until the aircraft is clear of the MATZ/ATZ;

(e) advise the controller when the aircraft is clear of the MATZ/ATZ.

Note 1: *Flight conditions are not required unless requested by the controller.*

Note 2: *Terrain clearance will be the responsibility of the pilot.*

Note 3: *Since compliance is not compulsory for civil aircraft some aircraft within the MATZ may not be known to the controller. All pilots should therefore maintain a good look-out at all times.*

2.2.2 The military ATSU providing the MATZ Penetration Service will normally continue with the service that the aircraft was previously receiving. In the interests of flight safety and good airmanship, it is strongly recommended that all pilots not previously receiving an ATS obtain a MATZ penetration 'approval' from the MATZ operating authority prior to entering a MATZ. It is recognised that most MATZ crossing/penetration 'approvals' will be obtained via RTF by pilots in receipt of a UK FIS; however, it should be possible for a pilot to request a MATZ crossing/penetration 'approval' without the use of radio (i.e. by prior agreement via telephone). In accordance with Class G Airspace classification and the rules of UK FIS, pilots are ultimately responsible for maintaining their own separation against other airspace users within the MATZ. Occasionally, a change in service may need to be negotiated in order to facilitate the MATZ crossing and the advisory information and/or instructions passed by the ATSU will

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

accord with the service being provided. In the event of no radar being available, a non-radar Basic Service, and/or routing instructions, might be provided to aircraft penetrating the MATZ.

2.2.3 Where a MATZ penetration approval cannot be issued, pilots are advised to avoid the MATZ, notwithstanding any action necessary to maintain the safety of the aircraft and/or its occupants.

2.2.4 Subject to paragraph 2.2.5, when crossing a MATZ or CMATZ it is the responsibility of the pilot to ensure that permission is obtained to transit each individual ATZ embedded therein. The pilot, in his request for approval to transit the MATZ/CMATZ, may ask the controller to obtain such permission on his behalf. When issuing any approval to cross a MATZ or CMATZ controllers are, where appropriate, to articulate clearly any permission to transit embedded ATZs.

2.2.5 Whilst specific permission is not required to transit an ATZ that is not served by an ATC unit, flights within such ATZs are nevertheless subject to the pilot obtaining information from the associated flight information service unit or air/ground unit to enable the flight to be conducted safely (Rule 11 of the Rules of the Air Regulations 2015 refers). In such cases the pilot may ask the controller to obtain relevant information on his behalf.

2.2.6 If appropriate, controllers will endeavour to co-ordinate flights with the controlling authority of an adjacent MATZ, but pilots should not assume approval to penetrate another MATZ until it is explicitly given.

Note: *Given that military aircrew observance of a MATZ and associated ATC requirements are mandatory, MATZ penetration by a military aircraft is subject to specific permission/clearance.*

2.2.7 To enable vertical separation to be applied, all aircraft will be given an altimeter setting to use within the MATZ. Normally this will be the aerodrome QFE, with the exception of the following:

(a) Within the Odiham MATZ the transit pressure setting will be the Farnborough QNH.

(b) Within the Warton MATZ the setting will be the Warton QNH.

(c) Within the Lakenheath/Mildenhall MATZ the setting will be the Lakenheath QNH.

(d) In the case of overlapping MATZs, the altimeter setting to be used will be the QFE of the higher or highest aerodrome of the CMATZ. This will be passed as the 'Clutch QFE'.

2.3 Availability of the MATZ Penetration Service

2.3.1 A MATZ Penetration Service will be available during the published hours of watch of the respective ATS Units. However, as many units are often open for flying outside normal operating hours, pilots should call for the penetration service irrespective of the hours of watch published. If, outside normal operating hours, no reply is received after two consecutive calls, pilots are advised to proceed with caution. Information on the operation of aerodromes outside their normal operating hours may be obtained by telephone from the Distress and Diversion (D & D) cell at the London ATCC. Telephone: 01489 612406.

2.4 MATZ Participating Aerodromes

2.4.1 Details of participating aerodromes are given in ENR 2-2 paragraph 2.4 (Table).

Note 1: *This aerodrome is open on very limited occasions when advised by NOTAM or Supplement.*

Note 2: *Non-standard north-easterly stub SFC to 3000 ft.*

Note 3: *Helicopters tasked to operate in EG D208 are required to call Lakenheath ATC to notify intended entry to EG D208 prior to penetrating the CMATZ. No restrictions will be imposed by Lakenheath on helicopters which operate within that portion of their north-easterly stub which is also within the lateral limits of EG D208, provided that the aircraft remain at or below 800 ft amsl.*

Note 4: *Non-standard extension to both stubs - 5 nm south of extended centre-lines.*

Note 5: *Non-standard demarcation of the 5 nm circles which are joined by a straight line at their most easterly points.*

Note 6: *Non-standard reference point aligned with common radar touchdown point.*

Note 7: *Non-standard MATZ with the following dimensions:*

Lateral — A rectangle of airspace, 20 nm x 6 nm. The major axis is centred on the Aerodrome Reference Point (ARP), aligned with the major runway headings 071° (T)/251° (T) and off-set 1 nm to the south.

Vertical — The portion of the rectangle contained within the part circle radius 5 nm centred on the ARP extends from the surface to 3000 ft AAL. The remainder extends from 1000 ft AAL to 3000 ft AAL.

Warning *— The northern sector of the ATZ is not wholly contained within the MATZ.*

Note 8: Warning *— 5 nm radius portion of MATZ co-incident with EG R313.*

Note 9: *If Boscombe Down is closed but Middle Wallop remains open, a CMATZ penetration service will be provided by Wallop Approach on 126.700 MHz.*

Note 10: *Odiham Approach, except weekends and PH, when the task may be carried out by Farnborough on Frequency 125.250 MHz.*

Note 11: *If Lossiemouth is closed, a MATZ penetration service will be provided by Kinloss Tower on 122.100 MHz (Alternate Frequency 119.575 MHz).*

Note 12: *Weekend and out of hours, contact Ternhill Radio for Traffic Information on Frequency 122.100 MHz.*

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

MATZ	Mid-point of the Longest Runway	AD Elevation (ft)	Stub Heading(s) °T to AD	Controlling Aerodrome	Frequency to be used (MHz)	Remarks
1	2	3	4	5	6	7
Barkston Heath	525746.74N 0003337.16W	367	058 (2 nm stub)	Cranwell	124.450	MATZ 3 nm radius. Stub extends from SFC to 3000 ft aal.
Benson	513654.14N 0010545.05W	203	008/188	Benson	120.900	
Boscombe Down	510911N 0014504W	407	230/050	Boscombe Down	126.700	Note 9.
Coningsby	530535N 0000958W	24	252	Coningsby	120.800	
Cranwell	530147.04N 0002933.91W	218	263	Cranwell	124.450	
Culdrose	500507.43N 0051514.66W	267	293	Culdrose	134.050	
Fairford	514101N 0014725W	286	268	Brize Norton	119.000	Note 1.
Kinloss	573858N 0033338W	22	—	Lossiemouth	119.575	Note 11.
Lakenheath	522433N 0003340E	32	056/236	Lakenheath	128.900	Notes 2 and 3.
Leeming	541733N 0013207W	132	156	Leeming	127.750	
Leuchars	562230N 0025129W	38	262/082	Leuchars	126.500	
Linton-on-Ouse	540257.81N 0011511.15W	53	211	Linton-on-Ouse	118.550	
Lossiemouth	574218.09N 0032020.89W	42	224	Lossiemouth	119.575	
Marham	523854N 0003302E	77	237/057	Marham	124.150	
Merryfield	505747N 0025613W	146	—	Yeovilton	127.350	MATZ 3 nm radius.
Middle Wallop	510822N 0013407W	297	256 (3 nm stub)	Boscombe Down	126.700	Notes 6 and 9.
Mildenhall	522142N 0002911E	33	103/283	Lakenheath	128.900	Notes 4 and 5.
Mona	531533.48N 0042226.44W	202	—	Valley	125.225	
Odiham	511403.09N 0005634.11W	405	093	Odiham	131.300	Note 10.
Predannack	500006N 0051355W	295	—	Culdrose	134.050	
Scampton	531828N 0003303W	202	041	Waddington	119.500	Note 8.
Shawbury	524737N 0024004W	249	180/360	Shawbury	133.150	
Ternhill	525225N 0023155W	272	—	Shawbury	133.150	Note 12.
Topcliffe	541220.26N 0012253.85W	92	201	Leeming	127.750	
Valley	531453.40N 0043207.20W	36	130	Valley	125.225	
Waddington	530958N 0003126W	231	202	Waddington	119.500	
Warton	534442N 0025302W	54	—	Warton	129.525	Note 7.
Wattisham	520738N 0005723E	284	228/048	Wattisham	125.800	
Wittering	523647.00N 0002833.26W	273	253/073	Wittering	119.675	
Yeovilton	510029N 0023845W	75	263/083	Yeovilton	127.350	

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

(DEP / DEST) (INLAND FIX) (ANCHOR POINT) (OCA RPS) (LANDFALL)
(LAST UK POINT) (NUMBER OF FLIGHTS (01 — 99))

Note: *If there is no INLAND FIX then the latitude at 80W is to be used.*

Example:

FF EGGXZOZX EGTTZDZX CZQXZQZX CZQMZQZX CZULZQZX CYHQZDZX BIRDZQZX LPPOZOZX KZNYZRZX KCFCZDZX
120936 EHAMKLMW
PRM — KLM — E — 930213 —
KJFK / EHAM TOPPS YAY 53/50 53/40 54/30 54/20 54/15 BABAN LAMSO 03
CYMX / EHAM YML FOXXE 57/50 58/40 58/30 57/20 56/10 MAC LAMSO 01

3.24 Format of NAT Company Preferred Route Flight Plan day minus 1 (CPR FPL-1)

3.24.1 The Company Preferred Route Flight Plan day minus 1 (FPL-1) format utilises the standard ICAO flight plan (FPL) format and a predetermined Company Preferred Route Identifier (CPR_ID).

3.24.2 Upon receipt of a flight plan at a dedicated AFTN address (EGGXGATT) the Shanwick Automated Track Tool (ATT) system extracts the Oceanic Route portion from the Company Preferred Route Flight Plan day minus 1 (FPL-1), and correlates this with airline scheduled data which corresponds to the Company Preferred Route Identifier (CPR_ID). This provides Shanwick with both route and traffic loading information accordingly.

3.24.3 The Callsign field of the Company Preferred Route Flight Plan day minus 1 (FPL-1) is utilised to indicate the Company Preferred Route Identifier (CPR_ID). The CPR_ID is a unique designator which must be pre-configured with Shanwick to indicate the departure point and destination pairing.

3.24.4 The preferred route is detailed in the Company Preferred Route (FPL-1) as per a normal flight plan. The Date of Flight (DOF field) in field 18 shall indicate the flight is for the next day's OTS Design.

Examples:

The CPR_ID is a seven character code defined as follows:

Airline ICAO Code	British Airways:	**BAW**
Preferred Route Indicator	P (does not change)	**P**
Westbound	W	**W**
Company Preferred Route ID Number (00-99)	Correlates to set departure/destination	**01**

The resulting CPR_ID in this example is BAWPW01

Example 1 ***(Indicating CPR_ID 01 for British Airways)***

CPR (FPL-1) sent to EGGXGATT on the 04/08/2016 for a Westbound OTS Design for the 05/08/2016.

(FPL-**BAWPW01**-IS
-B772/H-SDE1E3FGHIJ3J5J6M1M2RWXYZ/LB1D1
-EGLL1030
-N0487F340 CPT3G CPT L9 KENET UL9 STU/N0490F360 UL9 SLANY DCT DINIM/M083F360 DCT 50N020W 45N030W 38N040W/M083F380 35N045W 31N050W 20N060W DCT ANU DCT
-TAPA0752
-PBN/A1B1D1O1S2 NAV/RNVD1E2A1 SUR/TCAS DOF/160805 REG/BA777 EET/EISN0032 EGGX0119 50N020W0146 LPPO0253 KZWY0412 35N045W0452 31N050W0536 20N060W0723 TTZP0743 CODE/4007F9 OPR/BAW RVR/075 RMK/TCAS)

Example 2 – ***(Indicating CPR_ID 23 for British Airways)***

CPR (FPL-1) sent to EGGXGATT on the 04/08/2016 for a Westbound OTS Design for the 05/08/2016.

(FPL-**BAWPW23**-IS
-B744/H-SDE1E3FGHIJ3J5J6M1M2RWXYZ/LB1D1
-EGLL1030
-N0490F300 CPT5J CPT L9 KENET N14 UGNUS UN14 BAKUR DCT KORAK DCT CON DCT REVNU/M082F300 DCT SUNOT/M082F300 DCT 59N020W/M082F320 61N030W/M082F340 61N040W/M082F360 DCT NA DCT 61N050W DCT RADUN N822A PEPKI/N0481F360 N822A LOPVI DCT 58N070W
5430N08000W/N0483F380 4930N09000W DCT KP12G/N0489F400 DCT KP84A DCT KD66U DCT EKR J100 BCE GRNPA1
-KLAS0952
-PBN/A1B1D1O1S2 NAV/RNVD1E2A1 SUR/TCAS DOF/160805 REG/BA744 EET/EISN0030 EGGX0056 SUNOT0122 59N020W0146 CZQX0226 61N040W0303 BGGL0307 NA0324 61N050W0342 CZQX0350 RADUN0413 CZUL0427 CZWG0552 KZMP0704 KZDV0807 KZLC0913 KZLA0933 CODE/4006B2 OPR/BAW RVR/075 RMK/NRP TCAS)

3.24.5 **Initial Configuration and Setup for Company Preferred Route Messages FPL-1 Format**

3.24.5.1 Operators who would like to send Company Preferred Route messages via FPL-1 format are required to register by email at CPR@nats.co.uk. Registration is required so that configuration elements are completed prior to message sending.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.24.5.2 During registration Company Preferred Identifiers (CPR_IDs) will be determined for each scheduled departure point and destination pairing to be flown by the airline and a start date will be provided by the Shanwick.

Example of CPR_ID TABLE

ICAO AL	IATA AL	Carrier1Name	Market Pair (Airport)	Dep Airport	Arr Airport	Unique Market Pair (Route) Name (CPR_ID)
BAW	BA	British Airways	ANU-LGW	LGW	ANU	BAWPW01
BAW	BA	British Airways	ATL-LHR	LHR	ATL	BAWPW02
BAW	BA	British Airways	AUS-LHR	LHR	AUS	BAWPW03
BAW	BA	British Airways	BDA-LGW	LGW	BDA	BAWPW04
BAW	BA	British Airways	BGI-LGW	LGW	BGI	BAWPW05

3.25 DESTINATION ADDRESS CODE:

PRM format:

EGGXZOZX — Shanwick
EGTTZDZX — London FMU
BIRDZQZX — Reykjavik
KCFCZDZX — FAA Central Flow
CZQXZQZX — Gander
CZQMZQZX — Moncton
LPPOZOZX — Santa Maria
CZULZQZX — Montreal
CYHQZDZX — TCA ARU
KZNYZRZX — New York

FPL-1 format:
EGGXGATT — Shanwick

Note: *Shanwick can receive Company Preferred Route data in both PRM or FPL-1 formats at EGGXGATT. The AFTN address EGGXZOZX is only available for Company Preferred Route data in PRM format.*

4 En-Route Transponder Mandatory Zones

Designation and Lateral Limits	Vertical Limits and Classification	Controlling Authority
Burbo Bank TMZ (Area A) 533215N 0031146W – 533213N 0031406W – 532916N 0030709W – 533215N 0031146W.	3500 ft ——— SFC (Class G)	Warton APP (129.525 MHz) between 0730-1900 Mon-Thu, 0730-1700 Fri - Winter (Summer 1hr earlier).
Burbo Bank TMZ (Area B) 533213N 0031406W – 532916N 0030709W – 532704N 0030737W – 532550N 0031030W – 532550N 0031939W – 532631N 0032055W – 533213N 0031406W.	2000 ft ——— SFC (Class G)	Warton APP (129.525 MHz) between 0730-1900 Mon-Thu, 0730-1700 Fri - Winter (Summer 1hr earlier).
Burbo Bank TMZ (Area C) 533211N 0032449W – 533213N 0031406W – 532631N 0032055W – 532938N 0032640W – 533211N 0032449W.	FL 45 ——— SFC (Class G)	Warton APP (129.525 MHz) between 0730-1900 Mon-Thu, 0730-1700 Fri - Winter (Summer 1hr earlier).
Note: *See also ENR 6-1-15-7. For aircraft equipped with and operating secondary surveillance radar equipment, as defined in GEN 1.5 paragraph 5.3, access to the Burbo Bank TMZ is not subject to ATC approval. Access to the Burbo Bank TMZ without serviceable transponder equipment, as defined in GEN 1.5 paragraph 5.3, is subject to specific approval of the Controlling Authority.*		

Designation and Lateral Limits	Vertical Limits and Classification	Controlling Authority
Greater Wash TMZ - the area bounded by: 533420.44N 0005239.24E - 531700.01N 0013011.23E - 531206.6N 0012951.44E - 530328.42N 0011342.33E - 530531.14N 0010510.48E - 531353.77N 0004450.58E - 531727.25N 0004132.09E - 532923.10N 0003801.81E - 533333.56N 0004031.16E - 533420.44N 0005239.24E.	FL 100 ——— SFC (Class G)	Anglia Radar (125.275 MHz (backup 128.925 MHz)) - from surface up to and including FL 65, between 0630-2200 Winter (Summer 1hr earlier). Swanwick Military (133.325 MHz) - above FL 65 to FL 100, H24. Additionally from surface up to and including FL 65 between 2200-0630 Winter (Summer 1hr earlier).
Note: *For aircraft equipped with and operating secondary surveillance radar equipment, as defined in GEN 1.5 paragraph 5.3, access to the Greater Wash TMZ is not subject to ATC approval. Access to the Greater Wash TMZ without serviceable transponder equipment, as defined in GEN 1.5 paragraph 5.3, is subject to specific approval of the Controlling Authority.*		

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L10 (RNP/RNAV)									
▵ RINTI	510158N 0013656E								FIR Boundary. Extremity of L10. Intersection with B3 and UL10 (see AIP France).
(RNAV 5)	309°/ 129°	12.4 nm		FL 245 / FL 65		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 134.900 (FL 135 and above); Freq: 135.325 (Below FL 135).
▵ DOVER VOR/DME (DVR)	510945.44N 0012132.72E								Acft flying within the London TMA, at or below FL 190 and routing btn DVR and BPK, whether eastbound or westbound, are to route via DET unless instructed by ATC to route direct.
(RNAV 5)	303°/ 123°	13.7 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵ ITVIP	511714N 0010312E								Intersection with Q70.
(RNAV 5)	303°/ 123°	40.1 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵ LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E								
(RNAV 5)	303°/ 123°	11.5 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215 to FL 155); Freq: 129.280 (Below FL 155 to FL 115); Freq: 118.825 (Below FL 115).
▵ BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W								
(RNAV 5)	306°/ 125°	20.2 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between BPK and 10 nm NW of BPK: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215 to FL 155); Freq: 129.280 (Below FL 155 to FL 115); Freq: 118.825 (Below FL 115). Between 10 nm NW of BPK and BUZAD: London Control (Swanwick) Freq: 132.605 (FL 215 and above);

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
									Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
△ BUZAD	515632N 0003308W								
(RNAV 5)	305°/ 125°	8.2 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
△ WOBUN	520110N 0004400W								
(RNAV 5)	305°/ 125°	17.1 nm		FL 245 / FL 65		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 130.925 (Below FL 215).
△ DAVENTRY VOR/DME (DTY)	521048.51N 0010649.64W								Base level change is not at the usual right angle to the AWY CL but is contiguous with the base level change of the northern edge of the Daventry CTA Area 4.
(RNAV 5)	299°/ 119°	22.9 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / 6000 ft ALT	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class A. London Control (Swanwick) Freq: 134.390 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ HONILEY VOR/DME (HON)	522124.04N 0013949.41W								**Eastbound route only btn WAL and HON.** Intersection with L15, L612, N859 and P155.
(RNAV 5)	-/141°	82.0 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between WAL and abm Crewe: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195). Between abm Crewe and abm Birmingham: London Control (Swanwick) Freq: 134.390 for traffic via L612 and N859 (FL 195 and above); Freq: 129.205 for traffic via L15 and P155 (FL 195 and above); Scottish Control (Prestwick) Freq: 134.425 (Below FL 195). Between abm Birmingham and HON: London Control (Swanwick) Freq: 134.390 for traffic via L612 and N859 (FL 195 and above);

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L15 (RNP/RNAV)									
▵ BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E								**Eastbound route only.** Extremity of L15. Intersection with L9.
(RNAV 5)	-/135°	40.0 nm		FL 245 / FL 155		10 nm		odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Between 20 nm before BIG and BIG: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215). Between 35 nm before BIG and 20 nm before BIG: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 135.800 (Below FL 215). Between BETPO and 35 nm before BIG: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ BETPO	514754N 0004328W								
(RNAV 5)	-/135°	17.1 nm		FL 245 / FL 115		10 nm		odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 115 Class A. Between 10 nm before BETPO and BETPO: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 121.025 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165). Between FINMA and 10 nm before BETPO: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ FINMA	515947N 0010313W								Intersection with M605.
(RNAV 5)	-/135°	3.0 nm		FL 245 / FL 115		10 nm		odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 115 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ PIXUP	520151N 0010640W								
(RNAV 5)	-/135°	28.3 nm		FL 245 / FL 115		10 nm		odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 115 Class A. London Control (Swanwick) Freq: 129.205 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ HONILEY VOR/DME (HON)	522124.04N 0013949.41W								Intersection with L10, L612, N859 and P155.
(RNAV 5)	-/134°	40.4 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick)

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 134.390 (Above FL 195); Scottish Control (Prestwick) Freq: 134.425 (Below FL 195).
▵ KEPAD	524835N 0022844W								Intersection with L151.
(RNAV 5)	-/133°	19.9 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 134.390 (Above FL 195); Scottish Control (Prestwick) Freq: 134.425 (Below FL 195).
▵ RISLA	530151N 0025312W								Intersection with N862.
(RNAV 5)	-/133°	14.8 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (Below FL 195).
▵ AMPIT	531139N 0031133W								
(RNAV 5)	-/133°	19.9 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (Below FL 195).
▵ MALUD	532448N 0033630W								
(RNAV 5)	-/129°	22.0 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵ GIGTO	533801N 0040551W								Intersection with Q4.
(RNAV 5)	-/129°	18.3 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵ SOSIM	534856N 0043030W								Intersection with L28 and UL15.
(RNAV 5)	-/129°	16.1 nm		FL 255 / FL 145		10 nm		odd FL 250 / FL 150	FL 255/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵ MAKUX	535830N 0045228W								
(RNAV 5)	-/129°	30.3 nm		FL 255 / FL 145		10 nm		odd FL 250 / FL 150	FL 255/FL 195 Class C, FL 195/FL 145 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	PEPOD	541616N 0053409W								DRA Departure Transition Fix. Exceptionally ATC may route traffic FL 80 eastbound via L15. Intersection with L603.
(RNAV 5)		-/148°	17.9 nm		FL 255 / FL 75		10 nm		odd FL 250 / FL 90	FL 255/FL 195 Class C, FL 195/FL 75 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
△	DUFFY	543053N 0055139W								Extremity of L15.
Route Remarks:										
• Between MAKUX and DUFFY below FL 245, L15 lies within the Strangford CTA.										

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Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L18 (RNP/RNAV)										
△	LANON	522552N 0042221W								**Westbound route only.** Extremity of L18.
(RNAV 5)		315°/-	20 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. London Control (Swanwick) (All Levels) Freq: 133.600.
△	BADSI	523930N 0044617W								
(RNAV 5)		315°/-	11 nm		FL 245 / FL 145		10 nm	even FL 240 / FL 160		Class C. ATS delegated to Dublin ATC.
△	ABLIN	524658N 0045933W								
(RNAV 5)		315°/-	19 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		Class C. ATS delegated to Dublin ATC.
△	IRKUM	525948N 0052239W								
(RNAV 5)		315°/-	6 nm		FL 245 / FL 55		10 nm	even FL 240 / FL 60		Class C. ATS delegated to Dublin ATC.
△	LIPGO	530350N 0053000W								FIR Boundary. For continuation see AIP Ireland.
Route Remarks:										
• **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1** Mon-Thu 1800-0900 Winter (Summer 1 hr earlier) and from 1700 (Winter and Summer) on Friday or the day preceding a PH to 0900 (Winter), 0800 (Summer) on Monday or the day following a PH. **CDR 3** at all other times.										
• Activation of the North Wales MTA Southern Area beyond the published hours is permitted on weekdays, weekends and PHs (See ENR 5.2-1). During these periods of activity L18 west of LANON will not be avbl. Non availability of L18 will be notified to GAT by London Control (Swanwick) and tfc will be re-routed via AWYs L9 and M17.										
• See also ENR 1.1, paragraph 1.1.3.										

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
L28 (RNP/RNAV)									
▵ TRENT VOR/DME (TNT)	530314.23N 0014011.89W								**Westbound route only btn TNT and PENIL.** ATC may allocate FL 190 on a tactical basis. Extremity of L28. Intersection with N57 and Q4.
(RNAV 5)	329°/-	13.1 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 118.780 (All Levels).
▵ RODOL	531417N 0015143W								Intersection with P6.
(RNAV 5)	298°/-	16.1 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 118.780 (All Levels).
▵ MANCHESTER VOR/DME (MCT)	532125.29N 0021544.24W								
(RNAV 5)	289°/-	24.3 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 118.780 (All Levels).
▵ ASNIP	532843N 0025426W								Intersection with L8.
(RNAV 5)	289°/-	28.3 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 118.780 (All Levels).
▵ PENIL	533657N 0033949W								**Eastbound route only btn SOSIM and PENIL.**
(RNAV 5)	-/114°	32.4 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵ SOSIM	534856N 0043030W								Extremity of L28.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L151 (RNP/RNAV)									
▵ SITET	500600N 0000000E								FIR Boundary. Extremity of L151. Intersection with A34 and UN859 (See AIP France).
(RNAV 5)	336°/ 156°	7.2 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Dual designation with N859 btn SITET and DRAKE. London Control (Swanwick) Freq: 135.050 (All Levels).
▵ DRAKE	501234N 0000434W								
(RNAV 5)	338°/ 158°	54.9 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between DRAKE and abm BENBO: London Control (Swanwick) Freq: 135.050 (All Levels). Between abm BENBO and MID: London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵ MIDHURST VOR/DME (MID)	510314.23N 0003730.01W								**Eastbound (southbound) route only btn WAL and MID.**
(RNAV 5)	-/148°	29.7 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Between LINDY and abm TEVSI: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135). Between abm TEVSI and 5 nm before MID: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.050 (Below FL 215 to FL 175); Freq: 129.080 (Below FL 175). Between 5 nm before MID and MID: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.050 (Below FL 215 to FL 175); Freq: 133.175 (Below FL 175).
▵ LINDY	512814N 0010257W								
(RNAV 5)	-/148°	21.5 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Between KIDLI and 5 nm south of KIDLI: London Control (Swanwick) Freq: 132.165 (FL 215 and above);

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 121.025 (Below FL 215). Between 5 nm south of KIDLI and abm COWLY: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between abm COWLY and LINDY: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135).
▵ KIDLI	514617N 0012141W								Intersection with N859.
(RNAV 5)	-/148°	7.6 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ NEDEX	515237N 0012820W								
(RNAV 5)	-/148°	10.7 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ NANUM	520135N 0013747W								
(RNAV 5)	-/148°	3.0 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ TUBSU	520406N 0014028W								
(RNAV 5)	-/148°	2.5 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ DISIT	520611N 0014241W								
(RNAV 5)	-/148°	11.8 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵ PEPUL	521603N 0015314W								
(RNAV 5)	-/148°	10.3 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick)

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
										Freq: 129.605 (FL 175 and above); Freq: 118.825 (Below FL 175).
△	LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E								
(RNAV 5)		295°/-	23.4 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215).
△	HEMEL	514820N 0002510W								Extremity of L610. Intersection with T420.

Route Remarks:

- **CDR Category One (CDR 1) between RAPIX and LAM** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 H24.
- The use of this route may be interrupted when MoD (Shoeburyness) requires the activation of Danger Areas EG D138 and D138A above ALT 13000 ft through which the route passes. These Danger Areas are activated by NOTAM.
  Non-availability of (U)L610 will be notified by means of the daily UK CDR Closure NOTAM and the Eurocontrol CRAM.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 105, bounded by great circle lines joining:
  512453N 0013119E - 512133N 0020000E - 511948N 0020000E -
  512106N 0013052E - 512453N 0013119E,
  is part of L610.
- See also ENR 1.1, paragraph 1.1.3.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L612 (RNP/RNAV)										
△	XAMAB	501216N 0001553E								**Southbound route only btn MID and XAMAB.** FIR Boundary. Extremity of L612.
(RNAV 5)		-/147°	12.2 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 210	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
△	HAWKE	502227N 0000525E								Intersection with M189.
(RNAV 5)		-/147°	5.6 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 210	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
△	BENBO	502705N 0000037E								Intersection with Y47.
(RNAV 5)		-/147°	18.1 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 210	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
△	BOGNA	504207N 0001506W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	-/147°	25.5 nm		FL 245 / FL 65		10 nm		odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵ MIDHURST VOR/DME (MID)	510314.23N 0003730.01W								
(RNAV 5)	339°/ 159°	25.8 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between 5 nm before MID and MID: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 133.175 (Below FL 175). Between WOD and 5 nm before MID: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 129.080 (Below FL 175 to FL 105); Freq: 134.125 (Below FL 105).
▵ WOODLEY NDB (WOD)	512710.02N 0005243.68W								**Eastbound (southbound) route only btn GOW and WOD.** Intersection with M605.
(RNAV 5)	-/145°	12.0 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between 10 nm before WOD and WOD: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135). Between COWLY and 10 nm before WOD: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 119.775 (Below FL 155).
▵ COWLY	513658N 0010354W								Intersection with Q41.
(RNAV 5)	-/154°	24.2 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between COWLY and abm WCO: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between abm WCO and EMKUK:

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 130.925 (Below FL 215).
▵ EMKUK	515837N 0012115W								Intersection with Y321.
(RNAV 5)	-/154°	6.1 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 130.925 (Below FL 215).
▵ IXURA	520405N 0012540W								
(RNAV 5)	-/154°	19.4 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 130.925 (Below FL 215).
▵ HONILEY VOR/DME (HON)	522124.04N 0013949.41W								Intersection with L15.
(RNAV 5)	-/159°	51.1 nm		FL 245 / FL 85		8 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between HON and abm Birmingham: London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 130.925 (Below FL 215). Between abm Birmingham and abm STAFA: London Control (Swanwick) Freq: 134.390 (FL 195 and above); Scottish Control (Prestwick) Freq: 134.425 (Below FL 195). Between abm STAFA and LISTO: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵ LISTO	530836N 0021157W								Intersection with P18.
(RNAV 5)	-/159°	7.1 nm		FL 245 / FL 85		8 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵ LOVEL	531506N 0021628W								
(RNAV 5)	-/159°	14.3 nm		FL 245 / FL 85		8 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between LOVEL and abm MCT: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195). Between abm MCT and BARTN: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
△ BARTN	532814N 0022541W								
(RNAV 5)	-/159°	10.2 nm		FL 245 / FL 65		8 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ CROFT	533737N 0023220W								Intersection with P16.
(RNAV 5)	-/159°	9.6 nm		FL 245 / FL 65		8 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ CALDA	534627N 0023838W								
(RNAV 5)	-/159°	8.9 nm		FL 245 / FL 65		8 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ OBUNI	535440N 0024433W								
(RNAV 5)	-/159°	6.0 nm		FL 245 / FL 95		8 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ VAMEB	540010N 0024832W								
(RNAV 5)	-/159°	15.4 nm		FL 245 / FL 145		8 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ LAKEY	541420N 0025852W								
(RNAV 5)	-/159°	31.6 nm		FL 245 / FL 145		8 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△ DEAN CROSS DME (DCS)	544318.88N 0032026.30W								Intersection with N57 and N864.
(RNAV 5)	-/154°	18.0 nm		FL 245 / FL 95		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit; see Route Remarks) Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△ BEBNI	545906N 0033514W								
(RNAV 5)	-/154°	16.3 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△ NAVSO	551322N 0034849W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
(RNAV 5)	-/154°	30.5 nm		FL 245 / 6000 ft ALT		10 nm		odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△ LUSIV	554002N 0041441W								
(RNAV 5)	-/154°	3.3 nm		FL 245 / 6000 ft ALT		10 nm		odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△ FENIK	554255N 0041731W								
(RNAV 5)	-/154°	10.7 nm		FL 245 / 6000 ft ALT		10 nm		odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△ GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W								Extremity of L612.

Route Remarks:

- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, lower limit FL 65, bounded by great circle lines joining:
  535734N 0023258W - 535109N 0023251W -
  535637N 0023646W - 535734N 0023258W,
  is part of L612.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, lower limit FL 95, bounded by great circle lines joining:
  540234N 0023858W - 535747N 0023258W -
  535734N 0023258W - 535637N 0023646W -
  540207N 0024044W - 540234N 0023858W,
  is part of L612.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, lower limit FL 145, bounded by great circle lines joining:
  540629N 0024353W - 540234N 0023858W -
  540207N 0024044W - 540629N 0024353W,
  is part of L612.
- An area of Class C controlled airspace, base level FL 195, bounded by great circle lines joining:
  543637N 0032230W - 543356N 0031901W -
  541053N 0030154W - 543306N 0033033W -
  543637N 0032230W, is part of L612.
  ATS within this airspace may be delegated to BAe Warton for test flying.
- **Variable lower limit:** Daily from 0700 to 2000 (1hr earlier in summer) between BEBNI and DCS the lower limit is FL 125 making the Mnm FL (Eastbound) FL 130.
- Between DCS and HON the airway is 8 nm wide with western edge 3 nm west of the centre-line.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
L613 (RNP/RNAV)										
△	SOVAT	504646N 0012800E								**Westbound (northbound) route only.** FIR Boundary. Extremity of L613.
(RNAV 5)		319°/-	22.9 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 135.325 (Below FL 195).
△	SANDY	510351N 0010403E								Extremity of L613.
Route Remarks: • See also ENR 1.1, paragraph 1.1.3.										

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
L620 (RNP/RNAV)										
△	DAWLY	503427N 0032750W								Extremity of L620. Intersection with N864.
(RNAV 5)		075°/ 255°	28.4 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210	even FL 240 / FL 200	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
△	BRIPO	504227N 0024500W								
(RNAV 5)		075°/ 255°	9.2 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210	even FL 240 / FL 200	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
△	GIBSO	504459N 0023107W								Intersection with M17.
(RNAV 5)		075°/ 255°	11.1 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210	even FL 240 / FL 200	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
△	BEVUP	504800N 0021420W								
(RNAV 5)		075°/ 256°	10.1 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150	even FL 240 / FL 140	FL 245/FL 195 Class C, FL 195/FL 135 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
△	ABKIM	505043N 0015858W								
(RNAV 5)		076°/ 256°	25.1 nm		FL 245 / FL 95		10 nm	odd FL 230 / FL 110	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. Between ABKIM and 10 nm before SAM: London Control (Swanwick) Freq: 129.425 (All levels). Between 10 nm before SAM and SAM: London Control (Swanwick)

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
△	EVMEK	514741N 0011218E								
(RNAV 5)		-/147°	3.9 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 129.605 (All Levels).
△	CLACTON VOR/DME (CLN)	515054.50N 0010851.32E								Extremity of M84.
Route Remarks: • See also ENR 1.1, paragraph 1.1.3.										

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
M85 (RNP/RNAV)										
△	ITVIP	511714N 0010312E								**Southbound route only.** Extremity of M85. Intersection with L10 and Q70.
(RNAV 5)		-/163°	33.6 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 129.605 (All Levels).
△	DAGGA	514919N 0004739E								Extremity of M85.
Route Remarks: • **CDR Category One (CDR 1) between ITVIP and DAGGA** (ENR 1.1 paragraph 1.1.7 refers). **CDR 1** H24. • The use of this route may be interrupted when MOD (Shoeburyness) requires the activation of Danger Areas EG D138 and EG D138A above ALT 13000 ft through which the route passes. These Danger Areas are activated by NOTAM. Non-availability of M85 will be notified by means of the daily UK CDR Closure NOTAM and the Eurocontrol CRAM.										

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
M87 (RNP/RNAV)									
△ UMTUM	511227N 0010103E								**Southbound route only.** Extremity of M87. Intersection with L9.
(RNAV 5)	-/129°	19.0 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
△ EKNIV	512426N 0003731E								Extremity of M87.

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Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
M140 (RNP/RNAV)									
△ MIDHURST VOR/DME (MID)	510314.23N 0003730.01W								Extremity of M140. Intersection with L620.
(RNAV 5)	095°/ 275°	28.2 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between MID and 10 nm east of MID: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 133.175 (Below FL 175). Between 10 nm east of MID and 5 nm west of MAY: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.050 (Below FL 215 to FL 175); Freq: 133.175 (Below FL 175). Between 5 nm west of MAY and MAY: London Control (Swanwick) Freq: 128.425 (FL 175 and above); Freq: 133.175 (Below FL 175).
△ MAYFIELD VOR/DME (MAY)	510101.86N 0000658.04E								
(RNAV 5)	079°/ 260°	32.2 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between MAY and 15 nm west of WIZAD: London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
										Between 15 nm west of WIZAD and WIZAD: London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.175 (Below FL 195).
△	WIZAD	510700N 0005711E								
(RNAV 5)		080°/ 260°	15.6 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between WIZAD and 8 nm west of DVR: London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.175 (Below FL 195). Between 8 nm west of DVR and DVR: London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195 to FL 135); Freq: 135.325 (Below FL 135).
△	DOVER VOR/DME (DVR)	510945.44N 0012132.72E								**Eastbound route only btn DVR and VABIK.** Intersection with L9.
(RNAV 5)		078°/-	24.7 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Between DVR and 10 nm east of DVR: London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195 to FL 135); Freq: 135.325 (Below FL 135). Between 10 nm east of DVR and VABIK: London Control (Swanwick) Freq: 134.900 (FL 135 and above); Freq: 135.325 (Below FL 135).
△	VABIK	511447N 0020000E								FIR Boundary. Extremity of M140. Intersection with Q70 (see AIP Belgium).

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
M183 (RNP/RNAV)										
▵	COMPTON VOR/DME (CPT)	512929.66N 0011310.89W								**Westbound route only btn BKY and CPT.** Intersection with L9, N859 and Y321.
(RNAV 5)		-/201°	22.8 nm		FL 245 / FL 85		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between SILVA and 5 nm north of CPT: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 121.025 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between 5 nm north of CPT and CPT: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 134.125 (Below FL 155).
▵	SILVA	515051N 0010019W								Intersection with M605.
(RNAV 5)		-/259°	35.6 nm		FL 245 / FL 85		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between NUGBO and 5 nm west of NUGBO: London Control (Swanwick) Freq: 130.925 (FL 155 and above); Freq: 129.280 (Below FL 155). Between 5 nm west of NUGBO and 10 nm east of SILVA: London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between 10 nm east of SILVA and SILVA: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 121.025 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
▵	NUGBO	515822N 0000412W								
(RNAV 5)		-/259°	5 nm		FL 245 / FL 85		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 130.925 (FL 155 and above); Freq: 129.280 (Below FL 155).
▵	BARKWAY VOR/DME (BKY)	515923.17N 0000342.87E								**Eastbound route only btn BKY and REDFA.**

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)	085°/-	4.3 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150		FL 245/FL 195 Class C, FL 195/FL 135 Class A. London Control (Swanwick) Freq: 124.930 (FL 155 and above); Freq: 129.280 (Below FL 155).
△ ADMIS	515949N 0001036E								Intersection with M189.
(RNAV 5)	085°/-	35.4 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150		FL 245/FL 195 Class C, FL 195/FL 135 Class A. Between ADMIS and 20 nm west of TEDSA: London Control (Swanwick) Freq: 124.930 (FL 155 and above); Freq: 129.280 (Below FL 155). Between 20 nm west of TEDSA and 5 nm west of TEDSA: London Control (Swanwick) Freq: 124.930 (FL 155 and above); Freq: 119.775 (Below FL 155). Between 5 nm west of TEDSA and TEDSA: London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 124.930 (Below FL 215 to FL 155); Freq: 121.225 (Below FL 155).
△ TEDSA	520303N 0010739E								
(RNAV 5)	085°/-	25.4 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150		FL 245/FL 195 Class C, FL 195/FL 135 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△ SONDO	520506N 0014842E								
(RNAV 5)	086°/-	17.0 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150		FL 245/FL 195 Class C, FL 195/FL 135 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△ SONOG	520620N 0021610E								
(RNAV 5)	086°/-	8.1 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150		FL 245/FL 195 Class C, FL 195/FL 135 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△ REDFA	520653N 0022917E								FIR Boundary. Extremity of M183. Intersection with L620 (see AIP Netherlands).
Route Remarks: • See also ENR 1.1, paragraph 1.1.3.									

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
M185 (RNP/RNAV)										
▵	ORTAC	495957N 0020018W								**Eastbound route only btn ORTAC and MID.** FIR Boundary. Extremity of M185. Not available for flight planning ORTAC - ELDER. Route may be used on a tactical basis under instruction from ATC only.
(RNAV 5)		034°/-	47.4 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 127.825 (FL 195 and above); Freq: 129.425 (Below FL 195).
▵	ELDER	503948N 0012014W								
(RNAV 5)		034°/-	7.1 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) (All Levels) Freq: 127.825.
▵	BEGTO	504545N 0011408W								Intersection with N514.
(RNAV 5)		034°/-	17.4 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) (All Levels) Freq: 127.825.
▵	HAZEL	510019N 0005904W								
(RNAV 5)		078°/-	13.9 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) (All Levels) Freq: 127.825.
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W								Mnm cruising level to be flight planned within London TMA.
(RNAV 5)		025°/ 205°	16.5 nm		FL 245 / 3500 ft ALT		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. Dual designation with L980 btn MID and OCK. London Control (Swanwick) (All Levels) Freq: 132.165.
▵	OCKHAM VOR/DME (OCK)	511818.17N 0002649.86W								**Eastbound route only btn OCK and BPK.**
(RNAV 5)		026°/-	29.6 nm		FL 245 / 3500 ft ALT		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. London Control (Swanwick) (All Levels) Freq: 132.165.
▵	BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W								Extremity of M185.
Route Remarks: • See also ENR 1.1, paragraph 1.1.3.										

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
M189 (RNP/RNAV)									
▵ NEVIL	500000N 0002206W								FIR Boundary. Extremity of M189. Intersection with G27 (see AIP France).
(RNAV 5)	038°/ 219°	11.4 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
▵ OSPOL	500900N 0001108W								
(RNAV 5)	039°/ 219°	17.1 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
▵ HAWKE	502227N 0000525E								Intersection with L612.
(RNAV 5)	039°/ 219°	16.0 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵ WAFFU	503457N 0002059E								Intersection with M605 and Y8.
(RNAV 5)	039°/ 219°	11.2 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
▵ HASTY	504342N 0003200E								
(RNAV 5)	039°/ 219°	20.9 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 134.900 (All Levels).
▵ LYDD VOR/DME (LYD)	505958.87N 0005243.18E								
(RNAV 5)	062°/ 242°	8.1 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Dual designation with Y803 btn LYD and DVR. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.175 (Below FL 195).
▵ SANDY	510351N 0010403E								
(RNAV 5)	062°/ 242°	12.5 nm		FL 245 / FL 75		10 nm	odd FL 230 / FL 90	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Dual designation with Y803 btn LYD and DVR. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 135.325 (Below FL 195).
▵ DOVER VOR/DME (DVR)	510945.44N 0012132.72E								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	004°/ 184°	34.5 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between DVR and 20 nm north of DVR: London Control (Swanwick) Freq: 134.900 (All Levels). Between 20 nm north of DVR and JACKO: London Control (Swanwick) Freq: 128.160 (All Levels).
▵ JACKO	514409N 0012536E								
(RNAV 5)	303°/ 123°	12.4 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 128.160 (All Levels).
▵ CLACTON VOR/DME (CLN)	515054.50N 0010851.32E								**Eastbound route only btn UNGAP and CLN.**
(RNAV 5)	-/104°	37.2 nm		FL 245 / FL 85		9.5 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 128.160 (All Levels).
▵ ADMIS	515949N 0001036E								Intersection with M183.
(RNAV 5)	-/104°	23.0 nm		FL 245 / FL 85		9.5 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between ADMIS and abm BKY: London Control (Swanwick) Freq: 128.160 (All Levels). Between abm BKY and POTON: London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
▵ POTON	520504N 0002538W								
(RNAV 5)	-/104°	7.4 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 130.925 (Below FL 215).
▵ HEIDI	520644N 0003724W								
(RNAV 5)	-/104°	4.2 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 130.925 (Below FL 215).
▵ OLNEY	520740N 0004403W								Intersection with P166.
(RNAV 5)	-/103°	14.4 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 130.925 (Below FL 215).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
△ DAVENTRY VOR/DME (DTY)	521048.51N 0010649.64W								Intersection with L10 and M605.
(RNAV 5)	-/137°	14.9 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 130.925 (Below FL 215).
△ UNGAP	522129N 0012339W								Extremity of M189.

Route Remarks:

- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 85, bounded by straight lines joining: 512947N 0011552E - 512257N 0011505E - 512412N 0010924E - 512441N 0010412E - 512947N 0011552E, is part of M189.
- Between POTON and CLN the airway is published as 9.5 nm wide with the northern boundary 4.5 nm from the CL.
- See also ENR 1.1, paragraph 1.1.3.

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Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
M605 (RNP/RNAV)									
△ XIDIL	502106N 0003829E								**Southbound route only between SFD and XIDIL.** FIR Boundary. For continuation see AIP France.
(RNAV 5)	-/141°	9.2 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
△ HARDY	502816N 0002928E								
(RNAV 5)	-/141°	8.6 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
△ WAFFU	503457N 0002059E								Intersection with M189.
(RNAV 5)	-/141°	13.8 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
△ SEAFORD VOR/DME (SFD)	504538.49N 0000718.89E								
(RNAV 5)	318°/ 138°	56.2 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above);

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
										Freq: 135.800 (Below FL 215 to FL 175); Freq: 133.175 (Below FL 175).
▵	WOODLEY NDB (WOD)	512710.02N 0005243.68W								Intersection with L612.
(RNAV 5)		350°/ 170°	7.7 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135).
▵	BENSU	513444N 0005508W								Intersection with Q70.
(RNAV 5)		350°/ 170°	16.5 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
▵	SILVA	515051N 0010019W								
(RNAV 5)		350°/ 170°	9.1 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 131.130 (FL 195 and above); Freq: 130.925 (Below FL 195).
▵	FINMA	515947N 0010313W								Intersection with L15.
(RNAV 5)		350°/ 170°	11.3 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 131.130 (FL 195 and above); Freq: 130.925 (Below FL 195).
▵	DAVENTRY VOR/DME (DTY)	521048.51N 0010649.64W								Intersection with Y250.
(RNAV 5)		328°/ 148°	40.6 nm		FL 245 / FL 65		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Between DTY and abm Birmingham: London Control (Swanwick) Freq: 131.130 (FL 195 and above); Freq: 130.925 (Below FL 195). Between abm Birmingham and PEDIG: London Control (Swanwick) Freq: 134.390 (FL 195 and above); Scottish Control (Prestwick) Freq: 134.425 (Below FL 195).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	PEDIG	524448N 0014310W								
(RNAV 5)		348°/ 168°	61.5 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between PEDIG and abm TNT: London Control (Swanwick) Freq: 134.390 (FL 195 and above); Scottish Control (Prestwick) Freq: 134.425 (Below FL 195). Between abm TNT and 533328N 0020149W: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195). Between 533328N 0020149W and POL: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	POLE HILL VOR/DME (POL)	534437.56N 0020611.98W								Extremity of M605.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
M733 (RNP/RNAV)										
▵	SUBIP	502644N 0005306E								**Northbound route only.** FIR Boundary. Extremity of M733.
(RNAV 5)		320°/-	7.8 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 128.425.
▵	BANVA	503242N 0004512E								
(RNAV 5)		320°/-	19.3 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 128.425.
▵	UNDUG	504724N 0002530E								
(RNAV 5)		320°/-	18.0 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 128.425.
▵	MAYFIELD VOR/DME (MAY)	510101.86N 0000658.04E								Extremity of M733.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
M868 (RNP/RNAV)										
▵	TRENT VOR/DME (TNT)	530314.23N 0014011.89W								**Eastbound route only.** Extremity of M868.
(RNAV 5)		341°/-	7.2 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Dual designation with N57 btn TNT and TIPIL. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
▵	TIPIL	531000N 0014423W								
(RNAV 5)		015°/-	11.8 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
▵	EVSON	532127N 0013949W								
(RNAV 5)		043°/-	6.8 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵	ADELU	532630N 0013213W								Extremity of M868. Intersection with L60.

Route Remarks:

- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 85, bounded by straight lines joining:
  531930N 0013131W - 530517N 0013152W -
  531057N 0013528W - 531903N 0013212W -
  531930N 0013131W, is part of M868.
- The portion of airspace formed by joining positions:

  Camphill Box

  532719N 0014617W - 533017N 0011641W -
  531938N 0011532W - 532012N 0011840W -
  532110N 0012901W - 532002.91N 0013042.10W -
  531418.31N 0012448.84W - 531137N 0013631W -
  532719N 0014617W,
  from AWY base level to an upper limit of FL 100, occasionally to FL 190 on request;

  is notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with the conditions established in the Letter of Agreement (LOA) btn the Derbyshire and Lancashire (Camphill) Gliding Club, British Gliding Association (BGA), Leeds Bradford International Airport, and Scottish Control (Prestwick).
- Due to ATC operational requirements, the cruising level allocation between TNT and TIPIL is inappropriate to the MAG Track.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N14 (RNP/RNAV)									
▵ KENET	513114N 0012718W								**Westbound route only.** Extremity of N14.
(RNAV 5)	295°/-	28.0 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.750 (All Levels).
▵ UGNUS	514232N 0020823W								
(RNAV 5)	295°/-	16.5 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 134.750 (All Levels).
▵ OKTAD	514904N 0023246W								
(RNAV 5)	284°/-	14.6 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. London Control (Swanwick) Freq: 134.750 (All Levels).
▵ DOBEM	515211N 0025545W								Extremity of partition of N14.
				- / -					**ROUTE BREAK - THIS AIRWAY IS NOT CONTINUOUS.**
▵ PEMOB	520838N 0050941W								Extremity of partition of N14.
(RNAV 5)	290°/-	8.9 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 129.375 (All Levels).
▵ LANPI	521115N 0052330W								Extremity of N14. Intersection with Q63.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between PEMOB and LANPI** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to activity within EG D201F. **CDR 1 and 3** H24.
- An area of Class C airspace, base FL 195, bounded by great circle lines joining: 514603N 0024812W - 514418N 0023515W - 514409N 0023442W - 514539N 0024814W - 514603N 0024812W is part of N14.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N16 (RNP/RNAV)									
△ GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W								**Eastbound route only.** Extremity of N16.
(RNAV 5)	047°/-	27.6 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 134.125 (Below FL 175).
△ OTSID	511023N 0001351W								Intersection with Y321.
(RNAV 5)	047°/-	13.8 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 134.125 (Below FL 175).
△ BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E								
(RNAV 5)	349°/-	25.7 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 127.955 (Below FL 215 to FL 175); Freq: 123.900 (Below FL 175).
△ BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W								
(RNAV 5)	024°/-	15.7 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 245 and above); Freq: 135.425 (Below FL 245 to FL 175); Freq: 123.900 (Below FL 175).
△ BARKWAY VOR/DME (BKY)	515923.17N 0000342.87E								Extremity of N16.

Route Remarks:

- Due to ATC operational requirements, the cruising level allocation between BIG and BPK is inappropriate to the MAG Track.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N20 (RNP/RNAV)										
▵	KUNAV	503054N 0010356E								**Westbound route only.** FIR boundary. For continuation see AIP France.
(RNAV 5)		264°/-	15.7 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 128.425 (FL 145 and above); Freq: 120.175 (Below FL 145).
▵	ELDAX	502918N 0003930E								Intersection with M8.
(RNAV 5)		279°/-	41.6 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵	NOTGI	503510N 0002503W								
(RNAV 5)		315°/-	8.6 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵	EVEXU	504116N 0003441W								
(RNAV 5)		327°/-	12.1 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A. Dual designation with N859 btn EVEXU and GWC. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵	GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W								Extremity of N20.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N34 (RNP/RNAV)										
△	NEVRI	540406N 0061611W								**Northbound route only.** DRA Entry Fix. FIR Boundary. For continuation see AIP Ireland.
(RNAV 5)		005°/-	13.5 nm		FL 255 / FL 75		10 nm	odd FL 250 / FL 90		FL 255/FL 195 Class C, FL 195/FL 75 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
△	ABSUN	541732N 0061518W								
(RNAV 5)		006°/-	22.2 nm		FL 255 / FL 55		10 nm	odd FL 250 / FL 70		FL 255/FL 195 Class C, FL 195/FL 55 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
△	BELFAST VOR/DME (BEL)	543940.12N 0061347.67W								DRA Arrival and Departure Transition Fix. Extremity of N34.

Route Remarks:

- An area of Class D controlled airspace, below FL 195, base FL 75 bounded by straight lines joining: 541720N 0060646W - 541711N 0060044W - 540905N 0060721W - 541720N 0060646W, is part of N34.
- An area of Class D controlled airspace, below FL 195, base FL 55 bounded by straight lines joining: 542244N 0060623W - 541711N 0060044W - 541720N 0060646W - 542244N 0060623W, is part of N34.
- An area of Class D controlled airspace, below FL 195, base FL 105, bounded by straight lines joining: 542244N 0060623W - 542802N 0060613W - 542610N 0060131W - 542139N 0060517W - 542244N 0060623W, is part of N34.
- See also ENR 1.1, paragraph 1.1.3.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N42 (RNP/RNAV)										
△	RETSI	523042N 0025233W								**Southbound route only.** Extremity of N42.
(RNAV 5)		-/156°	25.3 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△	MONTY	525334N 0031026W								Extremity of N42.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N57 (RNP/RNAV)									
▵ DEVAL	505125N 0012800E								**Northbound route only btn DEVAL and SAPCO.** FIR Boundary.
(RNAV 5)	309°/-	19.6 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 135.325 (Below FL 195).
▵ SANDY	510351N 0010403E								
(RNAV 5)	309°/-	22.9 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Dual designation with N601 between SANDY and DET. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵ DETLING VOR/DME (DET)	511814.41N 0003550.19E								
(RNAV 5)	321°/-	26.5 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 134.900 (All Levels).
▵ LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E								
(RNAV 5)	315°/-	40.2 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Between LAM and abm BPK: London Control (Swanwick) Freq: 134.900 (All Levels). Between abm BPK and abm WOBUN: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between abm WOBUN and HEIDI: Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195).
▵ HEIDI	520644N 0003724W								
(RNAV 5)	315°/-	11.7 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195).
▵ WELIN	521450N 0005108W								Intersection with T420.
(RNAV 5)	315°/-	25.6 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight alti-tude**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
									Between WELIN and abm Birmingham: London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195). Between abm Birmingham and SAPCO: London Control (Swanwick) Freq: 127.105 (FL 195 and above); Scottish Control (Prestwick) Freq: 119.525 (Below FL 195).
△ SAPCO	523225N 0012125W								Intersection with Y53.
(RNAV 5)	341°/ 161°	32.9 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class A. FL 140 not available between SAPCO and TNT. London Control (Swanwick) Freq: 127.105 (Above FL 195); Scottish Control (Prestwick) Freq: 119.525 (Below FL 195).
△ TRENT VOR/DME (TNT)	530314.23N 0014011.89W								Intersection with L28 and M868.
(RNAV 5)	341°/ 161°	7.2 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Dual designation with M868 btn TNT and TIPIL. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
△ TIPIL	531000N 0014423W								
(RNAV 5)	341°/ 161°	22.7 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
△ DENBY	533113N 0015740W								Intersection with L975.
(RNAV 5)	341°/ 161°	14.4 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ POLE HILL VOR/DME (POL)	534437.56N 0020611.98W								**Eastbound (southbound) route only btn DCS and POL.** Intersection with P18.
(RNAV 5)	-/145°	10.0 nm		FL 245 / 4500 ft ALT		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/Alt 4500 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ BAMEP	535242N 0021609W								
(RNAV 5)	-/145°	10.0 nm		FL 245 / FL 55		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 55 Class A.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight alti-tude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
										Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	SETEL	540045N 0022609W								
(RNAV 5)		-/145°	6.0 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	OLPOP	540532N 0023208W								
(RNAV 5)		-/145°	10.1 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. (Variable lower limit) Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	IPNOX	541340N 0024222W								
(RNAV 5)		-/145°	37.1 nm		FL 245 / FL 95		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit) Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	DEAN CROSS DME (DCS)	544318.88N 0032026.30W								Extremity of N57.

Route Remarks:

- An area of Class A controlled airspace, base Alt 5500 ft, upper limit FL 75, bounded by straight lines joining: 523238N 0012014W - 523406N 0011224W - 521403N 0010009W - 521355N 0010026W - 523238N 0012014W, is part of N57.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base 4500 ft Alt, upper limit FL 245, bounded by straight lines joining: 534945N 0022257W - 534613N 0021835W - 534127N 0023240W - 534529N 0023244W - 534945N 0022257W, is part of N57.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 55, upper limit FL 245, bounded by straight lines joining: 535747N 0023258W - 534945N 0022257W - 534529N 0023244W - 535747N 0023258W, is part of N57.
- Daily from 0700 to 2000 (1 hr earlier in summer) btn DCS and OLPOP the lower limit is FL 125 making the Mnm FL (Southbound) FL 130.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N90 (RNP/RNAV)										
▵	SKESO	494929N 0030203W								**Southbound route only.** FIR Boundary. Extremity of N90. For continuation see AIP France.
(RNAV 5)		-/173°	37.1 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Western edge of AWY is 7 nm west of the CL. London Control (Swanwick) (All Levels) Freq: 126.075.
▵	NOTRO	502612N 0031021W								Intersection with Y91.
(RNAV 5)		-/188°	52.3 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Western edge of AWY is 7 nm west of the CL. Due to ATC operational requirements, the cruising level allocation between LAMAT and NOTRO is inappropriate to the MAG Track. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 126.075 (Above FL 165); Cardiff ATC Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) (All Levels) Freq: 134.750.
▵	LAMAT	511807N 0030103W								Extremity of N90.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 1600 Fri - 0745 Mon Winter (Summer 1 hr earlier).
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N160 (RNP/RNAV)										
▵	BOGMI	505953N 0071217W								Extremity of N160.
(RNAV 5)		320°/ 140°	20 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180	odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 132.950.
▵	LEDGO	511424N 0073405W								FIR Boundary. For continuation see AIP Ireland.
Route Remarks: • **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** H24. • See also ENR 1.1, paragraph 1.1.3.										

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N514 (RNP/RNAV)										
▵	GIBSO	504459N 0023107W								Extremity of N514. Intersection with L620.
(RNAV 5)		090°/ 270°	27.0 nm		FL 245 / FL 155		10 nm	odd FL 230 / FL 170	even FL 240 / FL 160	FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	BEWLI	504531N 0014837W								
(RNAV 5)		090°/ 270°	21.9 nm		FL 245 / FL 155		10 nm	odd FL 230 / FL 170	even FL 240 / FL 160	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Between BEWLI and 10 nm west of BEGTO: London Control (Swanwick) Freq: 129.425 (All Levels). Between 10 nm west of BEGTO and BEGTO: London Control (Swanwick) Freq: 134.440 (FL 185 and above); Freq: 127.825 (Below FL 185).
▵	BEGTO	504545N 0011408W								Intersection with M185.
(RNAV 5)		090°/ 271°	10.7 nm		FL 245 / FL 125		10 nm	odd FL 230 / FL 130	even FL 240 / FL 140	FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 134.440 (FL 185 and above); Freq: 127.825 (Below FL 185).
▵	POMPI	504548N 0005715W								Extremity of N514.
Route Remarks: • An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base Alt 5500 ft, bounded by great circle lines joining: 505259N 0011506W - 505435N 0010335W -										

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	**Significant Point Coordinates**							
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
504928N 0011713W - 505259N 0011506W, is part of N514.									
• **Variable lower limit:** Outside the Solent CTA notified hours of operation that portion of N514 that overlies the Solent CTA has a base expressed as FL 55.									

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N546 (RNP/RNAV)									
△ STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W								**Eastbound route only.** Dublin TMA Departures only. Extremity of N546.
(RNAV 5)	-/124°	27.9 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) (All Levels) Freq: 129.375.
△ BAKUR	521430N 0054049W								FIR Boundary. Extremity of N546.
Route Remarks:									
• See also ENR 1.1, paragraph 1.1.3.									

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N560 (RNP/RNAV)									
▵ GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W								Extremity of N560. Intersection with L612.
(RNAV 5)	010°/ 190°	16.5 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210	even FL 240 / FL 200	Class C. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ FOYLE	560834N 0042256W								
(RNAV 5)	010°/ 190°	19.4 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210	even FL 240 / FL 200	Class C. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ ERSON	562748N 0041824W								
(RNAV 5)	010°/ 190°	14.4 nm		FL 245 / FL 125		10 nm	odd FL 230 / FL 130	even FL 240 / FL 140	FL 245/FL 195 Class C, FL 195/FL 125 Class E and TMZ. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ INBAS	564200N 0041459W								
(RNAV 5)	010°/ 191°	11.7 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 105 Class E and TMZ. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ LAGAV	565335N 0041210W								
(RNAV 5)	011°/ 191°	13.9 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 105 Class E and TMZ. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ NESDI	570718N 0040848W								
(RNAV 5)	011°/ 191°	5.5 nm		FL 195 / FL 105		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ GUSSI	571247N 0040727W								
(RNAV 5)	011°/ 191°	8 nm		FL 195 / FL 95		10 nm	odd FL 190 / FL 110	even FL 180 / FL 100	Class E and TMZ. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ DAVOT	572042N 0040529W								
(RNAV 5)	011°/ 191°	12.0 nm		FL 195 / FL 95		10 nm	odd FL 190 / FL 110	even FL 180 / FL 100	Class E and TMZ. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ RIMOL	573233N 0040230W								Intersection with Y906.
(RNAV 5)	338°/ 158°	23.1 nm		FL 195 / FL 95		10 nm	odd FL 190 / FL 110	even FL 180 / FL 100	Class E and TMZ. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ BONBY	575330N 0042036W								
(RNAV 5)	052°/ 232°	6.6 nm		FL 195 / FL 75		10 nm	odd FL 190 / FL 90	even FL 180 / FL 80	Class E and TMZ. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ CHINN	575751N 0041117W								

ENR 3.1 LOWER ATS ROUTES (continued)

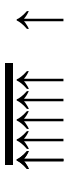
Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		052°/ 232°	45.6 nm		FL 195 / FL 75		10 nm	odd FL 190 / FL 90	even FL 180 / FL 80	Class E and TMZ. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
△	WICK VOR/DME (WIK)	582731.74N 0030601.33W								Intersection with Y904.
(RNAV 5)		015°/ 195°	30.8 nm		FL 195 / FL 75		10 nm	odd FL 190 / FL 90	even FL 180 / FL 80	Class E and TMZ. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
△	KOKAL	585735N 0025338W								Extremity of N560.

Route Remarks:

- **Transponder carriage and operation required within that part of N560 notified as Class E and TMZ.**
- Inverness Radar provide a radar service for tfc inbound to and outbound from Inverness via N560 during the promulgated hours of Inverness Radar as published in UK AIP AD 2.EGPE AD 2.18 (and as amended by NOTAM). Outside the hours of Inverness Radar an approach procedural service is provided by Inverness Approach.
- Tfc inbound to Inverness via N560:
  - (i) Tfc from the South has a clearance limit of GUSSI, descent clearance will be issued by Scottish Control to be level by GUSSI unless otherwise instructed by ATC.
  - (ii) Tfc from the North has a clearance limit of BONBY, descent clearance will be issued by Scottish Control to be level by BONBY unless otherwise instructed by ATC. Scottish Control will instruct tfc when to contact Inverness Approach or Inverness Radar (122.600 MHz), this will normally be at or before 40 nm from RIMOL.
- Due to ATC operational requirements, the cruising level allocation between RIMOL and BONBY is inappropriate to the MAG Track.
- En-route Danger Area EG D703 to the east between RIMOL and WIK.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N601 (RNP/RNAV)									
▵ SANDY	510351N 0010403E								**Northbound route only btn SANDY and DET.** Extremity of N601.
(RNAV 5)	309°/-	22.9 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Dual designation with N57 btn SANDY and DET. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵ DETLING VOR/DME (DET)	511814.41N 0003550.19E								
(RNAV 5)	316°/ 136°	16.1 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between DET and 5 nm before BAKER: London Control (Swanwick) Freq: 134.900 (FL 175 and above); Freq: 120.525 (Below FL 175). Between 5 nm before BAKER and BAKER: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215 to FL 175); Freq: 120.525 (Below FL 175).
▵ BAKER	512942N 0001753E								
(RNAV 5)	316°/ 136°	21.5 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between BAKER and abm LAM: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215 to FL 175); Freq: 118.825 (Below FL 175). Between abm LAM and BPK: London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 127.955 (Below FL 215 to FL 175); Freq: 129.280 (Below FL 175 to FL 115); Freq: 118.825 (Below FL 115).
▵ BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W								**Westbound route only btn BPK and TLA.**
(RNAV 5)	330°/-	23.4 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).



ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△ POTON	520504N 0002538W								
(RNAV 5)	330°/-	9.8 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 132.605 (FL 215 and above); Freq: 130.925 (Below FL 215).
△ BEDFO	521330N 0003348W								
(RNAV 5)	330°/-	9.4 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195).
△ EBOTO	522133N 0004140W								
(RNAV 5)	330°/-	17.6 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195).
△ PIPIN	523636N 0005630W								
(RNAV 5)	330°/-	9.2 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195).
△ LESTA	524427N 0010419W								Intersection with P6 and Y250.
(RNAV 5)	330°/-	15.7 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
△ EMBOR	525748N 0011745W								
(RNAV 5)	330°/-	23.1 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
△ XAPOS	531729N 0013751W								
(RNAV 5)	330°/-	12.4 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
△ BOLBI	532800N 0014845W								
(RNAV 5)	330°/-	9.3 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 119.525 (Below FL 195).
ULSAX	533554N 0015700W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)	329°/-	10.3 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ POLE HILL VOR/DME (POL)	534437.56N 0020611.98W								
(RNAV 5)	340°/-	7.7 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ NELSA	535148N 0021105W								
(RNAV 5)	340°/-	9.9 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ RIBEL	540058N 0021723W								
(RNAV 5)	340°/-	9.1 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
ERGAB	540922N 0022312W								
(RNAV 5)	340°/-	22.3 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit; see Route Remarks) Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ SHAPP	543000N 0023738W								
(RNAV 5)	339°/-	13.5 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit; see Route Remarks) Scottish Control (Prestwick) Freq: 126.300 (All Levels).
△ ABEVI	544227N 0024629W								
(RNAV 5)	339°/-	11.0 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit; see Route Remarks) Scottish Control (Prestwick) Freq: 126.300 (All Levels).
△ INPIP	545236N 0025346W								
(RNAV 5)	339°/-	16.4 nm		FL 245 / FL 95		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit; see Route Remarks) Scottish Control (Prestwick) Freq: 126.300 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
	UTOGU	550740N 0030443W								The change in the lower limit occurs along the straight line joining: 550858N 0030000W - 550529N 0031233W and not at the usual right angle to the AWY CL.
(RNAV 5)		339°/-	1.4 nm		FL 245 / FL 85		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
△	INREV	550857N 0030539W								
(RNAV 5)		339°/-	9.8 nm		FL 245 / FL 85		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
△	ESKDO	551756N 0031215W								
(RNAV 5)		339°/-	5.1 nm		FL 245 / FL 85		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
	IPDOR	552239N 0031545W								
(RNAV 5)		339°/-	7.9 nm		FL 245 / FL 85		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class D. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
△	TALLA VOR/DME (TLA)	552956.92N 0032110.20W								
(RNAV 5)		347°/ 167°	43.4 nm		FL 245 / 6000 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
△	GRICE	561148N 0034108W								Intersection with P600. Extremity of N601.

Route Remarks:

- **Variable lower limit:** Daily from 0700 to 2000 (1hr earlier in summer) btn ERGAB and UTOGU the lower limit is FL 125 making FL 140 the Mnm FL available.
- Three areas of controlled airspace Class C are part of N601:

  (Class C FL 115 - FL 155)
  522632N 0003702W - 522630N 0002732W -
  522106N 0002214W - 521104N 0002159W -
  522632N 0003702W.

  (Class C FL 145 - FL 245)
  522632N 0003702W - 522630N 0002732W -
  524757N 0004834W - 524523N 0005538W -
  522632N 0003702W.

  (Class C FL 195 - FL 245)
  524757N 0004834W - 524523N 0005538W -
  532003N 0013042W - 532109N 0012904W -
  532012N 0011840W - 531755N 0010606W -
  530016N 0010043W - 524757N 0004834W.

  Available H24.
- An area of Class C controlled airspace, base level FL 195 bounded by great circle lines joining:
  545610N 0024159W - 544628N 0023625W -
  541500N 0021001W - 541113N 0021858W -
  545442N 0024940W - 545610N 0024159W,
  is part of N601.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks

- Btn the hours of 1700 to 0900 each day Mon - Fri and 1700 Fri to 0900 Mon + PH (1 hr earlier in summer) (See GEN 2.1, paragraph 6 for PHs) **two** areas of controlled airspace, Class C above FL 195 and Class D below FL 195, are part of N601.

  Area 1, base level FL 165, bounded by great circle lines joining:
  551735N 0025427W - 551724N 0024532W -
  551241N 0023052W - 545912N 0022555W -
  545610N 0024159W - 551735N 0025427W.

  Area 2, base level FL 195, bounded by great circle lines joining:
  545912N 0022555W - 541500N 0021001W -
  544628N 0023625W - 545610N 0024159W -
  545912N 0022555W.
  Part or all of these two areas of airspace may not be avbl when MoD requires access to the area. Non availability of airspace will be notified to GAT by Scottish Control (Prestwick).
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, with variable lower limit as specified for N601, bounded by great circle lines joining:
  550449N 0031204W - 542007N 0023955W -
  544500N 0031150W - 550449N 0031204W,
  is part of N601.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base level FL 165 bounded by great circle lines joining:
  551742N 0030000W - 551735N 0025427W -
  545610N 0024159W - 545442N 0024940W -
  550858N 0030000W - 551742N 0030000W,
  is part of N601.
  Part or all of this airspace may not be avbl when activity associated with D510, Spadeadam requires access to the area. Non availability of airspace will be notified to GAT by Scottish Control (Prestwick).
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base level FL 85, bounded by great circle lines joining:
  552700N 0030000W - 550858N 0030000W -
  552358N 0031101W - 552700N 0030000W,
  is part of N601.
- The portion of airspace formed by joining positions:

  Camphill Box

  532719N 0014617W - 533017N 0011641W -
  531938N 0011532W - 532012N 0011840W -
  532110N 0012901W - 532002.91N 0013042.10W -
  531418.31N 0012448.84W - 531137N 0013631W -
  532719N 0014617W,
  from AWY base level to an upper limit of FL 100, occasionally to FL 190 on request;

  is notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with the conditions established in the Letter of Agreement (LOA) btn the Derbyshire and Lancashire (Camphill) Gliding Club, British Gliding Association (BGA), Leeds Bradford International Airport, and Scottish Control (Prestwick).
- Between POL and TLA the airway is 8 nm wide with eastern edge of the airway 3 nm east of the centre-line.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N621 (RNP/RNAV)										
▵	LELNA	495857N 0020623W								**Westbound (southbound) route only.** FIR Boundary. For continuation see AIP France.
(RNAV 5)		-/186°	15.9 nm		FL 245 / FL 195		10 nm		odd FL 230 / FL 210	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	MARUK	501447N 0020420W								
(RNAV 5)		-/199°	10.7 nm		FL 245 / FL 195		10 nm		odd FL 230 / FL 210	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	BEVEL	502454N 0015907W								
(RNAV 5)		-/199°	16.4 nm		FL 245 / FL 165		10 nm		odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 165 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	KAPEX	504030N 0015100W								
(RNAV 5)		-/230°	25.5 nm		FL 245 / FL 155		10 nm		odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W								Intersection with L620.
(RNAV 5)		-/214°	24 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 129.425 (FL 155 and above); Freq: 134.125 (Below FL 155).
▵	GOGSI	511727N 0010002W								Extremity of N621.

Route Remarks:

- If necessary, traffic will be radar vectored to remain 5 nm from eastern edge of EG D023 until 2000 ft above the notified level of Unusual Air Activity.
- Due to Brest ACC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N859 (RNP/RNAV)									
▵ SITET	500600N 0000000E								**Eastbound (southbound) route only btn CPT and SITET.** FIR Boundary. Continues as UN859 and intersects with A34 (See AIP France).
(RNAV 5)	-/156°	7.2 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Dual designation with L151 btn SITET and DRAKE. London Control (Swanwick) Freq: 135.050 (All Levels).
▵ DRAKE	501234N 0000434W								
(RNAV 5)	-/147°	31.7 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between 25 nm before DRAKE and DRAKE: London Control (Swanwick) Freq: 135.050 (All Levels). Between INKEK and 25 nm before DRAKE: London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵ INKEK	503853N 0003209W								Base level change point is not at right angles to the CL of N859 and extends between: 503606N 0003840W - 504012N 0002904W - 504114N 0002509W.
(RNAV 5)	-/147°	2.9 nm		FL 245 / FL 65		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵ EVEXU	504116N 0003441W								
(RNAV 5)	-/147°	12.1 nm		FL 245 / FL 65		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Dual designation with N20 btn EVEXU and GWC. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 133.175 (Below FL 175).
▵ GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W								
(RNAV 5)	-/156°	26.3 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between 10 nm before GWC and GWC: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175);

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 133.175 (Below FL 175). Between VAPID and 10 nm before GWC: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 129.080 (Below FL 175 to FL 105); Freq: 134.125 (Below FL 105).
△ VAPID	511514N 0010242W								
(RNAV 5)	-/156°	15.7 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between 5 nm after CPT and VAPID: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 105); Freq: 134.125 (Below FL 105). Between CPT and 5 nm after CPT: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135).
△ COMPTON VOR/DME (CPT)	512929.66N 0011310.89W								
(RNAV 5)	343°/ 163°	10 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 165); Freq: 129.080 (Below FL 165 to FL 135); Freq: 134.125 (Below FL 135).
△ DIGUT	513901N 0011759W								
(RNAV 5)	343°/ 163°	7.6 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between DIGUT and 5 nm from DIGUT: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 133.080 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between 5 nm from DIGUT and KIDLI: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 133.080 (Below FL 215).
△ KIDLI	514617N 0012141W								Intersection with L151.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)		343°/ 163°	36.9 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between KIDLI and 10 nm from KIDLI: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 133.080 (Below FL 215). Between 10 nm from KIDLI and 13 nm before HON: London Control (Swanwick) Freq: 134.390 (FL 225 and above); Freq: 133.080 (Below FL 225). Between 13 nm before HON and HON: London Control (Swanwick) Freq: 134.390 (FL 215 and above); Freq: 133.080 (Below FL 215).
▵	HONILEY VOR/DME (HON)	522124.04N 0013949.41W								**Southbound route only btn SANBA and HON.** Intersection with L10, L15, L612 and P155.
(RNAV 5)		-/154°	44.1 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between abm EGBB and HON: London Control (Swanwick) Freq: 134.390 (FL 195 and above); Freq: 133.080 (Below FL 195). Between 10 nm after UTUXA and abm EGBB: London Control (Swanwick) Freq: 134.390 (FL 195 and above). Scottish Control (Prestwick) Freq: 134.425 (Below FL 195). Between UTUXA and 10 nm after UTUXA: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵	UTUXA	530030N 0021313W								Intersection with P18.
(RNAV 5)		-/154°	8.9 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵	SANBA	530822N 0022003W								Extremity of N859.

Route Remarks:

- An area of controlled Class A airspace below FL 85, base FL 65, bounded by great circle lines joining:
  504625N 0003040W - 504626N 0002908W -
  504132N 0002357W - 504012N 0002904W -
  504140N 0002537W - 504625N 0003040W,
  is part of N859.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 85, bounded by great circle lines joining:
  513911N 0012629W - 513601N 0012453W -
  513640N 0013011W - 513911N 0012629W,
  is part of N859.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N862 (RNP/RNAV)										
△	SKESO	494929N 0030203W								Available H24 SKESO - BHD. FIR Boundary. Continues as UN862 and intersects with A25, UN90 and UY29 (see AIP France).
(RNAV 5)		334°/ 154°	11.8 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between London/Brest FIR Bdry and 500000N: Jersey Control Freq: 125.200 (All Levels).
△	SKERY	500000N 0031023W								
(RNAV 5)		334°/ 154°	26.9 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 126.075 (All Levels).
△	BERRY HEAD VOR/DME (BHD)	502354.98N 0032937.46W								**Southbound route only btn WAL and BHD.** ERNOK - BHD available **only** during: 1600 Fri to 0800 Mon Winter (Summer 1hr earlier). Intersection with N864.
(RNAV 5)		-/200°	57.2 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Between BHD and abm EGTE: London Control (Swanwick) Freq: 126.075 (All Levels). Between abeam EGTE and LAMAT: 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 or 126.075 (Above FL 165); Cardiff ATC Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
△	LAMAT	511807N 0030103W								Intersection with N90.
(RNAV 5)		-/188°	23.6 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 or 126.075 (Above FL 165); Cardiff ATC Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
△	ERNOK	514130N 0025644W								Available H24 WAL - ERNOK.
(RNAV 5)		-/188°	1.1 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. 0600 - 2300 Winter (Summer 1hr earlier)

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									London Control (Swanwick) Freq: 134.750 or 126.075 (Above FL 165); Cardiff ATC Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
▵ PERUP	514234N 0025632W								
(RNAV 5)	-/184°	9.6 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 or 126.075 (Above FL 165); Cardiff ATC Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
▵ DOBEM	515211N 0025545W								
(RNAV 5)	-/184°	4.8 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 or 126.075 (Above FL 165); Cardiff ATC Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
▵ RILES	515655N 0025522W								Intersection with L180.
(RNAV 5)	-/185°	10.0 nm		FL 245 / FL 145		12 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
▵ AMRAL	520653N 0025433W								
(RNAV 5)	-/185°	23.9 nm		FL 245 / FL 145		12 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
▵ RETSI	523042N 0025233W								
(RNAV 5)	-/180°	12.0 nm		FL 245 / FL 145		12 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
▵ NENVO	524238N 0025315W								The change in the lower limit occurs along the straight line joining: 524259N 0030447W - 524223N 0024501W and not at the usual right angle to the AWY CL.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)	-/180°	5.4 nm		FL 245 / FL 125		12 nm		odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△ ROBVA	524804N 0025334W								The change in the lower limit occurs along the straight line joining: 524825N 0030508W - 524749N 0024519W and not at the usual right angle to the AWY CL.
(RNAV 5)	-/180°	5.6 nm		FL 245 / FL 95		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△ KARNO	525340N 0025354W								
(RNAV 5)	-/185°	8.2 nm		FL 245 / FL 95		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
△ RISLA	530151N 0025312W								
(RNAV 5)	-/185°	2.8 nm		FL 245 / FL 95		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
△ NOKIN	530436N 0025258W								
(RNAV 5)	-/156°	21.0 nm		FL 245 / FL 95		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
△ WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W								Extremity of N862.

Route Remarks:

- AWY is 12 nm wide between LAMAT and KARNO, the western edge of the AWY is 7 nm west of the CL.
- Due to ATC operational requirements, the cruising level allocation between NOKIN and BHD is inappropriate to the MAG Track.
- The following areas, within N862 between the airway base level and FL 195, are notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with conditions established in a Letter of Agreement (LOA) between the British Gliding Association (BGA) and London Control (Swanwick), Swanwick Mil and Cardiff ATC:

  MADLEY Gliding Area bounded by great circle lines joining:
  520734N 0025744W - 520712N 0024624W -
  515640N 0024718W - 515701N 0025836W -
  520734N 0025744W.

  RAGLAN Gliding Area bounded by great circle lines joining:
  515701N 0025836W - 515640N 0024718W -
  515040N 0024748W - 515153N 0025901W -
  515701N 0025836W.
  During periods of activation of these areas ATC will direct aircraft towards TALGA to remain clear of the active area.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N863 (RNP/RNAV)										
▵	KOTEM	500000N 0010314W								**Eastbound (northbound) route only.** FIR Boundary. For continuation see AIP France.
(RNAV 5)		006°/-	20.2 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) (All Levels) Freq: 134.440.
▵	PILIP	502003N 0010026W								
(RNAV 5)		006°/-	17.0 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) (All Levels) Freq: 134.440.
▵	SUSIX	503700N 0005803W								
(RNAV 5)		006°/-	12.3 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 134.440 (FL 185 and above); Freq: 127.825 (Below FL 185 to FL 105); Freq: 133.175 (Below FL 105).
▵	AVANT	504912N 0005618W								Extremity of N863.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 above FL 195 H24.
  CDR 3 below FL 195.
  The use of this airway may be interrupted when MoD (Navy) requires the activation of Danger Areas EG D037 and/or D038 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity.
  Non-availability of N863 will be notified to GAT by 'Brest Control' and tfc will be routed to ORIST Y110 and L980.
- Due to Brest ACC operational requirements, cruising levels are inappropriate to the MAG TR btn KOTEM and AVANT.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, lower limit FL 125, bounded by:
  500000N 0011504W - 502917N 0011220W -
  503350N 0010622W - 500000N 0011101W,
  is part of N863.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N864 (RNP/RNAV)									
△ BERRY HEAD VOR/DME (BHD)	502354.98N 0032937.46W								Extremity of N864. Intersection with N862.
(RNAV 5)	008°/ 188°	10.6 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 126.075 (All Levels).
△ DAWLY	503427N 0032750W								
(RNAV 5)	008°/ 188°	5.6 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 126.075 (All Levels).
△ TINAN	504000N 0032654W								
(RNAV 5)	008°/ 188°	8.6 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Between TINAN and OHD EGTE: London Control (Swanwick) Freq: 126.075 (All Levels). Between OHD EGTE and TIVER: 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 126.075 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
△ TIVER	504833N 0032526W								
(RNAV 5)	008°/ 188°	2.3 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 126.075 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
△ ATWEL	505051N 0032502W								
(RNAV 5)	008°/ 188°	10.0 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 126.075 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
									2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
△ MULIT	510047N 0032319W								
(RNAV 5)	008°/ 188°	10.0 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 126.075 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (All Levels).
△ EXMOR	511043N 0032135W								
(RNAV 5)	008°/ 188°	26.1 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 105 Class A, FL 105/Alt 5500 ft Class D. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 126.075 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ NUMPO	513636N 0031701W								
(RNAV 5)	008°/ 188°	7.0 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	Between NUMPO and 513834N 0031640W: FL 245/FL 195 Class C, FL 195/FL 105 Class A, FL 105/Alt 5500 ft Class D. Between 513834N 0031640W and BCN: FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ BRECON VOR/DME (BCN)	514331.89N 0031546.92W								Intersection with L9.
(RNAV 5)	004°/ 184°	3.1 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick)

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ DIKAS	514637N 0031533W								
(RNAV 5)	004°/ 184°	1.9 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class A. 0600-2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300-0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ NAVOV	514831N 0031525W								The airspace division at NAVOV is not at right angles to the AWY CL but is contiguous with the northern bdry of AWY L9.
(RNAV 5)	004°/ 184°	5.0 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. 0600-2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300-0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ GOGIG	515330N 0031502W								
(RNAV 5)	004°/ 184°	1.2 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. 0600-2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300-0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ TOPRO	515442N 0031457W								
(RNAV 5)	004°/ 184°	2.8 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick)

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels).
△ TALGA	515730N 0031444W								**Northbound route only btn TALGA and MONTY.**
(RNAV 5)	004°/-	10.6 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140		FL 245/FL 195 Class C, FL 195/FL 125 Class A. Between TALGA and 5 nm north of TALGA: 0600 - 2300 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 134.750 (Above FL 165); Cardiff Approach Freq: 125.850 (FL 165 and below). 2300 - 0600 Winter (Summer 1hr earlier) London Control (Swanwick) Freq: 133.600 (All Levels). Between 5 nm north of TALGA and UMOLO: London Control (Swanwick) Freq: 133.600 (All Levels).
△ UMOLO	520803N 0031357W								
(RNAV 5)	004°/-	25.2 nm		FL 245 / FL 145		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△ NITON	523312N 0031201W								Intersection with P17.
(RNAV 5)	004°/-	10 nm		FL 245 / FL 145		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 145 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△ OKTEM	524310N 0031115W								
(RNAV 5)	004°/-	5.4 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△ NILGI	524835N 0031050W								
(RNAV 5)	005°/-	5.0 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△ MONTY	525334N 0031026W								
(RNAV 5)	004°/ 185°	5.4 nm		FL 245 / FL 65	Minimum limit: 5500 ft ALT	10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
△ GODPA	525900N 0031001W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)	005°/ 185°	5.0 nm		FL 245 / 4500 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 4500 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
▵ REXAM	530400N 0030937W								
(RNAV 5)	005°/ 185°	3.8 nm		FL 245 / 4500 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 4500 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
▵ IVLOD	530746N 0030919W								Change in BLCP is delineated by a line joining positions: 531018N 0031726W and 530209N 0025131W.
(RNAV 5)	005°/ 185°	15.8 nm		FL 245 / 3000 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 3000 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
▵ WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W								Intersection with L10, L151, N862 and Y53.
(RNAV 5)	357°/ 177°	12.2 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
▵ GUNTU	533537N 0030954W								
(RNAV 5)	357°/ 177°	8.3 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 133.050 (Below FL 195).
▵ BILVO	534352N 0031109W								
(RNAV 5)	357°/ 177°	39.2 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Between BILVO and 5415N: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 133.050 (Below FL 195). Between 5415N and SUBUK: Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵ SUBUK	542248N 0031711W								
(RNAV 5)	357°/ 177°	20.6 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵ DEAN CROSS DME (DCS)	544318.88N 0032026.30W								Intersection with L612.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	002°/ 182°	20.1 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit; see Route Remarks) Scottish Control (Prestwick) Freq: 126.300 (All Levels).
▵ ASRUS	550321N 0032045W								The change in the lower limit occurs along the great circle line joining: 550537N 0031205W - 550045N 0032924W and not at the usual right angle to the AWY CL.
(RNAV 5)	002°/ 182°	17.9 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
▵ UNURO	552111N 0032102W								Base level change is aligned with Scottish TMA.
(RNAV 5)	002°/ 182°	8.8 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class D. Scottish Control (Prestwick) Freq: 126.300 (All Levels).
▵ TALLA VOR/DME (TLA)	552956.92N 0032110.20W								
(RNAV 5)	010°/ 190°	37.5 nm		FL 245 / 6000 ft ALT		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵ PIPAR	560700N 0031206W								Base level change is aligned with Scottish TMA.
(RNAV 5)	010°/ 190°	5.1 nm		FL 245 / FL 65		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵ NOVBA	561200N 0031051W								
(RNAV 5)	010°/ 190°	11.3 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵ IBOLU	562310N 0030803W								
(RNAV 5)	010°/ 190°	18.7 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵ ASNUD	564139N 0030320W								Extremity of N864. Intersection with P600.

Route Remarks:

- Due to ATC operational requirements, the cruising level allocation between BHD and WAL and between DCS and TLA is inappropriate to the MAG Track.
- An area of N864, below FL105, between a line joining 513946N 0032432W - 513838N 0031727W - 513743N 0030845W and EXMOR is Class D airspace.
- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base Alt 4500 ft, bounded by straight lines joining:
  530513N 0030113W - 530209N 0025131W -
  525618N 0030157W - 530513N 0030113W,
  is part of N864.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks

- Between 2000 and 0700 daily, Winter (Summer 1hr earlier) an area of Class A controlled airspace, base FL 55 and upper limit FL 105 bounded by straight lines joining:
  531733N 0031654W - 530540N 0032345W -
  530348N 0031757W - 531733N 0031654W,
  is part of N864.
- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base Alt 3000 ft, bounded by straight lines joining:
  531356N 0030030W - 530626N 0024349W -
  530209N 0025131W - 530513N 0030113W -
  531356N 0030030W, is part of N864.
- **Variable lower limit:** Daily from 0700 to 2000 (1hr earlier in summer) between DCS and ASRUS the lower limit is FL 125 making the Mnm FLs FL 130 (Southbound) and FL 140 (Northbound).
- Between northern boundary of Scottish TMA and ASNUD, N864 is notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with the conditions established in a Letter of Agreement (LOA) between the British Gliding Association (BGA) and Scottish Control (Prestwick).
- Between WAL and DCS, N864 is only available from 1800 on Fridays, or the day preceding a PH, until 0800 on Mondays, or the day following a PH, Winter (Summer 1hr earlier). For limited periods, during these times, this part of AWY N864 may be required for use by the MoD. These activities will be promulgated by Scottish Control (Prestwick) and the alternative route will be 'as directed by ATC'.
- Between TLA and ASNUD, established from 0001 on Saturday to 2359 on Sunday as an alternative route when AWY P600, to the south of Perth (PTH), has been made available to Portmoak for gliding activity. However, aircraft may flight plan to use this route at any time during the above hours. At certain times, notably when the airspace is required for military use, this weekend route will not be available. In these circumstances, all of AWY P600 will be retained for use.

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ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N867 (RNP/RNAV)										
▵	GARMI	500000N 0012250W								**Northbound route only.** FIR Boundary. For continuation see AIP France.
(RNAV 5)		004°/-	31.3 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 127.825 (All Levels).
▵	KATHY	503114N 0012000W								Intersection with L980.
(RNAV 5)		360°/-	8.6 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 127.825 (All Levels).
▵	ELDER	503948N 0012014W								Intersection with M185.
(RNAV 5)		360°/-	17.5 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 127.825 (All Levels).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W								Extremity of N867.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between GARMI and KATHY** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 above FL 195 H24.
  CDR 3 below FL 195.
- The use of this airway may be interrupted when MoD (Navy) requires the activation of Danger Area EG D036 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity.
  Non-availability of N867 will be notified to GAT by 'Brest Control' and tfc will be routed to ORIST Y110 and L980.
- Due to Brest ACC operational requirements, cruising levels are inappropriate to the MAG TR btn GARMI and SAM.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P2 (RNP/RNAV)									
▵ NIGIT	511847N 0011015W								**Eastbound route only btn NUMPO and NIGIT.** Extremity of P2.
(RNAV 5)	-/104°	15 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Between 8 nm before NIGIT and NIGIT: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155). Between BEDEK and 8 nm before NIGIT: London Control (Swanwick) Freq: 134.750 (All Levels).
▵ BEDEK	512215N 0013331W								
(RNAV 5)	-/104°	19.4 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.750 (All Levels).
▵ OKESI	512636N 0020342W								
(RNAV 5)	-/104°	46.9 nm		FL 245 / FL 105		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.750 (All Levels).
▵ NUMPO	513636N 0031701W								Extremity of partition of P2.
				- / -					**ROUTE BREAK - THIS AIR-WAY IS NOT CONTINUOUS.**

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W								Extremity of partition of P2. Intersection with L9.
(RNAV 5)		270°/ 089°	44.6 nm		FL 245 / FL 145		10 nm	even FL 240 / FL 160	odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Between STU and the eastern boundary of the BANBA CTA (515729N 0060611W): London Control (Swanwick) Freq: 129.375 (All Levels). Between the eastern boundary of the BANBA CTA (515729N 0060611W) and BANBA: ATS delegated to Shannon ACC at FL 195 and above. The airspace within the BANBA CTA is Class C. (See ENR 2.1). Shannon ACC Freq: 132.150 (FL 195 and above); London Control (Swanwick) Freq: 129.375 (Below FL 195).
△	BANBA	515710N 0061421W								FIR Boundary. For continuation see AIP Ireland.

Route Remarks:

- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 145, bounded by the southern edge of AWY L9, northern edge of P2 and FIR boundary is deemed to be part of P2.
- Between NUMPO and NIGIT the southern boundary is approximately 4 nm from the CL of AWY and is co-incident with the southern boundary of Cotswold CTA 3.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P6 (RNP/RNAV)										
▵	LESTA	524427N 0010419W								**Westbound route only.** Extremity of P6.
(RNAV 5)		318°/-	41.4 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 118.780 (All Levels).
▵	RODOL	531417N 0015143W								Extremity of partition of P6. Intersection with L28.
					- / -					**ROUTE BREAK - THIS AIRWAY IS NOT CONTINUOUS.**
▵	UDEGO	535842N 0040250W								**Westbound route only.** Extremity of partition of P6.
(RNAV 5)		308°/-	15.0 nm		FL 255 / FL 195		10 nm	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	DIXOV	540720N 0042338W								
(RNAV 5)		308°/-	8.8 nm		FL 255 / FL 135		10 nm	even FL 240 / FL 140		FL 255/FL 195 Class C, FL 195/FL 135 Class A. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	RUBOV	541222N 0043553W								
(RNAV 5)		307°/-	10.0 nm		FL 255 / FL 135		10 nm	even FL 240 / FL 140		FL 255/FL 195 Class C, FL 195/FL 135 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	UMOPO	541803N 0044953W								
(RNAV 5)		307°/-	20.1 nm		FL 255 / FL 75		10 nm	even FL 240 / FL 80		FL 255/FL 195 Class C, FL 195/FL 75 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	NELBO	542924N 0051810W								DRA Arrival Transition Fix.
(RNAV 5)		291°/-	34.0 nm		FL 255 / FL 55	Minimum limit: 5000 ft ALT	10 nm	even FL 240 / FL 60		FL 255/FL 195 Class C, FL 195/FL 55 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	BELFAST VOR/DME (BEL)	543940.12N 0061347.67W								Extremity of P6.

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ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P16 (RNP/RNAV)										
▵	NOKIN	530436N 0025258W								Extremity of P16. Intersection with N862.
(RNAV 5)		022°/ 202°	23.7 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 200	odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (FL 195 and below).
▵	ASMIM	532646N 0023911W								
(RNAV 5)		022°/ 202°	11.6 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 200	odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (FL 195 and below).
▵	CROFT	533737N 0023220W								Intersection with L612 and Y70. The western bdry of controlled airspace, abm CROFT, is 4.28 nm from the CL.
(RNAV 5)		022°/ 202°	25.0 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 200	odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 136.575 (FL 190 and below).
▵	RIBEL	540058N 0021723W								**Southbound route only btn GASKO and RIBEL.** Intersection with N601.
(RNAV 5)		-/225°	17.2 nm		FL 245 / FL 125		10 nm		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 136.575 (FL 190 and below).
▵	GASKO	541329N 0015721W								Extremity of P16.

Route Remarks:

- Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P17 (RNP/RNAV)										
△	NITON	523312N 0031201W								**Northbound route only btn NITON and NOKIN.** Extremity of P17.
(RNAV 5)		022°/-	33.5 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) Freq: 133.600 (All Levels).
△	NOKIN	530436N 0025258W								Intersection with N862 and P16.
(RNAV 5)		036°/ 216°	12.9 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
△	KUXEM	531511N 0024047W								
(RNAV 5)		036°/ 216°	15.9 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 128.050 (Below FL 195).
△	BARTN	532814N 0022541W								Intersection with L612 and L975.
(RNAV 5)		037°/ 217°	20.1 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	POLE HILL VOR/DME (POL)	534437.56N 0020611.98W								**Eastbound route only btn POL and OBOXA.** Intersection with N601 and P18.
(RNAV 5)		017°/-	21.0 nm		FL 245 / FL 95		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	IPSIR	540454N 0015657W								The base level change point is not at right angles to the CL of P17 and follows an extended line from the northern extremity of the Leeds Bradford CTA, through IPSIR.
(RNAV 5)		017°/-	5.9 nm		FL 245 / FL 125		10 nm	odd FL 230 / FL 130		FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△	OBOXA	541036N 0015420W								Extremity of P17.

Route Remarks:

- Due to ATC operational requirements, the cruising level allocation between NITON and POL is inappropriate to the MAG Track.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
P18 (RNP/RNAV)									
▵ TELBA	523952N 0021907W								Extremity of P18.
(RNAV 5)	015°/ 195°	12.2 nm		FL 245 / FL 145		10 nm	even FL 240 / FL 160	odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵ STAFA	525141N 0021435W								Intersection with L8.
(RNAV 5)	007°/ 187°	8.9 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵ UTUXA	530030N 0021313W								Intersection with N859.
(RNAV 5)	007°/ 187°	8.1 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195).
▵ LISTO	530836N 0021157W								Intersection with L612.
(RNAV 5)	007°/ 187°	36.2 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between LISTO and abm MCT: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 134.425 (Below FL 195). Between abm MCT and POL: Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
▵ POLE HILL VOR/DME (POL)	534437.56N 0020611.98W								Intersection with N57 and P17.
(RNAV 5)	012°/ 192°	21.5 nm		FL 245 / FL 95		14 nm	even FL 240 / FL 100	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
▵ IDKOL	540543N 0015945W								The base level change point is not at right angles to the CL of P18 and follows an extended line from the northern extremity of the Leeds Bradford CTA, through IDKOL.
(RNAV 5)	012°/ 192°	3.2 nm		FL 245 / FL 125		14 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 136.575 (All Levels).
▵ ABKAT	540853N 0015847W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)	012°/ 192°	4.7 nm		FL 245 / FL 125		14 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 136.575 (All Levels).
△ GASKO	541329N 0015721W								Intersection with P16 and Y250.
(RNAV 5)	012°/ 192°	11.7 nm		FL 245 / FL 125		14 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ UVAVU	542500N 0015346W								
(RNAV 5)	012°/ 192°	8.0 nm		FL 245 / FL 105		14 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 125 Class A, FL 125/FL 105 Class D. Scottish Control (Prestwick) Freq: 124.500 (FL 225 and above); Freq: 133.800 (Below FL 225 to FL 165); Newcastle Approach Freq: 124.375 (Below FL 165).
△ TILNI	543251N 0015118W								
(RNAV 5)	012°/ 192°	10.0 nm		FL 245 / FL 75		14 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 125 Class A, FL 125/FL 75 Class D. Scottish Control (Prestwick) Freq: 124.500 (FL 225 and above); Freq: 133.800 (Below FL 225 to FL 165); Newcastle Approach Freq: 124.375 (Below FL 165).
△ GIRLI	544241N 0014811W								
(RNAV 5)	012°/ 192°	20 nm		FL 245 / FL 55		14 nm	even FL 240 / FL 60	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 125 Class A, FL 125/FL 55 Class D. Scottish Control (Prestwick) Freq: 124.500 (FL 225 and above); Freq: 133.800 (Below FL 225 to FL 165); Newcastle Approach Freq: 124.375 (Below FL 165).
△ NATEB	550218N 0014154W								Intersection with Y96.
(RNAV 5)	012°/ 192°	4.7 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△ ELMUD	550656N 0014024W								
(RNAV 5)	012°/ 192°	20.3 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△ ALASO	552650N 0013354W								
(RNAV 5)	350°/ 170°	15.7 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	RITSI	554209N 0013925W								
(RNAV 5)		350°/ 170°	12.9 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	MADAD	555447N 0014402W								
(RNAV 5)		350°/ 170°	18.4 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	NEXUS	561243N 0015041W								
(RNAV 5)		350°/ 170°	17.5 nm		FL 245 / FL 135		10 nm	even FL 240 / FL 140	odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 135 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	BALID	562949N 0015707W								
(RNAV 5)		350°/ 170°	10.0 nm		FL 245 / FL 115		10 nm	even FL 240 / FL 120	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 115 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	UPGET	563935N 0020050W								
(RNAV 5)		350°/ 170°	10.0 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	OKPAL	564921N 0020435W								
(RNAV 5)		350°/ 170°	6.3 nm		FL 245 / 4500 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / FL 50	FL 245/FL 195 Class C, FL 195/Alt 4500 ft Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	RATPU	565532N 0020659W								The change in the lower limit occurs along the line joining: 565514N 0021611W - 565533N 0020635W thence anti-clockwise by the arc of a circle radius 10 nm centred on 570531N 0020740W to 565659N 0015812W and not at the usual right angle to the AWY CL.
(RNAV 5)		350°/ 170°	23.7 nm		FL 245 / FL 115		10 nm	even FL 240 / FL 120	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 115 Class D. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
▵	ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W								Extremity of P18.

Route Remarks:

- **CDR Category One (CDR 1) between NATEB and ADN** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 Tue-Fri 0530-0900, and from 1500 Fri or the day preceding a PH to 1000 Mon or the day following a PH Winter (Summer 1hr earlier). Additionally available overnight May-Sep, Mon-Thu 1900-0900.
  (See GEN 2.1, paragraph 6 for PHs).
  The AWY is not avbl for use during these periods when MoD require access to the airspace.
- Due to ATC operational requirements, the cruising level allocation between TELBA and ALASO is inappropriate to the MAG Track.
- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 85, bounded by straight lines joining:
  540051N 0015409W - 535710N 0015020W -
  534803N 0015310W - 534906N 0020115W -
  535539N 0020919W - 540051N 0015409W,

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks

is part of P18.

- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 95, bounded by straight lines joining:
  541102N 0021850W - 540848N 0021054W -
  540222N 0021251W - 541102N 0021850W,
  is part of P18.
- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 125, bounded by straight lines joining:
  541530N 0020852W - 541310N 0020934W -
  540954N 0021448W - 541102N 0021850W -
  541113N 0021858W - 541530N 0020852W,
  is part of P18.
- Two areas of Class D controlled airspace, base level FL 75 and upper limit FL 115, are part of P18:

  Area 1, east of P18, bounded by great circle lines joining:
  565044N 0015237W - 564530N 0015349W -
  565023N 0015541W - 565044N 0015237W.

  Area 2, west of P18, bounded by great circle lines joining:
  564819N 0021329W - 564326N 0021135W -
  564809N 0021455W - 564819N 0021329W.
- Two areas of Class D controlled airspace, base ALT 4500 ft and upper limit FL 115, are part of P18:

  Area 1, east of P18, bounded by great circle lines joining:
  570417N 0014929W - 565044N 0015237W -
  565023N 0015541W - 565659N 0015812W
  thence anti-clockwise by the arc of a circle radius 10 nm centred on 570531N 0020740W to 570417N 0014929W.

  Area 2, west of P18, bounded by great circle lines joining:
  565514N 0021611W - 564819N 0021329W -
  564809N 0021455W - 565507N 0021952W -
  565514N 0021611W.

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ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
P44 (RNP/RNAV)									
△ ARTOV	515419N 0012533E								**Eastbound route only.** Extremity of P44.
(RNAV 5)	061°/-	10.8 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△ RATLO	515929N 0014055E								
(RNAV 5)	061°/-	11.2 nm		FL 245 / FL 135		10 nm	odd FL 230 / FL 150		FL 245/FL 195 Class C, FL 195/FL 135 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△ PIXAM	520447N 0015650E								
(RNAV 5)	062°/-	29.1 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210		Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△ SOMVA	521826N 0023838E								FIR Boundary. Extremity of P44.
Route Remarks:									
• See also ENR 1.1, paragraph 1.1.3.									

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
P49 (RNP/RNAV)									
△ XAMAN	514705N 0021327E								**Westbound (northbound) route only.** FIR Boundary. Extremity of P49.
(RNAV 5)	298°/-	14.3 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A London Control (Swanwick) Freq: 118.480 (FL 220 and above); Freq: 135.425 (FL 210 and below).
△ IDESI	515352N 0015308E								Extremity of P49. Intersection with M20 and Y6.
Route Remarks:									
• See also ENR 1.1, paragraph 1.1.3.									

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P87 (RNP/RNAV)										
△	BOLRO	500000N 0014129W								**Northbound route only.** FIR Boundary. Extremity of P87.
(RNAV 5)		004°/-	15.7 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 200		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 127.825 (All Levels).
△	DOMUT	501543N 0014009W								Extremity of P87. Intersection with L980.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 above FL 195 H24.
  CDR 3 below FL 195.
- The use of this airway may be interrupted when MoD (Navy) requires the activation of Danger Area EG D036 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity.
  Non-availability of P87 will be notified to GAT by 'Brest Control' and tfc will be routed to ORIST Y110 and L980.
- Due to Brest ACC operational requirements, the cruising level allocation is inappropriate to the MAG Track.
- The area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 125, is part of P87:
  501623N 0012910W - 500000N 0013035W -
  500000N 0013344W - 501347N 0013231W -
  501623N 0012910W.
- See also ENR 1.1, paragraph 1.1.3.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P137 (RNP/RNAV)										
△	SONDO	520506N 0014842E								**Eastbound route only.** Intersection with M183. Extremity of P137.
(RNAV 5)		-/112°	41.1 nm		FL 245 / FL 205		10 nm		odd FL 230 / FL 210	Class C. London Control (Swanwick) Freq: 118.480 (FL 220 and above); Freq: 121.025 (FL 210 and below).
△	UMBAG	522052N 0004657E								Extremity of P137.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P600 (RNP/RNAV)										
▵	ROTEV	540144N 0060358W								**Northbound route only btn ROTEV and BLACA.** FIR Boundary.
(RNAV 5)		029°/-	37.8 nm		FL 255 / FL 75		10 nm	odd FL 250 / FL 90		FL 255/FL 195 Class C, FL 195/FL 75 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	GOTNA	543541N 0053553W								DRA Arrival Transition Fix.
(RNAV 5)		044°/-	23.1 nm		FL 255 / FL 55	Minimum limit: 5000 ft ALT	10 nm	odd FL 250 / FL 70		FL 255/FL 195 Class C, FL 195/FL 55 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	BLACA	545300N 0050932W								DRA Arrival and Departure Transition Fix. Intersection with P620.
(RNAV 5)		029°/ 209°	15.3 nm		FL 255 / FL 55	Minimum limit: 5000 ft ALT	10 nm	odd FL 250 / FL 70	even FL 240 / FL 60	FL 255/FL 195 Class C, FL 195/FL 55 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	TUNSO	550640N 0045741W								
(RNAV 5)		029°/ 209°	5 nm		FL 255 / FL 55	Minimum limit: 5000 ft ALT	10 nm	odd FL 250 / FL 70	even FL 240 / FL 60	FL 255/FL 195 Class C, FL 195/FL 55 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	GIRVA	551108N 0045347W								Base level change is aligned with Scottish TMA.
(RNAV 5)		029°/ 210°	8.6 nm		FL 255 / 6000 ft ALT		10 nm	odd FL 250 / FL 70	even FL 240 / FL 80	FL 255/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵	TURNBERRY VOR/DME (TRN)	551848.28N 0044701.89W								Intersection with UP600.
(RNAV 5)		037°/ 218°	29.4 nm		FL 245 / 6000 ft ALT		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵	FENIK	554255N 0041731W								Intersection with L612.
(RNAV 5)		038°/ 218°	5.4 nm		FL 245 / 6000 ft ALT		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵	GOSAM	554719N 0041202W								
(RNAV 5)		038°/ 218°	30.0 nm		FL 245 / 6000 ft ALT		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵	GRICE	561148N 0034108W								Intersection with N601.
(RNAV 5)		038°/ 218°	2.7 nm		FL 245 / 6000 ft ALT		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	ENUKU	561400N 0033819W								
(RNAV 5)		038°/ 218°	4.4 nm		FL 245 / FL 55	Minimum limit: 5000 ft ALT	10 nm	odd FL 230 / FL 70	even FL 240 / FL 60	FL 245/FL 195 Class C, FL 195/FL 55 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	EDONU	561736N 0033341W								
(RNAV 5)		038°/ 218°	11.0 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	PERTH VOR (PTH)	562632.63N 0032206.96W								The change in the lower limit occurs along the great circle lines joining: 562948N 0032900W - 562633N 0032207W (VOR PTH) - 562341N 0031445W and not at the usual right angle to the AWY CL.
(RNAV 5)		037°/ 217°	18.4 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	ASNUD	564139N 0030320W								Intersection with N864.
(RNAV 5)		037°/ 217°	5.1 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	GANKI	564548N 0025808W								
(RNAV 5)		037°/ 217°	10.0 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	GLESK	565400N 0024745W								
(RNAV 5)		037°/ 217°	4.1 nm		FL 245 / FL 55		10 nm	odd FL 230 / FL 70	even FL 240 / FL 60	FL 245/FL 195 Class C, FL 195/FL 55 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	NAXIL	565724N 0024326W								
(RNAV 5)		037°/ 217°	26.0 nm		FL 245 / FL 115		10 nm	odd FL 230 / FL 130	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 115 Class A. Scottish Control (Prestwick) Freq: 124.500 (All Levels).
△	ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W								Intersection with Y904 and Y905.
		068°/ 249°	26.0 nm		FL 195 / 4500 ft ALT		10 nm	odd FL 190 / FL 50	even FL 180 / FL 60	Class E and TMZ. **(See Note)** Within the confines of the Aberdeen CTR/CTA, P600 assumes the airspace classification of the Aberdeen CTR/CTA. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
△	OSLEL	572858N 0013158W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	069°/ 249°	9.1 nm		FL 195 / FL 105		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ LESNI	573233N 0011622W								
(RNAV 5)	069°/ 249°	24.9 nm		FL 245 / FL 105		10 nm	odd FL 230 / FL 110	even FL 240 / FL 120	FL 245/FL 195 Class C, FL 195/FL 105 Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ BUDON	574207N 0003343W								
(RNAV 5)	069°/ 249°	30.0 nm		FL 245 / FL 195		10 nm	odd FL 230 / FL 210	even FL 240 / FL 200	Class C. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ OVDAN	575321N 0001818E								Extremity of P600.

Route Remarks:

- Between ROTEV and BLACA below FL 245, AWY P600 lies within the Strangford CTA.
- An area of controlled airspace, Class C above FL 195 and Class D below FL 195, base level FL 125, bounded by straight lines joining:
  550250N 0045120W - 551002N 0044501W -
  550806N 0043002W - 550250N 0045120W,
  is part of P600.
- Use of this route may be interrupted between Southern boundary of Scottish TMA and 5440N due to activities involving aircraft engaged in MoD (DPA) sponsored trials under the control of DRA West Freugh.
- Areas of controlled airspace, Class C above FL 195 and Class A below FL 195:
  base FL 85, bounded by great circle lines joining:
  562948N 0032900W - 562925N 0032930W -
  562030N 0034100W - 562149N 0034418W -
  562948N 0032900W;
  and
  base FL 55, bounded by great circle lines joining:
  562149N 0034418W - 562030N 0034100W -
  561400N 0034919W - 561400N 0040926W -
  562000N 0034746W - 562149N 0034418W,
  and
  base FL 55, bounded by great circle lines joining:
  561654N 0034537W - 561400N 0033819W -
  561400N 0034919W - 561654N 0034537W,
  are parts of P600.
- Intense gliding activity takes place on both sides of this AWY between the Northern Scottish TMA boundary and ADN; and this portion is notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with the conditions established in the Letter of Agreement between the British Gliding Association (BGA) and Scottish Control (Prestwick).
- When gliding conditions at Portmoak are favourable the use of the portion of AWY P600 between GRICE and PTH may be suspended during daylight hours on Saturdays and Sundays. Aircraft will then be routed via AWY N864 by Scottish Control (Prestwick).
- Traffic which would prefer to use AWY P600 between GRICE and PTH at weekends should FPL accordingly. When this portion of AWY is not available traffic will be tactically re-routed by Scottish Control (Prestwick) via AWY N864.
- Between GRICE and PTH the AWY narrows, with the eastern edge following a non-standard alignment between the following points:
  560854N 0033351W - 561400N 0033259W - 562341N 0031445W.
- The area of controlled airspace, Class E and TMZ, base level Alt 4500 ft and upper limit of FL 195, bounded by straight lines joining:
  572422.41N 0012815.10W - 570417.00N 0014929.00W -
  thence anti-clockwise by the arc of a circle radius 10 nm centred on 570531N 0020740W to
  570845.00N 0015019.00W - 571754.92N 0015604.67W -
  572422.41N 0012815.10W, is part of P600 **(See Note)**.
- See also ENR 1.1, paragraph 1.1.3.
- ***Note:*** *Transponder carriage and operation required within that part of P600 notified as Class E and TMZ.*

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P620 (RNP/RNAV)										
▵	NIMAT	535754N 0054432W								**Westbound (southbound) route only.** FIR Boundary. For continuation see AIP Ireland.
(RNAV 5)		-/209°	12.0 nm		FL 255 / FL 95		12 nm		even FL 240 / FL 100	FL 255/FL 195 Class C, FL 195/FL 95 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	NUMPI	540840N 0053536W								
(RNAV 5)		-/209°	23.1 nm		FL 255 / FL 95		12 nm		even FL 240 / FL 100	FL 255/FL 195 Class C, FL 195/FL 95 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	NELBO	542924N 0051810W								DRA Departure Transition Fix.
(RNAV 5)		-/195°	24.2 nm		FL 255 / FL 95		12 nm		even FL 240 / FL 100	FL 255/FL 195 Class C, FL 195/FL 95 Class D. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	BLACA	545300N 0050932W								DRA Departure Transition Fix. Extremity of P620.

Route Remarks:

- Btn NIMAT and BLACA below FL 245, AWY P620 lies within the Strangford CTA.
- Airway is 12 nm wide with centre-line defined 5 nm from eastern edge and 7 nm from western edge.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Q3 (RNP/RNAV)										
▵	OCKHAM VOR/DME (OCK)	511818.17N 0002649.86W								**Eastbound (northbound) route only.** Extremity of Q3.
(RNAV 5)		003°/-	30.1 nm		FL 245 / FL 175		10 nm	odd FL 230 / FL 190		FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 132.165.
▵	HEMEL	514820N 0002510W								Extremity of Q3. Intersection with T420.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Q4 (RNP/RNAV)										
▵	EMBOR	525748N 0011745W								**Westbound route only btn EMBOR and WAL.** Extremity of Q4.
(RNAV 5)		293°/-	14.6 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 119.525 (FL 195 and below).
▵	TRENT VOR/DME (TNT)	530314.23N 0014011.89W								Intersection with L28. FL 105 and below between TNT and WAL only available for traffic departing EGNX.
(RNAV 5)		293°/-	41.3 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 134.425 (FL 195 and below).
▵	VABKA	531808N 0024410W								Intersection with L8.
(RNAV 5)		292°/-	15.3 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 134.425 (FL 195 and below).
▵	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W								**Eastbound route only btn GIGTO and WAL.** Intersection with L10, L975 and N864.
(RNAV 5)		-/115°	21.5 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 133.050 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight alti-tude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
△ IBRAR	533154N 0034111W								
(RNAV 5)	-/115°	15.9 nm		FL 245 / FL 145		10 nm		odd FL 230 / FL 150	FL 245/FL 195 Class C, FL 195/FL 145 Class A. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
△ GIGTO	533801N 0040551W								Extremity of Q4.

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight alti-tude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Q41 (RNP/RNAV)									
△ ORTAC	495957N 0020018W								FIR Boundary. For continuation see AIP France.
(RNAV 5)	025°/ 205°	19.2 nm		FL 195 / FL 35		10 nm	odd FL 190 / FL 50	even FL 180 / FL 40	Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
△ ASPEN	501734N 0014820W								
(RNAV 5)	025°/ 205°	13.5 nm		FL 245 / FL 35		10 nm	odd FL 230 / FL 50	even FL 240 / FL 40	FL 245/FL 195 Class C, FL 195/FL 35 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
△ THRED	502955N 0013950W								
(RNAV 5)	025°/ 205°	5.0 nm		FL 245 / FL 55		10 nm	odd FL 230 / FL 70	even FL 240 / FL 60	FL 245/FL 195 Class C, FL 195/FL 55 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
△ KUMIL	503431N 0013639W								
(RNAV 5)	025°/ 205°	6.0 nm		FL 245 / FL 55		10 nm	odd FL 230 / FL 70	even FL 240 / FL 60	FL 245/FL 195 Class C, FL 195/FL 55 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
△ NEDUL	503958N 0013252W								
(RNAV 5)	025°/ 205°	19.0 nm		FL 245 / FL 55		10 nm	odd FL 230 / FL 70	even FL 240 / FL 60	FL 245/FL 195 Class C, FL 195/FL 55 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
△ SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W								
(RNAV 5)	016°/ 196°	11 nm		FL 245 / FL 55		10 nm	odd FL 230 / FL 70	even FL 240 / FL 60	FL 245/FL 195 Class C, FL 195/FL 55 Class A. London Control (Swanwick) Freq: 129.425 (FL 155 and above); Freq: 134.125 (Below FL 155).
△ ETRID	510756N 0011615W								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	016°/ 196°	4 nm		FL 245 / FL 65		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 129.425 (FL 155 and above); Freq: 134.125 (Below FL 155).
▵ PEPIS	511148N 0011437W								
(RNAV 5)	016°/ 196°	10.4 nm		FL 245 / FL 65		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 134.125 (Below FL 155).
▵ TABEN	512149N 0011022W								
(RNAV 5)	016°/ 196°	7.2 nm		FL 245 / FL 65		10 nm	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 134.125 (Below FL 155).
▵ NORRY	512847N 0010724W								
(RNAV 5)	016°/ 196°	8.5 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Between NORRY and abm CPT: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 155); Freq: 134.125 (Below FL 155). Between abm CPT and COWLY: London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 130.925 (Below FL 215).
▵ COWLY	513658N 0010354W								
(RNAV 5)	016°/ 196°	14.7 nm		FL 245 / FL 85		10 nm	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 130.925 (Below FL 215 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
▵ WESTCOTT NDB (WCO)	515110.51N 0005744.67W								Extremity of Q41.

Route Remarks:

- Between ORTAC and THRED AWY base is FL 35 or 3014 ft amsl, whichever is higher. Consequently, when low atmospheric pressure prevails, FL 40 may not be available as a cruising FL.
- Six areas of controlled airspace, Class C above FL 195 and Class A below FL 195, are part of Q41:

  Area 1: FL 65 - FL 245, bounded by:
  512455N 0011719W - 511721N 0012030W -
  512624N 0012933W - 512455N 0011719W.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	**Significant Point Coordinates**							
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓ ↑	**Controlling Unit/ Airspace Class/ Remarks**
Area 2: FL 65 - FL 105, bounded by: 512624N 0012933W - 511721N 0012030W - 511617N 0012057W - 511726N 0012843W - 511837N 0012813W - 512624N 0012933W. Area 3: FL 65 - FL 115, bounded by: 511726N 0012843W - 511617N 0012057W - 510416N 0012559W - 510045N 0013053W - 505950N 0013614W - 510038N 0013541W - 511726N 0012843W. Area 4: FL 55 - FL 115, bounded by: 510416N 0012559W - 510123N 0012711W - 510045N 0013053W - 510416N 0012559W. Area 5: FL 65 - FL 95, bounded by: 510045N 0013053W - 505334N 0014051W - 505950N 0013614W - 510045N 0013053W. Area 6: FL 55 - FL 95, bounded by: 510123N 0012711W - 505859N 0012811W - 505512N 0013047W - 505334N 0014051W - 510045N 0013053W - 510123N 0012711W. Areas 2 to 6 are open daily 0630-0930 and 1730-2130 (Winter), 0445-0830 and 1630-2030 (Summer). Areas 4 and 6 - During the notified hours of operation of Solent CTA the base changes to 5500 ft ALT.								
• See also ENR 1.1, paragraph 1.1.3.								

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	**Significant Point Coordinates**							
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓ ↑	**Controlling Unit/ Airspace Class/ Remarks**
Q75 (RNP/RNAV)								
▵ BUZAD	515632N 0003308W							**Westbound route only.** Extremity of Q75. Intersection with L10 and T420.
(RNAV 5)	-/264°	18.0 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
▵ UTAVA	515847N 0000419W							Not available for flight planning btn BKY and UTAVA.
(RNAV 5)	-/264°	5 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 124.930 (Above FL 155); Freq: 129.280 (FL 155 and below).
▵ BARKWAY VOR/DME (BKY)	515923.17N 0000342.87E							Extremity of Q75.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
T71 (RNP/RNAV)										
▵	VAPID	511514N 0010242W								**Eastbound route only.** Extremity of T71. Intersection with N859.
(RNAV 5)		-/179°	5.8 nm		FL 245 / FL 175		10 nm		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 132.165.
▵	TEVSI	512101N 0010301W								
(RNAV 5)		-/179°	16.0 nm		FL 245 / FL 175		10 nm		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) (All Levels) Freq: 132.165.
▵	COWLY	513658N 0010354W								Extremity of T71.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
T256 (RNP/RNAV)										
▵	DEAN CROSS DME (DCS)	544318.88N 0032026.30W								**Eastbound route only.** Extremity of T256. Intersection with L612, N57 and N864.
(RNAV 5)		-/136°	19.1 nm		FL 245 / FL 95		10 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. (Variable lower limit) Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵	RIPNO	545632N 0034415W								The change in the lower limit occurs along the straight line joining: 545853N 0033559W - 545410N 0035231W and not at the usual right angle to the AWY CL.
(RNAV 5)		-/136°	17.3 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
▵	OSMEG	550826N 0040603W								The change in the lower limit occurs along the straight line joining: 550603N 0041419W - 551049N 0035745W and not at the usual right angle to the AWY CL.
(RNAV 5)		-/136°	3.2 nm		FL 245 / 6000 ft ALT		10 nm		odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	NEW GALLOWAY NDB (NGY)	551038.52N 0041007.02W								
(RNAV 5)		-/144°	32.3 nm		FL 245 / 6000 ft ALT		10 nm		odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 124.825 (All Levels).
△	NORBO	553545N 0044543W								Extremity of T256.

Route Remarks:

- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base level FL 95 bounded by great circle lines joining: 550045N 0032924W - 545511N 0032917W - 545853N 0033559W - 550045N 0032924W, is part of T256 and has the same variable lower limit.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base level FL 135, bounded by great circle lines joining: 550603N 0041419W - 543306N 0033033W - 543637N 0032230W - 544000N 0032654W - 550603N 0041419W, is part of T256. ATS within this airspace may be delegated to BAe Warton for test flying.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base level FL 85, bounded by great circle lines joining: 551845N 0032945W - 550045N 0032924W - 545853N 0033559W - 551049N 0035745W - 551845N 0032945W, is part of T256.
- Variable lower limit: Daily from 0700 to 2000 (1hr earlier in summer) btn DCS and RIPNO the lower limit is FL 125 making the Mnm FL (Eastbound) FL 130.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
T420 (RNP/RNAV)										
△	ALESO	503432N 0011332E								**Northbound route only btn ALESO and WELIN.** FIR Boundary. For continuation see AIP France.
(RNAV 5)		315°/-	24.0 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
△	ROTNO	505126N 0004641E								Unless otherwise instructed by ATC, en-route holding at Lydd will be a race-track pattern on an axis of 320° MAG turning right at the VOR at levels up to and including FL 140; acft holding above FL 140 will turn left.
(RNAV 5)		315°/-	9.5 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
△	ETVAX	505807N 0003556E								

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)	315°/-	8.5 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
△ TIGER	510402N 0002622E								
(RNAV 5)	316°/-	22 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
△ BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E								Intersection with L9.
(RNAV 5)	330°/-	16.0 nm		FL 245 / 3500 ft ALT		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. London Control (Swanwick) Freq: 132.165 (All Levels).
△ FINCH	513336N 0001059W								
(RNAV 5)	330°/-	17.2 nm		FL 245 / 3500 ft ALT		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. Between FINCH and abm BPK: London Control (Swanwick) Freq: 132.165 (All Levels). Between abm BPK and HEMEL: London Control (Swanwick) Freq: 127.105 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ HEMEL	514820N 0002510W								
(RNAV 5)	330°/-	9.6 nm		FL 245 / 5500 ft ALT		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/Alt 5500 ft Class A. London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125).
△ BUZAD	515632N 0003308W								Intersection with L10.
(RNAV 5)	330°/-	13.0 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 75 Class A. Between BUZAD and 5 nm before OLNEY: London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195 to FL 165); Freq: 131.130 (Below FL 165 to FL 125); Freq: 119.775 (Below FL 125). Between 5 nm before OLNEY and OLNEY: London Control (Swanwick) Freq: 127.105 (FL 195 and above); Freq: 130.925 (Below FL 195).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
△ OLNEY	520740N 0004403W								
(RNAV 5)	330°/-	8.4 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 127.105 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ WELIN	521450N 0005108W								Intersection with N57.
(RNAV 5)	330°/ 149°	16.8 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. FL 140 not available between WELIN and TNT. London Control (Swanwick) Freq: 127.105 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ AKUPA	522912N 0010528W								Intersection with Y250.
(RNAV 5)	329°/ 149°	5.1 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. FL 140 not available between WELIN and TNT. London Control (Swanwick) Freq: 127.105 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ TIMPO	523332N 0010950W								
(RNAV 5)	329°/ 149°	10.0 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. FL 140 not available between WELIN and TNT. London Control (Swanwick) Freq: 127.105 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ ELVOS	524201N 0011825W								
(RNAV 5)	329°/ 149°	25.0 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. FL 140 not available between WELIN and TNT. London Control (Swanwick) Freq: 127.105 (Above FL 195); Scottish Control (Prestwick) Freq: 119.525 (FL 195 and below).
△ TRENT VOR/DME (TNT)	530314.23N 0014011.89W								Extremity of T420. Intersection with L28.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
T421 (RNP/RNAV)										
▵	KUNAV	503054N 0010356E								**Northbound route only.** FIR Boundary. For continuation see AIP France.
(RNAV 5)		322°/-	32.2 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
▵	NIVKO	505606N 0003228E								
(RNAV 5)		322°/-	10.5 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
▵	BISRU	510418N 0002203E								
(RNAV 5)		322°/-	20 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160		FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
▵	BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E								Extremity of T421.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y4 (RNP/RNAV)										
▵	ODROB	513915N 0015445E								**Westbound (southbound) route only.** Extremity of Y4. Intersection with Y76.
(RNAV 5)		-/206°	30.2 nm		FL 245 / FL 95		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 118.480 (FL 220 and above); Freq: 121.025 (FL 210 and below).
▵	SONOG	520620N 0021610E								Extremity of Y4.
Route Remarks:										
• The northern limits of Y4 are bounded by a perpendicular line to the CL of Y4 at SONOG to a point intersecting the northern bdry of L620, then westwards along the northern bdry of L620.										

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y6 (RNP/RNAV)										
▵	SUMUM	513814N 0020628E								**Westbound (northbound) route only.** FIR Boundary. Extremity of Y6.
(RNAV 5)		332°/-	2.7 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	TOSVA	514037N 0020426E								
(RNAV 5)		332°/-	15 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	IDESI	515352N 0015308E								Intersection with M20.
(RNAV 5)		332°/-	29.8 nm		FL 245 / FL 165		10 nm	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 165 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	BANEM	522008N 0013019E								Extremity of Y6.
Route Remarks:										
• See also ENR 1.1, paragraph 1.1.3.										

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Y8 (RNP/RNAV)										
▵	KUNAV	503054N 0010356E								**Westbound route only btn KUNAV and WAFFU.** FIR Boundary. Extremity of Y8.
(RNAV 5)		279°/-	12.1 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 128.425 (FL 145 and above); Freq: 135.325 (Below FL 145).
▵	BANVA	503242N 0004512E								Intersection with M733.
(RNAV 5)		279°/-	15.6 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
▵	WAFFU	503457N 0002059E								
(RNAV 5)		292°/ 111°	45.3 nm		FL 245 / FL 95		10 nm	even FL 240 / FL 100	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
▵	GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W								
(RNAV 5)		286°/ 106°	23.1 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 135.800 (Below FL 215 to FL 175); Freq: 134.125 (Below FL 175).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W								Extremity of Y8.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y47 (RNP/RNAV)										
△	DRAKE	501234N 0000434W								**Southbound route only.** Extremity of Y47.
(RNAV 5)		-/193°	14.9 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (All Levels).
△	BENBO	502705N 0000037E								Intersection with L612.
(RNAV 5)		-/193°	19.1 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
△	SEAFORD VOR/DME (SFD)	504538.49N 0000718.89E								
(RNAV 5)		-/180°	15.4 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
△	MAYFIELD VOR/DME (MAY)	510101.86N 0000658.04E								Extremity of Y47.

Route Remarks:

- Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight alti-tude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y53 (RNP/RNAV)										
△	SAPCO	523225N 0012125W								Extremity of Y53.
(RNAV 5)		314°/ 134°	18.1 nm		FL 245 / FL 75		10 nm	even FL 240 / FL 80	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. For flight planning purposes the portion of AWY Y53 btn SAPCO and PEDIG is for westbound flights only which are unable to route on AWY N601, exceptionally ATC may clear tfc eastbound. London Control (Swanwick) Freq: 127.105 (Above FL 195); Freq: 130.925 (FL 195 and below).
△	PEDIG	524448N 0014310W								
(RNAV 5)		310°/ 130°	27.2 nm		FL 245 / FL 65		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
										London Control (Swanwick) Freq: 134.390 (Above FL 195); Scottish Control (Prestwick) Freq: 134.425 (FL 195 and below).
△	NUGRA	530146N 0021814W								
(RNAV 5)		306°/ 126°	11.5 nm		FL 245 / FL 65		10 nm	even FL 240 / FL 80	odd FL 230 / FL 70	FL 245/FL 195 Class C, FL 195/FL 65 Class A. London Control (Swanwick) Freq: 134.390 (Above FL 195); Scottish Control (Prestwick) Freq: 134.425 (FL 195 and below).
△	NANTI	530815N 0023401W								
(RNAV 5)		309°/ 129°	3.1 nm		FL 245 / 3500 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / 5000 ft ALT	FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (FL 195 and below).
△	MOGTA	531008N 0023810W								
(RNAV 5)		309°/ 129°	8.5 nm		FL 245 / 3500 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / 5000 ft ALT	FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (FL 195 and below).
△	EKLAD	531514N 0024929W								
(RNAV 5)		309°/ 128°	13.9 nm		FL 245 / 3500 ft ALT		10 nm	even FL 240 / FL 60	odd FL 230 / 5000 ft ALT	FL 245/FL 195 Class C, FL 195/Alt 3500 ft Class A. Scottish Control (Prestwick) Freq: 118.780 (Above FL 195); Freq: 128.050 (FL 195 and below).
△	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W								Intersection with L10. Extremity of Y53.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y70 (RNP/RNAV)									
▵ BODSO	530308N 0020541E								Extremity of Y70. Intersection with L17.
(RNAV 5)	281°/ 101°	55.3 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180	odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) Freq: 128.125 (All Levels).
▵ SUPEL	531340N 0003528E								
(RNAV 5)	281°/ 101°	20.5 nm		FL 245 / FL 175		10 nm	even FL 240 / FL 180	odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵ OTBED	531717N 0000155E								The base level change south of OTBED to the southern limits of Y70 is at a perpendicular line to the CL of L60.
(RNAV 5)	297°/ 117°	15.4 nm		FL 245 / FL 155		10 nm	even FL 240 / FL 160	odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵ VEGUS	532401N 0002111W								
(RNAV 5)	297°/ 117°	9.0 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵ SIVBU	532755N 0003444W								
(RNAV 5)	296°/ 116°	8.4 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120	odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. During Hibaldstow operations acft flying below FL 160 may occasionally be routed by ATC around parachute activity. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵ GIPLO	533131N 0004723W								Base level change point is not at right angles to the CL of Y70 and extends between 533619N 0004448W and 532643N 0004958W.
(RNAV 5)	296°/ 116°	11.6 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100	odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵ GOLES	533629N 0010500W								**Westbound route only btn GOLES and KOLID.** Base level change point is not at right angles to the CL of Y70 and extends between 534115N 0010227W and 533142N 0010734W. Intersection with L975.
(RNAV 5)	284°/-	10.1 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
▵ BATLI	533845N 0012137W								Intersection with Y250.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	284°/-	27.1 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
△ POLE HILL VOR/DME (POL)	534437.56N 0020611.98W								Intersection with N601.
(RNAV 5)	247°/-	17.1 nm		FL 245 / FL 85		10 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ CROFT	533737N 0023220W								Intersection with P16.
(RNAV 5)	249°/-	8.4 nm		FL 245 / FL 85		8 nm	even FL 240 / FL 100		FL 245/FL 195 Class C, FL 195/FL 85 Class A. AWY is 8 nm wide, 3 nm north of CL and 5 nm south of CL. Scottish Control (Prestwick) Freq: 118.780 (FL 195 and above); Freq: 136.575 (Below FL 195).
△ KOLID	533426N 0024521W								Intersection with L70. Extremity of Y70.

Route Remarks:

- The portion of airspace formed by joining positions:

  L975 Crossing Area

  533835N 0013503W - 534007N 0011937W -
  534626.98N 0011937.00W - 534308.41N 0011615.09W -
  534127.82N 0010357.97W - 533059N 0010932W -
  532845N 0013215W - 533835N 0013503W,
  from AWY base level to an upper limit of FL 120, occasionally to FL 190 on request;

  is notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with the conditions established in the Letter of Agreement (LOA) btn the Derbyshire and Lancashire (Camphill) Gliding Club, British Gliding Association (BGA), Leeds Bradford International Airport, and Scottish Control (Prestwick).

- The area of Y70 bounded by the co-ordinates:
  533142N 0010734W - 533119N 0010614W -
  533109N 0010751W - 533142N 0010734W, has a lower limit of FL 85.

- The area of Y70 bounded by the co-ordinates:
  534402N 0012252W - 534134N 0010443W -
  534007N 0011937W - 534402N 0012252W, has a lower limit of FL 125.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y76 (RNP/RNAV)										
▵	DETLING VOR/DME (DET)	511814.41N 0003550.19E								**Westbound (southbound) route only.** Extremity of Y76.
(RNAV 5)		-/235°	15.1 nm		FL 245 / FL 95		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 118.480 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	TANET	512658N 0005532E								
(RNAV 5)		-/235°	9.7 nm		FL 245 / FL 95		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 118.480 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	KOPUL	513232N 0010814E								
(RNAV 5)		-/261°	18.0 nm		FL 245 / FL 95		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 118.480 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	ERING	513526N 0013643E								
(RNAV 5)		-/251°	11.9 nm		FL 245 / FL 95		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 118.480 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	ODROB	513915N 0015445E								
(RNAV 5)		-/251°	9.8 nm		FL 245 / FL 95		10 nm		even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 95 Class A. London Control (Swanwick) Freq: 118.480 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	RIMBU	514222N 0020943E								FIR Boundary. For continuation see AIP Netherlands.

Route Remarks:

- Due to presence of EG D138, pilots should ensure that they do not fly north of track from ERING to abm SND NDB (15 DME DET).
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Y91 (RNP/RNAV)										
▵	BIGNO	500000N 0024930W								**Southbound route only.** Channel Islands CTA Arrivals only. Extremity of Y91 is aligned with the Channel Islands CTR.
(RNAV 5)		-/154°	29.4 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) (All Levels) Freq: 126.075.
▵	NOTRO	502612N 0031021W								
(RNAV 5)		-/128°	13.9 nm		FL 245 / FL 105		12 nm		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) (All Levels) Freq: 126.075.
▵	DAWLY	503427N 0032750W								Extremity of Y91.

Route Remarks:

- **CDR Category One (CDR 1).**
  Available:
  1600 Fri - 0745 Mon (Winter);
  1500 Fri - 0645 Mon (Summer).
  Not available on PHs.
- Western edge of AWY is 7 nm west of the CL.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y110 (RNP/RNAV)										
▵	ORIST	500000N 0015042W								**Eastbound (northbound) route only.** Not flight plannable for traffic with RFL below FL 205 between ORIST and VEXEN. FIR Boundary. Extremity of Y110.
(RNAV 5)		006°/-	8.4 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 127.825 (Above FL 225); Freq: 129.425 (Below FL 225).
▵	VEXEN	500822N 0014934W								Intersection with L980.
(RNAV 5)		006°/-	9.2 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140		FL 245/FL 195 Class C, FL 195/FL 125 Class A. London Control (Swanwick) Freq: 127.825 (Above FL 225); Freq: 129.425 (Below FL 225).
▵	ASPEN	501734N 0014820W								Extremity of Y110. Intersection with Q41.

Route Remarks:

- Due to Brest ACC operational requirements, cruising levels are inappropriate to the MAG TR btn ORIST and ASPEN.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y124 (RNP/RNAV)										
▵	MOGTA	531008N 0023810W								**Eastbound route only.** Available for Jet traffic only. Intersection with Y53.
(RNAV 5)		-/096°	20.1 nm		FL 245 / FL 195		10 nm		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 118.780 (All Levels).
▵	AMPIT	531139N 0031133W								Intersection with L15.
(RNAV 5)		-/096°	15.9 nm		FL 245 / FL 195		12 nm		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵	DOLOP	531251N 0033751W								
(RNAV 5)		-/096°	12.9 nm		FL 245 / FL 195		12 nm		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵	BAGIT	531345N 0035918W								
(RNAV 5)		-/096°	13.2 nm		FL 245 / FL 195		12 nm		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵	PETUK	531436N 0042114W								
(RNAV 5)		-/096°	13.9 nm		FL 245 / FL 195		12 nm		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵	LUTIP	531522N 0044416W								
(RNAV 5)		-/096°	15.9 nm		FL 245 / FL 145		12 nm		odd FL 230 / FL 150	Class C. Scottish Control (Prestwick) Freq: 133.050 (All Levels).
▵	LOMVO	531616N 0051046W								
(RNAV 5)		-/095°	11.6 nm		FL 245 / FL 115		12 nm		odd FL 230 / FL 130	Class C. Dublin ACC (All Levels) Freq: 129.175. The area of ATS delegation to Dublin is defined as follows: Western extremity - FIR boundary. Eastern extremity - 5 nm east of LUTIP.
▵	DEXEN	531649N 0053000W								FIR Boundary. Extremity of Y124.

Route Remarks:

- **CDR Category One, Two and Three (CDR 1, 2 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 Mon-Thu 1800-0800 Winter (Summer 1 hr earlier) and from 1700 (Winter and Summer) on Friday or the day preceding a PH to 0800 (Winter), 0700 (Summer) on Monday or the day following a PH.
  CDR 2 Mon-Thu 0800-1800, Fri 0800-1700 (Winter); Mon-Fri 0700-1700 (Summer).
  The route may be closed tactically with 2 hrs notice in which case routings will be via LIFFY L975.
- That portion of Y124 west of LUTIP below FL 195 is permanently established for tactical use by Dublin ATC.
- Between DEXEN and AMPIT AWY is 12 nm wide with 7 nm north of the CL and 5 nm south of the CL.
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y250 (RNP/RNAV)									
△ DAVENTRY VOR/DME (DTY)	521048.51N 0010649.64W								**Northbound route only btn DTY and MAMUL.** Extremity of Y250.
(RNAV 5)	004°/-	18.4 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Due to ATC operational requirements, the cruising level allocation between DTY and LESTA is inappropriate to the MAG Track. London Control (Swanwick) Freq: 131.130 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ AKUPA	522912N 0010528W								Intersection with T420.
(RNAV 5)	004°/-	15.3 nm		FL 245 / FL 105		10 nm	even FL 240 / FL 120		FL 245/FL 195 Class C, FL 195/FL 105 Class A. Due to ATC operational requirements, the cruising level allocation between DTY and LESTA is inappropriate to the MAG Track. London Control (Swanwick) Freq: 131.130 (Above FL 195); Freq: 130.925 (FL 195 and below).
△ LESTA	524427N 0010419W								Intersection with N601.
(RNAV 5)	351°/-	41.4 nm		FL 245 / FL 195		10 nm	even FL 240 / FL 200		Class C. London Control (Swanwick) Freq: 131.130 (Above FL 195).
△ MAMUL	532505N 0011648W								Intersection with L60 and L603.
(RNAV 5)	357°/ 177°	10.2 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
△ UPTON	533513N 0011803W								
(RNAV 5)	330°/ 150°	4.1 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
△ BATLI	533845N 0012137W								
(RNAV 5)	330°/ 150°	5.0 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
△ RIMTO	534303N 0012559W								
(RNAV 5)	330°/ 150°	32.3 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
△	OBOXA	541036N 0015420W								
(RNAV 5)		330°/ 150°	3.4 nm		FL 245 / FL 125		10 nm	even FL 240 / FL 140	odd FL 230 / FL 130	FL 245/FL 195 Class C, FL 195/FL 125 Class A. Scottish Control (Prestwick) Freq: 133.800 (All Levels).
△	GASKO	541329N 0015721W								Extremity of Y250. Intersection with P18.

Route Remarks:

- Lower limit reduced to FL 85 above the lateral limits of Leeds Bradford CTA.
- The portion of airspace formed by joining positions:

  (i) **Camphill Box**

  532719N 0014617W - 533017N 0011641W -
  531938N 0011532W - 532012N 0011840W -
  532110N 0012901W - 532002.91N 0013042.10W -
  531418.31N 0012448.84W - 531137N 0013631W -
  532719N 0014617W,
  from AWY base level to an upper limit of FL 100, occasionally to FL 190 on request;

  (ii) **L975 Crossing Area**

  533835N 0013503W - 534007N 0011937W -
  534626.98N 0011937.00W - 534308.41N 0011615.09W -
  534127.82N 0010357.97W - 533059N 0010932W -
  532845N 0013215W - 533835N 0013503W,
  from AWY base level to an upper limit of FL 120, occasionally to FL 190 on request;

  is notified for the purposes of SERA.6001(a) Classification of Airspaces in accordance with the conditions established in the Letter of Agreement (LOA) btn the Derbyshire and Lancashire (Camphill) Gliding Club, British Gliding Association (BGA), Leeds Bradford International Airport, and Scottish Control (Prestwick).
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 85, bounded by straight lines joining:
  535710N 0015020W - 534612N 0013902W -
  534803N 0015310W - 535710N 0015020W,
  is part of Y250.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y311 (RNP/RNAV)										
▵	DOVER VOR/DME (DVR)	510945.44N 0012132.72E								**Eastbound route only.** Extremity of Y311. Intersection with L9, L10 and M140.
(RNAV 5)		-/090°	33.0 nm		FL 245 / FL 85		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 134.900 (All Levels).
▵	ODVIK	510957N 0002909E								Extremity of Y311.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y312 (RNP/RNAV)										
▵	DOVER VOR/DME (DVR)	510945.44N 0012132.72E								**Eastbound route only.** Extremity of Y312. Intersection with L9, L10 and M140.
(RNAV 5)		-/097°	33.0 nm		FL 245 / FL 75		10 nm		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 134.900 (All Levels).
▵	ADMAG	511402N 0002934E								Extremity of Y312.

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	**Significant Point Coordinates**								
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Y904 (RNP/RNAV)									
△ ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W								Extremity of Y904.
(RNAV 5)	341°/ 161°	17.0 nm		FL 195 / 4500 ft ALT		10 nm	even FL 180 / FL 60	odd FL 190 / FL 50	Class E and TMZ. **(See Note)** Within the confines of the Aberdeen CTR/CTA, Y904 assumes the airspace classification of the Aberdeen CTR/ CTA. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
△ NANEV	573429N 0022714W								
(RNAV 5)	341°/ 161°	13.0 nm		FL 155 / FL 75		10 nm	even FL 140 / FL 80	odd FL 150 / FL 90	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
△ SMOKI	574637N 0023556W								
(RNAV 5)	341°/ 161°	44.0 nm		FL 155 / FL 75		10 nm	even FL 140 / FL 80	odd FL 150 / FL 90	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
△ WICK VOR/DME (WIK)	582731.74N 0030601.33W								Extremity of Y904.

Route Remarks:

- The areas of controlled airspace, Class E and TMZ, base level Alt 4500 ft and an upper limit of FL 195, bounded by:
  573240.63N 0023553.96W - 572452.78N 0023019.93W
  thence anti-clockwise by the arc of a circle radius 10 nm centred on 571834N 0021602W to
  572100.00N 0023356.00W - 573240.63N 0023553.96W
  and
  573613.16N 0021832.25W - 573705.88N 0015736.32W -
  573549.60N 0015753.00W - 572815.24N 0021136.39W
  thence anti-clockwise by the arc of a circle radius 10 nm centred on 571834N 0021602W to
  572824.68N 0021301.47W - 573613.16N 0021832.25W,
  are part of Y904 **(See Note)**.
- ***Note:*** *Transponder carriage and operation required.*

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes								
Significant Point Name	Significant Point Coordinates								
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y905 (RNP/RNAV)									
▵ ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W								Extremity of Y905.
(RNAV 5)	046°/ 226°	20.9 nm		FL 195 / 4500 ft ALT		10 nm	odd FL 190 / FL 50	even FL 180 / FL 60	Class E and TMZ. **(See Note)** Within the confines of the Aberdeen CTR/CTA, Y905 assumes the airspace classification of the Aberdeen CTR/ CTA. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ PETOX	573333N 0014902W								The section btn PETOX and SUM passes close to EG D809.
(RNAV 5)	009°/ 189°	3 nm		FL 195 / 4500 ft ALT		10 nm	odd FL 190 / FL 50	even FL 180 / FL 60	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ RISDU	573631N 0014824W								
(RNAV 5)	009°/ 189°	77.4 nm		FL 195 / FL 105		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ BEKET	585313N 0013120W								
(RNAV 5)	009°/ 189°	27.1 nm		FL 195 / FL 105		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ ERDOG	592003N 0012504W								
(RNAV 5)	009°/ 189°	3.0 nm		FL 195 / FL 75		10 nm	odd FL 190 / FL 90	even FL 180 / FL 80	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ GAVEL	592300N 0012422W								
(RNAV 5)	009°/ 189°	7.0 nm		FL 195 / FL 75		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵ RAVDI	592957N 0012242W								
(RNAV 5)	009°/ 189°	3.0 nm		FL 195 / FL 45		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 134.850 (All Levels).

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	MOCHA	593256N 0012159W								Acft in communication with Sumburgh ATC must report OHD MOCHA unless otherwise authorized by that Unit.
(RNAV 5)		009°/ 189°	20.0 nm		FL 195 / FL 45		10 nm	odd FL 190 / FL 110	even FL 180 / FL 120	Class E and TMZ. **(See Note)** Within the confines of the Sumburgh CTR/CTA, Y905 assumes the airspace classification of the Sumburgh CTR/ CTA. Scottish Control (Prestwick) Freq: 134.850 (All Levels).
▵	SUMBURGH VOR/DME (SUM)	595243.52N 0011711.52W								Extremity of Y905.

Route Remarks:

- Although coverage of SUM VOR meets ICAO criteria, it is nevertheless deficient along the alignment of Y905 at low level in view of the distance btn SUM and PETOX. During commissioning flight inspection ICAO mnm field strength at FL 70 occurred to 90 nm and it is estimated it would occur above approximately FL 100 overhead PETOX.
  Therefore in line VOR navigation beyond SUM VOR 50D to PETOX may not comply with RNP 5.
- The area of controlled airspace, Class E and TMZ, base level Alt 4500 ft and upper limit of FL 195, bounded by straight lines joining:
  573556.19N 0013910.07W - 573332.59N 0013539.66W -
  573234.17N 0013954.16W - 573556.19N 0013910.07W,
  is part of Y905 **(See Note)**.
- ***Note:*** *Transponder carriage and operation required.*

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes								
Significant Point Name		Significant Point Coordinates								
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Minimum flight altitude	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Y906 (RNP/RNAV)										
▵	RIMOL	573233N 0040230W								Extremity of Y906.
(RNAV 5)		304°/ 124°	17.1 nm		FL 195 / FL 95		10 nm	even FL 180 / FL 100	odd FL 190 / FL 110	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵	GARVA	574118N 0042941W								
(RNAV 5)		304°/ 124°	25.1 nm		FL 195 / FL 95		10 nm	even FL 180 / FL 100	odd FL 190 / FL 110	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵	ULLAP	575400N 0051009W								
(RNAV 5)		304°/ 123°	37.2 nm		FL 195 / FL 55	Minimum limit: 5200 ft ALT	10 nm	even FL 180 / FL 60	odd FL 190 / FL 70	Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W								Extremity of Y906.

Route Remarks:

- Inverness Radar provide a radar service for tfc inbound to and outbound from Inverness via Y906 during the promulgated hours of Inverness Radar as published in UK AIP AD 2.EGPE AD 2.18 (and as amended by NOTAM). Outside the hours of Inverness Radar an approach procedural service is provided by Inverness Approach.
- Tfc inbound to Inverness via Y906 has a clearance limit of GARVA, descent clearance will be issued by Scottish Control to be level by GARVA unless otherwise instructed by ATC. Scottish Control will instruct tfc when to contact Inverness Approach or Inverness Radar (122.600 MHz), this will normally be at or before 40 nm from RIMOL.
- ***Note:*** *Transponder carriage and operation required.*

ENR 3.1 LOWER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**								
Significant Point Name		**Significant Point Coordinates**								
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Minimum flight altitude**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Y911 (RNP/RNAV)										
▵	BOYNE	534602N 0053000W								FIR Boundary. Extremity of Y911.
(RNAV 5)		058°/ 238°	31.7 nm		FL 195 / FL 75		10 nm	odd FL 190 / FL 90	even FL 180 / FL 80	Class E and TMZ. **(See Note)** Within the confines of airways L10 and L15 and Strangford CTA in the vicinity of the Isle of Man, Y911 assumes the airspace classification of airways L10 and L15 and the Strangford CTA. Scottish Control (Prestwick) Freq: 123.775 (All Levels).
▵	ISLE OF MAN VOR/DME (IOM)	540400.72N 0044548.51W								Extremity of Y911.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.
- ***Note:*** *Transponder carriage and operation required.*

ENR 3.2 UPPER ATS ROUTES

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL6 (RNP/RNAV)									
▵	DOVER VOR/DME (DVR)	510945.44N 0012132.72E							**Eastbound route only.** Extremity of UL6. Intersection with UL9.
(RNAV 5)		-/106°	30.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between DET and 5 nm east of DET: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 255); Freq: 134.900 (Below FL 255). Between 5 nm east of DET and 15 nm before DVR: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 135.325 (Below FL 305 to FL 275); Freq: 134.900 (Below FL 275). Between 15 nm before DVR and DVR: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq; 134.900 (Below FL 305).
▵	DETLING VOR/DME (DET)	511814.41N 0003550.19E							Extremity of UL6.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL7 (RNP/RNAV)									
▵	LONAM	535022N 0035633E							UIR Boundary. For continuation see AIP Netherlands. Intersection with UM90 and UN610.
(RNAV 5)		339°/ 159°	29.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	VENAS	541820N 0033908E							
(RNAV 5)		339°/ 159°	6.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels). →
▵	GOLVO	542441N 0033508E							
(RNAV 5)		339°/ 159°	15.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels). →
▵	PELET	543912N 0032552E							Intersection with UL74 and UP58. →▮

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)		339°/ 159°	19.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ASKAM	545747N 0031350E							Intersection with UP59.
(RNAV 5)		332°/ 152°	62.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	CUTEL	555309N 0022228E							Intersection with P5 and UL619.
(RNAV 5)		336°/ 155°	71.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	ODMIX	565812N 0012803E							
(RNAV 5)		335°/ 155°	65.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	FORTY	575700N 0003545E							Intersection with UM86, UN583, UP60 and UZ105.
(RNAV 5)		335°/ 155°	129.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	SUMBURGH VOR/DME (SUM)	595243.52N 0011711.52W							Intersection with UN603 and UP612. Extremity of UL7.

Route Remarks:

- **CDR Category One and Two (CDR 1 and 2) between LONAM and VENAS** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 Every weekend 1700 Fri to 0700 Mon and every night Mon-Thu 2300-0700 Winter (Summer 1 hr earlier).
  CDR 2 Mon-Thu 0700-2300 and Fri 0700-1700 Winter (Summer 1 hr earlier). Available when published in the AUP/UUP.
- Dual designation with UL74 btn PELET and VENAS.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL22 (RNP/RNAV)									
▵	MERLY	512000N 0050000W							**Westbound route only.** Extremity of UL22.
(RNAV 5)		280°/-	79.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between MERLY and the eastern boundary of the BANBA CTA (512806N 0064015W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (512806N 0064015W) and MOPAT: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	MOPAT	512955N 0070537W							UIR Boundary. Extremity of UL22.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UL28 (RNP/RNAV)									
▵	TRENT VOR/DME (TNT)	530314.23N 0014011.89W							**Westbound route only btn TNT and MCT.** Extremity of UL28.
(RNAV 5)		329°/-	13.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	RODOL	531417N 0015143W							Intersection with UP6.
(RNAV 5)		298°/-	16.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	MANCHESTER VOR/DME (MCT)	532125.29N 0021544.24W							Intersection with M16.
(RNAV 5)		289°/ 109°	24.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	ASNIP	532843N 0025426W							Intersection with UL8.
(RNAV 5)		289°/ 109°	28.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	PENIL	533657N 0033949W							**Eastbound route only btn SOSIM and PENIL.** Intersection with UL10.
(RNAV 5)		-/114°	32.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	SOSIM	534856N 0043030W							DRA Exit Fix. Extremity of UL28.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL60 (RNP/RNAV)								
△ KOLAG	530237N 0031518E							**Westbound route only btn KOLAG and MAMUL.** UIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)	278°/-	27.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
△ SOPEK	530632N 0023000E							
(RNAV 5)	278°/-	89.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between SOPEK and 0010000E: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335). Between 0010000E and OTBED: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ OTBED	531717N 0000155E							Intersection with UY70.
(RNAV 5)	281°/-	25.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ NISBI	532129N 0003921W							
(RNAV 5)	280°/-	9.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ DOPEK	532304N 0005532W							
(RNAV 5)	280°/-	4.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ ARTIX	532342N 0010209W							
(RNAV 5)	280°/-	6.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ MOGMO	532443N 0011251W							
(RNAV 5)	280°/-	2.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick)

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min		Controlling Unit/ Airspace Class/ Remarks
							↓	↑	
									Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	MAMUL	532505N 0011648W							Intersection with UL603.
(RNAV 5)		280°/ 100°	9.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	ADELU	532630N 0013213W							**Westbound route only btn ADELU and PENIL.**
(RNAV 5)		280°/-	10 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	BOLBI	532800N 0014845W							
(RNAV 5)		280°/-	13.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	SONEX	532953N 0021021W							
(RNAV 5)		280°/-	53.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	PENIL	533657N 0033949W							Extremity of UL60. Intersection with UL10 and UL70.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL70 (RNP/RNAV)									
▵	DESIG	533138N 0015334W							Extremity of UL70. Intersection with UL603 and UL975.
(RNAV 5)		277°/ 097°	31.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	KOLID	533426N 0024521W							
(RNAV 5)		277°/ 096°	9.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	TADAL	533514N 0030135W							
(RNAV 5)		276°/ 096°	5.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	GUNTU	533537N 0030954W							
(RNAV 5)		276°/ 096°	17.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	PENIL	533657N 0033949W							**Westbound route only btn PENIL and BAGSO.** Intersection with UL10.
(RNAV 5)		276°/-	10.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	BABRA	533739N 0035643W							
(RNAV 5)		276°/-	5.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	GIGTO	533801N 0040551W							
(RNAV 5)		276°/-	7.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	UNDUX	533830N 0041839W							
(RNAV 5)		276°/-	5.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	SOPAX	533849N 0042708W							
(RNAV 5)		276°/-	13.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	RAMOX	533937N 0045022W							
(RNAV 5)		276°/-	11.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	OGTUG	534012N 0050850W							
(RNAV 5)		276°/-	12.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	BAGSO	534048N 0053000W							UIR Boundary. Extremity of UL70.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL149 (RNP/RNAV)									
▵	DAWLY	503427N 0032750W							Extremity of UL149. Intersection with UY91.
(RNAV 5)		310°/ 130°	14.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	DEVOM	504318N 0034519W							Intersection with UN26.
(RNAV 5)		310°/ 130°	11.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	DIDEL	505035N 0035950W							Intersection with UN514.
(RNAV 5)		310°/ 129°	48.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	MERLY	512000N 0050000W							Intersection with UL22 and UM140.
(RNAV 5)		338°/ 157°	11.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	GISOK	513009N 0050728W							**Southbound route only btn BAKUR and GISOK.** Intersection with UN18.
(RNAV 5)		-/157°	14.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	NEKAP	514335N 0051726W							
(RNAV 5)		-/157°	34.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	BAKUR	521430N 0054049W							UIR Boundary. Extremity of UL149.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between MERLY and BAKUR** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to EG D113A activity. **CDR 1 and 3** H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL151 (RNP/RNAV)									
▵	SITET	500600N 0000000E							**Eastbound (southbound) route only.** UIR Boundary. Extremity of UL151. Intersection with UN859.
(RNAV 5)		-/156°	7.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.050 (All Levels).
▵	DRAKE	501234N 0000434W							
(RNAV 5)		-/158°	54.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.050 (All Levels).
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W							
(RNAV 5)		-/148°	29.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	LINDY	512814N 0010257W							
(RNAV 5)		-/148°	21.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	KIDLI	514617N 0012141W							Intersection with UN859.
(RNAV 5)		-/148°	7.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	NEDEX	515237N 0012820W							
(RNAV 5)		-/148°	10.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	NANUM	520135N 0013747W							
(RNAV 5)		-/148°	3.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	TUBSU	520406N 0014028W							
(RNAV 5)		-/148°	2.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	DISIT	520611N 0014241W							
(RNAV 5)		-/148°	11.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	PEPUL	521603N 0015314W							
(RNAV 5)		-/148°	10.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	VIDOK	522439N 0020231W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		-/148°	18.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
△	TELBA	523952N 0021907W							
(RNAV 5)		-/148°	10.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
△	KEPAD	524835N 0022844W							Intersection with UL15.
(RNAV 5)		-/147°	42.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W							Extremity of UL151.

Route Remarks:

- The area of airspace bounded by:
  523853N 0022755W - 514408N 0012901W -
  513624N 0012504W - 513710N 0013022W -
  523253N 0023011W - 523853N 0022755W,
  is part of UL151.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL179 (RNP/RNAV)									
▵	INLAK	512841N 0013127W							**Eastbound route only btn INLAK and CPT.** Extremity of UL179.
(RNAV 5)		087°/-	11.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	COMPTON VOR/DME (CPT)	512929.66N 0011310.89W							Intersection with UL9 and UM197.
(RNAV 5)		080°/ 261°	52.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between CPT and 15 nm east of CPT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between 15 nm east of CPT and LAM: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E							**Westbound route only btn GILTI and LAM.**
(RNAV 5)		-/274°	14.5 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	FERIT	513759N 0003221E							Intersection with UM14.
(RNAV 5)		-/274°	4.0 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	SIRGO	513746N 0003847E							Intersection with UL620.
(RNAV 5)		-/274°	3.8 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	TERKO	513732N 0004448E							
(RNAV 5)		-/274°	6.3 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	TUGPO	513710N 0005452E							
(RNAV 5)		-/274°	13.7 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	TOBIX	513617N 0011651E							
(RNAV 5)		-/274°	12.4 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	ERING	513526N 0013643E							
(RNAV 5)		-/274°	16.6 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	GILTI	513413N 0020318E							UIR Boundary. For continuation see AIP Netherlands.

Route Remarks:

- **CDR Category One (CDR 1) between GILTI and LAM** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 H24.
- The use of this route may be interrupted when MoD (Shoeburyness) requires the activation of Danger Areas EG D138 and D138A above ALT 13000 ft through which the route passes. These Danger Areas are activated by NOTAM.
  Non-availability of UL179 will be notified by means of the daily UK CDR Closure NOTAM and the Eurocontrol CRAM.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL180 (RNP/RNAV)									
▵	LESLU	510000N 0080000W							UIR Boundary. Extremity of UL180.
(RNAV 5)		082°/ 263°	115.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MERLY	512000N 0050000W							Intersection with UL22, UM140 and UN21.
(RNAV 5)		069°/ 250°	29.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	ASRAX	513117N 0041643W							Intersection with UT7.
(RNAV 5)		070°/ 250°	6.0 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	SWANY	513334N 0040748W							Intersection with UM17.
(RNAV 5)		070°/ 250°	13.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	ABDUK	513834N 0034801W							Intersection with UL607.
(RNAV 5)		070°/ 250°	21.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
▵	DIKAS	514637N 0031533W							**Southbound (westbound) route only between RILES and DIKAS.** Intersection with UL9 and UP4.
(RNAV 5)		-/232°	16.2 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	RILES	515655N 0025522W							Extremity of UL180.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between LESLU and MERLY** (ENR 1.1, paragraph 1.1.7 refers).
  Availability subject to SWMDA activity.
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL603 (RNP/RNAV)									
△	LAMSO	524358N 0025940E							**Eastbound route only btn TENSO and LAMSO.** UIR Boundary. For continuation see AIP Netherlands. Intersection with UP154 and UZ304 (See AIP Netherlands).
(RNAV 5)		-/102°	7.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
△	BUKUT	524530N 0024802E							
(RNAV 5)		-/102°	11.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
△	DIBAL	524750N 0023000E							
(RNAV 5)		-/102°	1.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
△	ENITO	524805N 0022803E							
(RNAV 5)		-/101°	54.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
△	DOLAS	525843N 0010003E							
(RNAV 5)		-/109°	39.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	AMVEL	531103N 0000155W							
(RNAV 5)		-/108°	10 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	ROGAG	531406N 0001745W							
(RNAV 5)		-/108°	14.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	LAMIX	531829N 0004056W							Intersection with UT29.
(RNAV 5)		-/108°	20.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
									Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	EDUXO	532424N 0011301W							
(RNAV 5)		-/108°	2.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	MAMUL	532505N 0011648W							
(RNAV 5)		-/108°	11.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	ELNOD	532826N 0013524W							
(RNAV 5)		-/108°	11.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	DESIG	533138N 0015334W							For flight planning purposes btn REMSI and DESIG, FL 250 and FL 270 are not avbl for cruising tfc.
(RNAV 5)		-/113°	12.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	TENSO	533602N 0021227W							
(RNAV 5)		293°/ 112°	48.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	BELOX	535316N 0032923W							
(RNAV 5)		292°/ 112°	12.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 125.680 (All Levels).
▵	REMSI	535737N 0034932W							DRA Entry and Exit Fix. Extremity of UL603.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL607 (RNP/RNAV)									
△	KONAN	510751N 0020000E							**Eastbound route only.** UIR Boundary. For continuation see AIP Belgium.
(RNAV 5)		-/099°	134.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between INLAK and abm DET: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between abm DET and abm ITVIP: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 275); Freq: 134.900 (Below FL 275). Between abm ITVIP and KONAN: London Control (Swanwick) Freq: 127.430 (FL 315 and above); Freq: 134.900 (Below FL 315).
△	INLAK	512841N 0013127W							Intersection with UL18.
(RNAV 5)		-/098°	66.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	NUMPO	513636N 0031701W							Intersection with UP2.
(RNAV 5)		-/097°	19.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between NUMPO and abm POMAX: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between abm POMAX and ABDUK: Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
△	ABDUK	513834N 0034801W							Intersection with UL180.
(RNAV 5)		-/096°	55.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	NEKAP	514335N 0051726W							
(RNAV 5)		-/096°	47.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between NEKAP and the eastern boundary of the BANBA CTA (514539N 0060210W): London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335). Between the eastern boundary of the BANBA CTA (514539N 0060210W) and EVRIN: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	EVRIN	514656N 0063348W							UIR Boundary. Extremity of UL607.

Route Remarks:

- EG D115A, EG D117 and EG D118 may affect minimum overflying level.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL608 (RNP/RNAV)									
▵	SUMUM	513814N 0020628E							**Westbound route only.** UIR Boundary. For continuation see AIP Netherlands. Intersection with UY6.
(RNAV 5)		290°/-	19.7 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	LOGAN	514451N 0013643E							Intersection with UL980.
(RNAV 5)		289°/-	18.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between LOGAN and 10 nm before CLN: London Control (Swanwick) Freq: 128.160 (All Levels). Between 10 nm before CLN and CLN: London Control (Swanwick) Freq: 133.940 (All Levels).
▵	CLACTON VOR/DME (CLN)	515054.50N 0010851.32E							Extremity of UL608.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL610 (RNP/RNAV)									
▵	RAPIX	512638N 0020000E							**Westbound route only.** UIR Boundary. For continuation see AIP Belgium.
(RNAV 5)		280°/-	4.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	SUNUP	512731N 0015227E							
(RNAV 5)		280°/-	10 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	TEBRA	512920N 0013643E							
(RNAV 5)		280°/-	18.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	KOPUL	513232N 0010814E							
(RNAV 5)		280°/-	6.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	UNSAD	513340N 0005746E							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)		280°/-	12.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
△	NILON	513546N 0003804E							
(RNAV 5)		280°/-	1.9 nm		FL 460 / FL 245		even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
△	GILDA	513606N 0003501E							Intersection with UL620 and UM14.
(RNAV 5)		280°/-	16.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E							Intersection with UL179 and UN57.
(RNAV 5)		295°/-	23.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	HEMEL	514820N 0002510W							Extremity of UL610. Intersection with UT420.

Route Remarks:

- **CDR Category One (CDR 1) between RAPIX and LAM** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 H24.
- The use of this route may be interrupted when MoD (Shoeburyness) requires the activation of Danger Areas EG D138 and D138A above ALT 13000 ft through which the route passes. These Danger Areas are activated by NOTAM.
  Non-availability of UL610 will be notified by means of the daily UK CDR Closure NOTAM and the Eurocontrol CRAM.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL612 (RNP/RNAV)									
▵	XAMAB	501216N 0001553E							**Eastbound route only btn DCS and XAMAB.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/147°	12.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	HAWKE	502227N 0000525E							Intersection with UM189.
(RNAV 5)		-/147°	5.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	BENBO	502705N 0000037E							Intersection with UY47.
(RNAV 5)		-/147°	18.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	BOGNA	504207N 0001506W							
(RNAV 5)		-/147°	25.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between MID and 10 nm after MID: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305). Between 10 nm after MID and 10 nm before BOGNA: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 255); Freq: 135.050 (Below FL 255). Between 10 nm before BOGNA and BOGNA: London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W							
(RNAV 5)		-/159°	25.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between WOD and 15 nm before MID: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between 15 nm before MID and MID: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	WOODLEY NDB (WOD)	512710.02N 0005243.68W							Intersection with UM605.
(RNAV 5)		-/145°	12.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	COWLY	513658N 0010354W							Intersection with UQ41.
(RNAV 5)		-/154°	24.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	EMKUK	515837N 0012115W							Intersection with Y321.
(RNAV 5)		-/154°	6.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	IXURA	520405N 0012540W							
(RNAV 5)		-/154°	19.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	HONILEY VOR/DME (HON)	522124.04N 0013949.41W							Intersection with P155.
(RNAV 5)		-/159°	51.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels).
▵	LISTO	530836N 0021157W							
(RNAV 5)		-/159°	7.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	LOVEL	531506N 0021628W							
(RNAV 5)		-/159°	14.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	BARTN	532814N 0022541W							Intersection with UL975.
(RNAV 5)		-/159°	10.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	CROFT	533737N 0023220W							
(RNAV 5)		-/159°	9.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	CALDA	534627N 0023838W							
(RNAV 5)		-/159°	8.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	OBUNI	535440N 0024433W							
(RNAV 5)		-/159°	6.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	VAMEB	540010N 0024832W							
(RNAV 5)		-/159°	15.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	LAKEY	541420N 0025852W							
(RNAV 5)		-/159°	31.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between DCS and 5415N: Scottish Control (Prestwick) Freq: 135.530 (All Levels). Between 5415N and LAKEY: London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	DEAN CROSS DME (DCS)	544318.88N 0032026.30W							
(RNAV 5)		334°/ 154°	18.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	BEBNI	545906N 0033514W							
(RNAV 5)		334°/ 154°	16.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	NAVSO	551322N 0034849W							
(RNAV 5)		334°/ 154°	30.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	LUSIV	554002N 0041441W							
(RNAV 5)		334°/ 154°	3.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	FENIK	554255N 0041731W							
(RNAV 5)		334°/ 154°	10.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W							Intersection with UL602 and UP600.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
(RNAV 5)		341°/ 161°	76.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between GOW and 562000N: Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.825 (Below FL 255). Between 562000N and ORSUM: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255).
△	ORSUM	570307N 0051741W							Intersection with UP24.
(RNAV 5)		341°/ 161°	75.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 127.275 (Below FL 255).
△	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W							Intersection with UN591, UN601, UN610 and UN614.
(RNAV 5)		346°/ 166°	142.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
△	MODGO	602643N 0073955W							Intersection with UP61.
(RNAV 5)		346°/ 166°	22.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
△	BESGA	604723N 0075446W							Intersection with UP612.
(RNAV 5)		346°/ 166°	13.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
△	MATIK	610000N 0080400W							UIR Boundary. Extremity of UL612.

Route Remarks:

- The area of airspace bounded by:
  550603N 0041419W - 544000N 0032654W -
  543356N 0031901W - 541053N 0030154W -
  550603N 0041419W, is part of UL612.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL613 (RNP/RNAV)									
▵	SOVAT	504646N 0012800E							**Westbound (northbound) route only between SOVAT and TLA.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		319°/-	22.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 134.900 (Below FL 305).
▵	SANDY	510351N 0010403E							Intersection with UL15, UN57 and UN601.
(RNAV 5)		325°/-	70.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between SANDY and abm DET: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 134.900 (Below FL 305). Between abm DET and STOAT: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	STOAT	520133N 0000115W							
(RNAV 5)		332°/-	19.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 285 and above); Freq: 127.105 (Below FL 285).
▵	MOGLI	521830N 0001609W							
(RNAV 5)		332°/-	48.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 285 and above); Freq: 127.105 (Below FL 285).
▵	BETAX	530033N 0005403W							
(RNAV 5)		332°/-	28.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	MAMUL	532505N 0011648W							Intersection with UY250.
(RNAV 5)		332°/-	21.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	HALIF	534406N 0013450W							Intersection with UN590.
(RNAV 5)		332°/-	28.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	ABKAT	540853N 0015847W							Intersection with UP18.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
(RNAV 5)		332°/-	94.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	TALLA VOR/DME (TLA)	552956.92N 0032110.20W							Intersection with UL602 and UN601.
(RNAV 5)		358°/ 178°	52.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 270	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	FINDO	562209N 0032749W							Intersection with UP600.
(RNAV 5)		358°/ 178°	65.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	VADNO	572711N 0033738W							
(RNAV 5)		358°/ 178°	42.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	PIPEM	580923N 0034419W							
(RNAV 5)		358°/ 178°	49.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	SOXON	585806N 0035222W							
(RNAV 5)		358°/ 178°	28.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	BAMRA	592600N 0035710W							Extremity of UL613.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between FINDO and BAMRA** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL619 (RNP/RNAV)									
▵	VALBO	550743N 0050000E							UIR Boundary. Extremity of UL619. Intersection with L619 (see AIP Denmark).
(RNAV 5)		297°/ 116°	49.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 280	odd FL 450 / FL 270	Class C. ATS delegated to Copenhagen ACC.
▵	AVRAL	553034N 0034259E							
(RNAV 5)		296°/ 116°	50.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 280	odd FL 450 / FL 270	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	CUTEL	555309N 0022228E							Intersection with L983, UL7 and UP16.
(RNAV 5)		301°/ 120°	62.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	RIVOT	562429N 0004637E							Intersection with M83 and UN591.
(RNAV 5)		308°/ 127°	103.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between RIVOT and 0010000W: Scottish Control (Prestwick) Freq: 134.775 (All Levels). Between 0010000W and DENOG: Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	DENOG	572553N 0014516W							
(RNAV 5)		307°/ 125°	286.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between DENOG and 0043000W: Scottish Control (Prestwick) Freq: 129.225 (All Levels). Between 0043000W and AKIVO: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	AKIVO	595752N 0093000W							Extremity of UL619. Intersection with UP60.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL620 (RNP/RNAV)									
▵	GAPLI	500000N 0080000W							Extremity of UL620. UIR Boundary.
(RNAV 5)		087°/ 268°	91.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	LANDS END VOR/DME (LND)	500810.62N 0053812.96W							Intersection with UM142, UP620 and UT7.
(RNAV 5)		074°/ 255°	87.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	DAWLY	503427N 0032750W							Intersection with UN864, UP69, UP70, UP71, UP72 and UP73.
(RNAV 5)		075°/ 255°	28.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	BRIPO	504227N 0024500W							
(RNAV 5)		075°/ 255°	9.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	GIBSO	504459N 0023107W							Intersection with UM17 and UN514.
(RNAV 5)		075°/ 255°	11.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	BEVUP	504800N 0021420W							
(RNAV 5)		075°/ 256°	10.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	ABKIM	505043N 0015858W							
(RNAV 5)		076°/ 256°	25.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							Intersection with N866, UM140, UN20, UN621, UQ41 and UY8.
(RNAV 5)		078°/ 259°	27.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W							**Westbound route only between CLN and MID.**
(RNAV 5)		-/235°	56.1 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	GILDA	513606N 0003501E							Intersection with UL610.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		-/235°	2.9 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	SIRGO	513746N 0003847E							Intersection with UL179.
(RNAV 5)		-/235°	6.6 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	MANGO	514134N 0004726E							
(RNAV 5)		-/235°	16.3 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	CLACTON VOR/DME (CLN)	515054.50N 0010851.32E							**Eastbound route only between CLN and REDFA.**
(RNAV 5)		072°/-	10.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 118.480 (All Levels).
△	ARTOV	515419N 0012533E							Intersection with M604 and UP44. →
(RNAV 5)		072°/-	41.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
△	REDFA	520653N 0022917E							UIR Boundary. For continuation see AIP Netherlands.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL722 (RNP/RNAV)									
▵	ANNET	493905N 0040005W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		025°/ 205°	49.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.075 (All Levels).
▵	BERRY HEAD VOR/DME (BHD)	502354.98N 0032937.46W							Extremity of UL722. Intersection with UN864.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 1600 Fri to 0745 Mon, and Mon-Fri 2359-0745 Winter (Summer 1hr earlier).
- Flts intending to join or leave UL722, south of BHD, must avoid Danger Areas EG D003 and EG D004 when they are active and must, therefore, flight plan via BHD.
  Flts joining UL722 are to expect ATC to route them tactically via N864/UN864, under radar control, until they are above FL 245.
  Flts leaving UL722 are to expect ATC to vector flts into N864/UN864 before descent to levels below FL 245.
- Due to ATC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL739 (RNP/RNAV)									
▵	LIZAD	493525N 0041949W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		283°/ 102°	63.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MABUG	494705N 0055612W							Intersection with UN12 and UN34.
(RNAV 5)		282°/ 102°	81.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	GAPLI	500000N 0080000W							UIR Boundary. Extremity of UL739.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL975 (RNP/RNAV)								
△ LIFFY	532848N 0053000W							**Eastbound route only btn LIFFY and BARTN.** UIR Boundary. Extremity of UL975.
(RNAV 5)	095°/-	12.1 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ IDEXA	532814N 0050951W							
(RNAV 5)	096°/-	11.0 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ GINIS	532739N 0045129W							
(RNAV 5)	096°/-	8 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ NATKO	532712N 0043807W							
(RNAV 5)	096°/-	10.9 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ LYNAS	532633N 0042000W							
(RNAV 5)	096°/-	13.1 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ ROLEX	532542N 0035804W							
(RNAV 5)	096°/-	9.0 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ OSLOR	532505N 0034303W							
(RNAV 5)	096°/-	3.9 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	MALUD	532448N 0033630W							Intersection with UL15. EIDW deps requesting to cruise at FL 290 or above will be expected to achieve FL 290 by MALUD.
(RNAV 5)		096°/-	9.1 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	EMLIP	532408N 0032124W							
(RNAV 5)		096°/-	8.0 nm		FL 460 / FL 245	12 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W							Intersection with M16, UL10, UL151, UN862 and UY53.
(RNAV 5)		081°/-	17.6 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	ASMIM	532646N 0023911W							
(RNAV 5)		081°/-	8.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	BARTN	532814N 0022541W							
(RNAV 5)		081°/ 261°	9.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	SONEX	532953N 0021021W							
(RNAV 5)		081°/ 262°	7.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	DENBY	533113N 0015740W							
(RNAV 5)		082°/ 262°	2.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min		Controlling Unit/ Airspace Class/ Remarks
							↓	↑	
									Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	DESIG	533138N 0015334W							Intersection with UL70 and UL603.
(RNAV 5)		082°/ 262°	12.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	UNIGO	533340N 0013339W							
(RNAV 5)		082°/ 262°	9.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	UPTON	533513N 0011803W							
(RNAV 5)		082°/ 262°	2.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	ARPUB	533534N 0011428W							
(RNAV 5)		082°/ 262°	5.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	GOLES	533629N 0010500W							**Westbound route only btn LIBSO and GOLES.**
(RNAV 5)		-/278°	42.4 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	LIBSO	533129N 0000536E							Intersection with UT29.
(RNAV 5)		043°/ 223°	29.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between LIBSO and 15 nm before ROVNI: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285). Between 15 nm before ROVNI and ROVNI: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
△	ROVNI	535313N 0003901E							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)		046°/ 227°	89.0 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	NIGOL	545418N 0022932E							
(RNAV 5)		082°/ 262°	25.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ASKAM	545747N 0031350E							
(RNAV 5)		066°/ 247°	26.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ROPAL	550817N 0035643E							
(RNAV 5)		067°/ 247°	26.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	INPUT	551818N 0043905E							
(RNAV 5)		067°/ 247°	12.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	LESRA	552308N 0050000E							UIR Boundary. Continues as L975 (see AIP Denmark).

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between LIBSO and LESRA** (ENR 1.1, paragraph 1.1.7 refers).
  Closure by NOTAM predicated on EG D323B/E status.
  CDR 1 and 3 H24.
- Between LIFFY and WAL the width is 12 nm with the CL aligned WAL - LIFFY; this portion of UL975 extends 5 nm to the south and 7 nm to the north of the CL.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL980 (RNP/RNAV)									
▵	ORTAC	495957N 0020018W							**Eastbound route only btn ORTAC and MID.** UIR Boundary. Extremity of UL980.
(RNAV 5)		040°/-	10.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.825 (All Levels).
▵	VEXEN	500822N 0014934W							
(RNAV 5)		040°/-	9.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.825 (All Levels).
▵	DOMUT	501543N 0014009W							
(RNAV 5)		040°/-	20.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345).
▵	KATHY	503114N 0012000W							Intersection with UN867.
(RNAV 5)		041°/-	23.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between KATHY and 10 nm before AVANT: London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345). Between 10 nm before AVANT and AVANT: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 134.440 (Below FL 305).
▵	AVANT	504912N 0005618W							
(RNAV 5)		041°/-	18.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W							**Westbound route only btn XAMAN and MID.**
(RNAV 5)		-/220°	46.0 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Between 15 nm before MID and MID: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305). Between LAM and 15 nm before MID: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E							
(RNAV 5)		-/264°	12.6 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	WESUL	514015N 0002909E							Intersection with UM14.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
							↓	↑	
(RNAV 5)		-/264°	7.4 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BRASO	514107N 0004100E							
(RNAV 5)		-/264°	4.0 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	MANGO	514134N 0004726E							
(RNAV 5)		-/264°	2.2 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	LIVSU	514149N 0005058E							
(RNAV 5)		-/264°	3.8 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	SABER	514214N 0005658E							
(RNAV 5)		-/264°	5 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	TRIPO	514247N 0010458E							
(RNAV 5)		-/264°	19.9 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	LOGAN	514451N 0013643E							
(RNAV 5)		-/264°	22.9 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	XAMAN	514705N 0021327E							UIR Boundary. For continuation see AIP Netherlands.

Route Remarks:

- The Upper Airspace bounded by:
  500620N 0014207W - 500000N 0014301W -
  500000N 0015013W - 500620N 0014207W,
  is part of UL980.
- Due to Brest ACC operational requirements, the cruising level allocation between ORTAC and MID is inappropriate to the MAG Track.
- UL980 as defined does not include that part of EG D138 north of a line 513705N 0005511E - 513821N 0011344E. Pilots flying UL980 below ALT 35000 ft should ensure that they do not fly south of track between LOGAN and LAM.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM8 (RNP/RNAV)									
△	SUBIP	502644N 0005306E							**Westbound route only.** UIR Boundary. Extremity of UM8.
(RNAV 5)		287°/-	9.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.425 (All Levels).
△	ELDAX	502918N 0003930E							
(RNAV 5)		296°/-	13.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.050 (All Levels).
△	WAFFU	503457N 0002059E							Extremity of UM8. Intersection with UY8.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM14 (RNP/RNAV)									
△	GILDA	513606N 0003501E							**Westbound (northbound) route only.** Extremity of UM14.
(RNAV 5)		319°/-	2.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
△	FERIT	513759N 0003221E							
(RNAV 5)		319°/-	3.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
△	WESUL	514015N 0002909E							
(RNAV 5)		319°/-	28.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
△	STOAT	520133N 0000115W							Extremity of UM14. Intersection with UL613.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM17 (RNP/RNAV)									
▵	KUMIL	503431N 0013639W							**Eastbound route only btn GIBSO and KUMIL.** Extremity of UM17.
(RNAV 5)		-/108°	20.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	BILNI	504031N 0020733W							
(RNAV 5)		-/108°	15.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	GIBSO	504459N 0023107W							
(RNAV 5)		311°/ 130°	41.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	EXMOR	511043N 0032135W							Intersection with UM140.
(RNAV 5)		310°/ 130°	14.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	KESUP	511932N 0033917W							
(RNAV 5)		310°/ 130°	22.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	SWANY	513334N 0040748W							
(RNAV 5)		310°/ 130°	42.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W							**Westbound route only btn STU and VATRY.** Intersection with UL9 and UN546.
(RNAV 5)		336°/-	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	PEMOB	520838N 0050941W							Intersection with UN14.
(RNAV 5)		336°/-	27.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	VATRY	523316N 0053000W							UIR Boundary. Extremity of UM17.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between STU and VATRY** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to activity within EG D201A/F/G.
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM20 (RNP/RNAV)									
▵	RINIS	515430N 0021921E							**Westbound route only.** UIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)		268°/-	16.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	IDESI	515352N 0015308E							Intersection with UY6.
(RNAV 5)		298°/-	28.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	LAPRA	520707N 0011236E							Extremity of UM20.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM25 (RNP/RNAV)									
▵	ANNET	493905N 0040005W							**Eastbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/101°	24.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	NAKID	494254N 0043723W							Intersection with UN160.
(RNAV 5)		-/100°	61.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	IDOKI	495137N 0061139W							Intersection with UN12.
(RNAV 5)		-/099°	70.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	GAPLI	500000N 0080000W							UIR Boundary. Extremity of UM25.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM30 (RNP/RNAV)									
▵	SALCO	494414N 0033146W							**Southbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/200°	44.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	NOTRO	502612N 0031021W							Extremity of UM30.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 1600 Fri to 0745 Mon Winter (Summer 1hr earlier).
- Due to ATC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM65 (RNP/RNAV)									
▵	RODOL	531417N 0015143W							**Westbound route only.** Extremity of UM65.
(RNAV 5)		332°/-	25.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	TENSO	533602N 0021227W							Extremity of UM65. Intersection with UL603.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM82 (RNP/RNAV)									
▵	TIPTA	544813N 0013641W							**Eastbound route only btn TIPTA and ROBEM.** Extremity of UM82.
(RNAV 5)		029°/-	44.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	ROBEM	552733N 0010114W							Intersection with UP16.
(RNAV 5)		047°/ 228°	83.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	RIVOT	562429N 0004637E							Intersection with UM89.
(RNAV 5)		057°/ 239°	130.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between RIVOT and 0020000E: Scottish Control (Prestwick) Freq: 134.775 (All Levels). Between 0020000E and NIVUN: Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	NIVUN	573412N 0040813E							UIR Boundary. Extremity of UM82. Intersection with M82, P5, P609 and Z321 (see AIP Norway).

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM84 (RNP/RNAV)									
▵	KONAN	510751N 0020000E							**Southbound route only.** UIR Boundary. For continuation see AIP Belgium.
(RNAV 5)		-/128°	29.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.900 (All Levels).
▵	ABTUM	512604N 0012229E							
(RNAV 5)		-/178°	12.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.900 (All Levels).
▵	NONVA	513846N 0012144E							
(RNAV 5)		-/147°	10.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.900 (All Levels).
▵	EVMEK	514741N 0011218E							
(RNAV 5)		-/147°	3.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.900 (All Levels).
▵	CLACTON VOR/DME (CLN)	515054.50N 0010851.32E							Extremity of UM84.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM86 (RNP/RNAV)									
▵	FORTY	575700N 0003545E							Extremity of UM86. Intersection with UL7, UP60 and UP600.
(RNAV 5)		296°/ 115°	153.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	SOXON	585806N 0035222W							
(RNAV 5)		295°/ 113°	182.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between SOXON and 0043000W: Scottish Control (Prestwick) Freq: 129.225 (All Levels). Between 0043000W and AKIVO: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	AKIVO	595752N 0093000W							Extremity of UM86. Intersection with UP60.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM89 (RNP/RNAV)									
▵	TURNBERRY VOR/DME (TRN)	551848.28N 0044701.89W							Extremity of UM89. Intersection with UP600.
(RNAV 5)		070°/ 251°	94.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 124.825 or 126.300 (Below FL 255).
▵	SAINT ABBS VOR/DME (SAB)	555427.04N 0021222.81W							Intersection with L983 and UN562.
(RNAV 5)		074°/ 255°	104.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between SAB and 0013000W: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255). Between 0013000W and RIVOT: Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	RIVOT	562429N 0004637E							Intersection with UM82.
(RNAV 5)		045°/ 227°	129.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between RIVOT and 0013000E: Scottish Control (Prestwick) Freq: 134.775 (All Levels). Between 0013000E and ALOTI: Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	ALOTI	575427N 0033630E							UIR Boundary. Extremity of UM89. Intersection with T400 (see AIP Norway).

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) btn SAB and ALOTI (UIR Boundary)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM90 (RNP/RNAV)									
▵	LONAM	535022N 0035633E							UIR Boundary. Extremity of UM90. Intersection with UL7.
(RNAV 5)		331°/ 150°	23.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	SOTUN	541036N 0033737E							Intersection with UL74.
(RNAV 5)		304°/ 124°	13.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	ROLUM	541820N 0031831E							
(RNAV 5)		304°/ 123°	126.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	GIVEM	552754N 0001453E							
(RNAV 5)		304°/ 123°	83.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	NEXUS	561243N 0015041W							Extremity of UM90. Intersection with UP18 and UP59.
Route Remarks: • **CDR Category One and Three (CDR 1 and 3) between SOTUN and NEXUS** (ENR 1.1, paragraph 1.1.7 refers). Closure by NOTAM predicated on EG D323 status. **CDR 1 and 3** H24. **CDR Category One and Two (CDR 1 and 2) between LONAM and SOTUN** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1** Every weekend 1700 Fri to 0700 Mon and every night Mon-Thu 2300-0700 Winter (Summer 1 hr earlier). **CDR 2** Mon-Thu 0700-2300 and Fri 0700-1700 Winter (Summer 1 hr earlier). Available when published in the CRAM. • For EGPD Arrs/Deps only avbl when ATSOCAS below FL 245 is avbl on request from Swanwick Military.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM125 (RNP/RNAV)									
▵	ORVIK	593818N 0004009E							UIR Boundary. Extremity of UM125. Intersection with M125 and P990 (see AIP Norway).
(RNAV 5)		286°/ 105°	61.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	SUMBURGH VOR/DME (SUM)	595243.52N 0011711.52W							Intersection with UN584, UN603 and UP612. Extremity of UM125.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM140 (RNP/RNAV)									
▵	DOVER VOR/DME (DVR)	510945.44N 0012132.72E							**Eastbound route only btn SAM and DVR.** Extremity of UM140.
(RNAV 5)		-/084°	30.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 275); Freq: 134.900 (Below FL 275).
▵	PENUX	510632N 0003412E							
(RNAV 5)		-/083°	73.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 275); Freq: 134.440 (Below FL 275).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							
(RNAV 5)		282°/ 101°	77.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	EXMOR	511043N 0032135W							Intersection with UM17.
(RNAV 5)		281°/ 100°	62.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MERLY	512000N 0050000W							**Eastbound route only btn NORLA and MERLY.** Intersection with UL22 and UL180.
(RNAV 5)		-/106°	72.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between MERLY and the eastern boundary of the BANBA CTA (513306N 0062427W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (513306N 0062427W and NORLA: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	NORLA	513709N 0065211W							UIR Boundary. Extremity of UM140.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM142 (RNP/RNAV)									
△	OGAGI	492722N 0050157W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		332°/ 152°	2.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.615 (FL 335 and above); Freq: 133.480 (Below FL 335).
△	DOLUR	492904N 0050326W							Intersection with UN38 and UN54.
(RNAV 5)		332°/ 152°	45.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
△	LANDS END VOR/DME (LND)	500810.62N 0053812.96W							Intersection with UL620, UN160 and UP620.
(RNAV 5)		303°/ 123°	30.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Dual designation with UN160 btn LND and INSUN. London Control (Swanwick) Freq: 132.950 (All Levels).
△	INSUN	502343N 0061924W							Intersection with UN34 and UN160.
(RNAV 5)		303°/ 122°	73.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
△	LESLU	510000N 0080000W							UIR Boundary. Extremity of UM142.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between LND and LESLU** (ENR 1.1, paragraph 1.1.7 refers).
  Availability subject to SWMDA activity.
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM183 (RNP/RNAV)									
▵	BARKWAY VOR/DME (BKY)	515923.17N 0000342.87E							**Eastbound route only.** Extremity of UM183.
(RNAV 5)		085°/-	4.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	ADMIS	515949N 0001036E							
(RNAV 5)		085°/-	35.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Between ADMIS and 5 nm east of ADMIS: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305). Between 5 nm east of ADMIS and TEDSA: London Control (Swanwick) Freq: 133.940 (All Levels).
▵	TEDSA	520303N 0010739E							
(RNAV 5)		085°/-	25.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	SONDO	520506N 0014842E							
(RNAV 5)		086°/-	17.0 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	SONOG	520620N 0021610E							
(RNAV 5)		086°/-	8.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	REDFA	520653N 0022917E							UIR Boundary. Extremity of UM183. Intersection with UL620 (see AIP Netherlands).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM185 (RNP/RNAV)									
▵	ORTAC	495957N 0020018W							**Eastbound route only btn ORTAC and BPK.** UIR Boundary. Extremity of UM185.
(RNAV 5)		034°/-	47.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Between ORTAC and abm THRED: London Control (Swanwick) Freq: 129.425 (FL 345 and above); Freq: 127.825 (Below FL 345). Between abm THRED and ELDER: London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345).
▵	ELDER	503948N 0012014W							
(RNAV 5)		034°/-	24.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Between ELDER and 10 nm before HAZEL: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 134.440 (Below FL 305). Between 10 nm before HAZEL and HAZEL: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	HAZEL	510019N 0005904W							
(RNAV 5)		078°/-	13.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W							
(RNAV 5)		025°/-	16.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Between MID and 10 nm before OCK: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305). Between 10 nm before OCK and OCK: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	OCKHAM VOR/DME (OCK)	511818.17N 0002649.86W							Intersection with UQ3.
(RNAV 5)		026°/-	29.6 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W							**Westbound route only btn ATNAK and BPK.**

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)		-/240°	32.1 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Dual designation with N866 btn BPK and DIGSU. Between DIGSU and 15 nm west of DIGSU: London Control (Swanwick) Freq: 133.940 (All Levels). Between 15 nm west of DIGSU and BPK: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	DIGSU	520126N 0003805E							Intersection with N866.
(RNAV 5)		-/221°	95.0 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Between ADGEG and 30 nm before DIGSU: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335). Between 30 nm before DIGSU and DIGSU: London Control (Swanwick) Freq: 133.940 (All Levels).
▵	ADGEG	531343N 0021906E							
(RNAV 5)		-/222°	110.6 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	TIPAN	543554N 0042356E							Intersection with N866.
(RNAV 5)		-/187°	145.8 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	ATNAK	570000N 0050000E							UIR Boundary. Extremity of UM185.

Route Remarks:

- **CDR Category One (CDR 1) between TIPAN and DIGSU** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 1800 Fri to 0600 Mon Winter (Summer 1 hr earlier) or 2300 the day before or 0600 the day following a Public Holiday (Summer 1 hr earlier).
  Closure by NOTAM predicated on EG D323 status or activation of EAMTA.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM189 (RNP/RNAV)									
▵	DRAKE	501234N 0000434W							**Southbound route only. Tfc should plan to use eastbound levels.** Extremity of UM189.
(RNAV 5)		-/213°	11.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	HAWKE	502227N 0000525E							Intersection with UL612.
(RNAV 5)		-/219°	16.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	WAFFU	503457N 0002059E							Intersection with UM605 and UY8.
(RNAV 5)		-/219°	32.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between WAFFU and 10 nm from WAFFU: London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295). Between 10 nm from WAFFU and LYD: London Control (Swanwick) Freq: 128.425 (All Levels).
▵	LYDD VOR/DME (LYD)	505958.87N 0005243.18E							Extremity of UM189.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM195 (RNP/RNAV)									
▵	LORKU	495618N 0022216W							**Westbound route only.** UIR Boundary. Intersection with N866. Extremity of UM195.
(RNAV 5)		-/213°	21.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	MARUK	501447N 0020420W							Extremity of UM195.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.
- The use of this airway may be interrupted when Danger Area EG D023 is activated above ALT 22000 ft. Closures will be notified by NOTAM and CRAM.
  There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. In this instance, non-availability of UM195 will be notified to GAT by 'London Control' and traffic will be routed to LELNA and UN621.
- Due to Brest ACC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM197 (RNP/RNAV)									
▵	GAPLI	500000N 0080000W							UIR Boundary. Extremity of UM197.
(RNAV 5)		071°/ 254°	273.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 290	even FL 430 / FL 300	Class C. Between GAPLI and 00350W: London Control (Swanwick) Freq: 132.950 (All Levels). Between 00350W and 00240W: London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305). Between 00240W and 00150W: London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335). Between 00150W and CPT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	COMPTON VOR/DME (CPT)	512929.66N 0011310.89W							**Eastbound route only btn CPT and REDFA.** Intersection with Q295, UL9 and UL179.
(RNAV 5)		074°/-	38.8 nm		FL 460 / FL 285	10 nm	odd FL 450 / FL 290		Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	IPRIL	514029N 0001335W							Intersection with N866.
(RNAV 5)		075°/-	73.5 nm		FL 460 / FL 285	10 nm	odd FL 450 / FL 290		Class C. Between IPRIL and 00030E: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between 00030E and RATLO: London Control (Swanwick) Freq: 118.480 (All Levels).
▵	RATLO	515929N 0014055E							Intersection with UP44.
(RNAV 5)		076°/-	30.8 nm		FL 460 / FL 285	10 nm	odd FL 450 / FL 290		Class C. London Control (Swanwick) Freq: 118.480 (All Levels).
▵	REDFA	520653N 0022917E							UIR Boundary. Extremity of UM197. Intersection with UL620 (see AIP Netherlands).

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).

  (i) **FL 285 to FL 345:**

  CDR 1 1700 Fri to 0900 Mon, Tue-Fri 0000-0900 and 0000-2359 during a Public Holiday, Winter (1 hr earlier in summer).
  CDR 3 at all other times.

  (ii) **Above FL 345:**

  CDR 1 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM605 (RNP/RNAV)									
▵	XIDIL	502106N 0003829E							**Eastbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/141°	9.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	HARDY	502816N 0002928E							
(RNAV 5)		-/141°	8.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	WAFFU	503457N 0002059E							
(RNAV 5)		-/141°	13.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	SEAFORD VOR/DME (SFD)	504538.49N 0000718.89E							
(RNAV 5)		-/138°	56.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between WOD and abm MID: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between abm MID and SFD: London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	WOODLEY NDB (WOD)	512710.02N 0005243.68W							Intersection with UL612.
(RNAV 5)		-/170°	7.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	BENSU	513444N 0005508W							Intersection with UQ70.
(RNAV 5)		-/170°	16.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	SILVA	515051N 0010019W							
(RNAV 5)		-/170°	9.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	FINMA	515947N 0010313W							Intersection with UL15.
(RNAV 5)		-/170°	11.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	DAVENTRY VOR/DME (DTY)	521048.51N 0010649.64W							Extremity of UM605.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UM733 (RNP/RNAV)									
▵	SUBIP	502644N 0005306E							**Northbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		320°/-	7.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) (All Levels) Freq: 128.425
▵	BANVA	503242N 0004512E							
(RNAV 5)		320°/-	19.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) (All Levels) Freq: 128.425.
▵	UNDUG	504724N 0002530E							
(RNAV 5)		320°/-	18.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) (All Levels) Freq: 128.425.
▵	MAYFIELD VOR/DME (MAY)	510101.86N 0000658.04E							Extremity of UM733.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM868 (RNP/RNAV)									
▵	TRENT VOR/DME (TNT)	530314.23N 0014011.89W							**Eastbound route only.** Extremity of UM868.
(RNAV 5)		341°/-	7.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	TIPIL	531000N 0014423W							
(RNAV 5)		015°/-	11.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	EVSON	532127N 0013949W							
(RNAV 5)		043°/-	6.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	ADELU	532630N 0013213W							Extremity of UM868. Intersection with UL60.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation between TNT and TIPIL is inappropriate to the MAG Track.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UM869 (RNP/RNAV)									
▵	SURAT	555456N 0033000E							Extremity of UM869. Intersection with L983.
(RNAV 5)		080°/ 260°	51.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	GOREV	560312N 0050000E							UIR Boundary. Extremity of UM869. Intersection with M869 (see AIP Denmark).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN12 (RNP/RNAV)									
▵	DOLUR	492904N 0050326W							Extremity of UN12.
(RNAV 5)		300°/ 120°	38.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MABUG	494705N 0055612W							Intersection with UN34 and UL739.
(RNAV 5)		297°/ 117°	11.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	IDOKI	495137N 0061139W							Intersection with UM25.
(RNAV 5)		297°/ 116°	39.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	TESDO	500726N 0070700W							Intersection with UN20.
(RNAV 5)		296°/ 116°	37.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LULOX	502200N 0080000W							UIR Boundary. Extremity of UN12.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN14 (RNP/RNAV)									
▵	KENET	513114N 0012718W							**Westbound route only.**
(RNAV 5)		295°/-	28.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	UGNUS	514232N 0020823W							
(RNAV 5)		295°/-	16.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	OKTAD	514904N 0023246W							Intersection with Q60.
(RNAV 5)		284°/-	14.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	DOBEM	515211N 0025545W							
(RNAV 5)		284°/-	12.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	TOPRO	515442N 0031457W							
(RNAV 5)		284°/-	11.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	MEDOG	515701N 0033258W							Intersection with UL18.
(RNAV 5)		283°/-	47.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	ABAPO	520610N 0044812W							
(RNAV 5)		283°/-	13.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	PEMOB	520838N 0050941W							Intersection with UM17, UN24 and UN30.
(RNAV 5)		290°/-	8.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	LANPI	521115N 0052330W							Intersection with Q63.
(RNAV 5)		290°/-	11.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	BAKUR	521430N 0054049W							UIR Boundary. Extremity of UN14.
Route Remarks: • **CDR Category One and Three (CDR 1 and 3) between MEDOG and BAKUR** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24. • EG D201F and D203 activity may affect availability and/or minimum overflying level.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN16 (RNP/RNAV)									
▵	GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W							**Eastbound route only.** Extremity of UN16.
(RNAV 5)		047°/-	27.6 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	OTSID	511023N 0001351W							
(RNAV 5)		047°/-	13.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E							
(RNAV 5)		349°/-	25.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W							
(RNAV 5)		024°/-	15.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BARKWAY VOR/DME (BKY)	515923.17N 0000342.87E							Extremity of UN16.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation between BIG and BPK is inappropriate to the MAG Track.									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN18 (RNP/RNAV)									
▵	LANDS END VOR/DME (LND)	500810.62N 0053812.96W							Extremity of UN18.
(RNAV 5)		020°/ 200°	65.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	ELRAG	511028N 0050621W							
(RNAV 5)		360°/ 180°	19.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	GISOK	513009N 0050728W							Intersection with UL149.
(RNAV 5)		360°/ 180°	38.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	PEMOB	520838N 0050941W							Extremity of UN18.

Route Remarks:

- **CDR Category Two and Three (CDR 2 and 3)** (ENR 1.1-1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 2 and 3.**
- Minimum overflying level may be affected if EG D113A or SWMDA Area C is active.
- Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN20 (RNP/RNAV)									
▵	GAPLI	500000N 0080000W							UIR Boundary. Extremity of UN20.
(RNAV 5)		081°/ 261°	35.0 nm		FL 460 / FL 275	10 nm	odd FL 450 / FL 290	even FL 430 / FL 280	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	TESDO	500726N 0070700W							Intersection with UN12.
(RNAV 5)		081°/ 261°	44.3 nm		FL 460 / FL 275	10 nm	odd FL 450 / FL 290	even FL 430 / FL 280	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	RIGDI	501615N 0055929W							
(RNAV 5)		074°/ 254°	11.8 nm		FL 460 / FL 275	10 nm	odd FL 450 / FL 290	even FL 430 / FL 280	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	GITUS	502000N 0054200W							
(RNAV 5)		074°/ 255°	94.3 nm		FL 460 / FL 275	10 nm	odd FL 450 / FL 290	even FL 430 / FL 280	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	BUMUX	504816N 0032058W							
(RNAV 5)		084°/ 265°	76.7 nm		FL 460 / FL 275	10 nm	odd FL 450 / FL 290	even FL 430 / FL 280	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							Extremity of UN20. Intersection with UL620 and UM140.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN21 (RNP/RNAV)									
▵	GAPLI	500000N 0080000W							UIR Boundary. Extremity of UN21.
(RNAV 5)		057°/ 238°	139.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MERLY	512000N 0050000W							Intersection with UL180. Extremity of UN21.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between GAPLI and MERLY** (ENR 1.1, paragraph 1.1.7 refers).

  Availability subject to SWMDA activity.
- **Available Westbound H24 and Eastbound 1400-0600 (1 hr earlier in summer).**

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN22 (RNP/RNAV)									
▵	SALCO	494414N 0033146W							**Northbound route only.** Extremity of UN22. UIR Boundary.
(RNAV 5)		347°/-	42.3 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	BABAX	502511N 0034817W							Intersection with UP16. Extremity of UN22.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  Availability subject to EG D003 and EG D004 activity.
  CDR 1 and 3 1600 Fri to 0745 Mon Winter (Summer 1hr earlier).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN24 (RNP/RNAV)									
▵	PEMOB	520838N 0050941W							**Westbound route only.** Extremity of UN24.
(RNAV 5)		275°/-	25.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	SLANY	520931N 0055032W							Extremity of UN24. UIR Boundary.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to EG D201A activity. **CDR 1 and 3** H24.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN26 (RNP/RNAV)									
▵	MANIG	494707N 0031534W							**Southbound route only between BHD and MANIG.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/168°	37.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	BERRY HEAD VOR/DME (BHD)	502354.98N 0032937.46W							Intersection with UN864.
(RNAV 5)		334°/ 154°	21.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	DEVOM	504318N 0034519W							Intersection with UL149.
(RNAV 5)		330°/ 150°	90.5 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280	odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W							Intersection with UL9, UM17, UN546 and UP2. Extremity of UN26.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between DEVOM and STU** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** Mon-Fri 1700-0745 and 1700 Fri to 0745 Mon, or the day preceding a PH to 0745 Mon or the day following a PH Winter (Summer 1hr earlier).									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN28 (RNP/RNAV)									
▵	GATRA	511752N 0063755W							**Southbound route only.** Extremity of UN28.
(RNAV 5)		-/203°	42.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between GATRA and the eastern boundary of the BANBA CTA (513123N 0062954W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (513123N 0062954W) and BANBA: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	BANBA	515710N 0061421W							UIR Boundary. Extremity of UN28.

Route Remarks:

- **CDR Category Two and Three (CDR 2 and 3)** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 2 and 3.**
- Link route for periods of activity of SWMDA Area B (when UP620 between BANBA and LND not available).
- Due to ATC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN30 (RNP/RNAV)									
▵	BANBA	515710N 0061421W							**Westbound route only.** UIR Boundary. Extremity of UN30.
(RNAV 5)		-/257°	41.5 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Between BANBA and the eastern boundary of the BANBA CTA (515835N 0060634W): ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels). Between the eastern boundary of the BANBA CTA (515835N 0060634W) and PEMOB: London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	PEMOB	520838N 0050941W							Extremity of UN30.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to EG D201A activity. **CDR 1 and 3** H24.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN32 (RNP/RNAV)									
▵	ANNET	493905N 0040005W							**Southbound route only.** UIR Boundary. Extremity of UN32.
(RNAV 5)		-/216°	57.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	NOTRO	502612N 0031021W							Extremity of UN32.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to EG D003, D004 and D013 activity. **CDR 1 and 3** 1600 Fri to 0745 Mon Winter (Summer 1hr earlier).
- Due to ATC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN34 (RNP/RNAV)									
▵	TALIG	493059N 0054804W							Extremity of UN34.
(RNAV 5)		344°/ 164°	17.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MABUG	494705N 0055612W							Intersection with UL739, UN12 and UT7.
(RNAV 5)		340°/ 160°	39.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	INSUN	502343N 0061924W							Intersection with UM142 and UN160.
(RNAV 5)		351°/ 171°	55.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	GATRA	511752N 0063755W							**Northbound route only between GATRA and EVRIN.**
(RNAV 5)		008°/-	29.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between GATRA and the eastern boundary of the BANBA CTA (512921N 0063618W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (512921N 0063618W) and EVRIN: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	EVRIN	514656N 0063348W							UIR Boundary. Extremity of UN34.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between MABUG and EVRIN** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

  Availability subject to SWMDA activity.
- Due to ATC operational requirements, the cruising level allocation between GATRA and EVRIN is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN38 (RNP/RNAV)									
▵	DOLUR	492904N 0050326W							Extremity of UN38. Intersection with UM142.
(RNAV 5)		312°/ 131°	145.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LESLU	510000N 0080000W							UIR Boundary. Extremity of UN38.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between DOLUR and LESLU** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** H24.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN40 (RNP/RNAV)									
▵	DOKEK	512518N 0060329W							**Northbound route only.** Extremity of UN40.
(RNAV 5)		322°/-	28.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between DOKEK and the eastern boundary of the BANBA CTA (513518N 0061724W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (513518N 0061724W) and EVRIN: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	EVRIN	514656N 0063348W							UIR Boundary. Extremity of UN40.
Route Remarks:									
• **CDR Category Two and Three (CDR 2 and 3)** (ENR 1.1, paragraph 1.1.7 refers).									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN42 (RNP/RNAV)									
▵	RETSI	523042N 0025233W							**Southbound route only.** Extremity of UN42. Intersection with UN862.
(RNAV 5)		-/156°	25.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	MONTY	525334N 0031026W							Extremity of UN42.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN54 (RNP/RNAV)									
▵	DOLUR	492904N 0050326W							Extremity of UN54. Intersection with UM142.
(RNAV 5)		344°/ 164°	122.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) (All Levels) Freq: 132.950.
▵	DOKEK	512518N 0060329W							Intersection with UP620 (Southbound) and UN40. Extremity of UN54.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between DOLUR and DOKEK** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity.
  CDR 1 and 3 Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN57 (RNP/RNAV)									
▵	SANDY	510351N 0010403E							**Westbound (northbound) route only btn SANDY and POL.** Extremity of UN57.
(RNAV 5)		316°/-	49.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between SANDY and abm DET: London Control (Swanwick) Freq: 135.325 (FL 275 and above); Freq: 134.900 (Below FL 275). Between abm DET and LAM: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	LAMBOURNE VOR/DME (LAM)	513845.69N 0000906.13E							
(RNAV 5)		315°/-	51.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between LAM and abm BPK: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305). Between abm BPK and WELIN: London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	WELIN	521450N 0005108W							
(RNAV 5)		315°/-	25.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	SAPCO	523225N 0012125W							
(RNAV 5)		341°/-	32.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	TRENT VOR/DME (TNT)	530314.23N 0014011.89W							Intersection with UL28.
(RNAV 5)		341°/-	44.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	POLE HILL VOR/DME (POL)	534437.56N 0020611.98W							Not available for flight planning btn DCS and POL.
(RNAV 5)		-/145°	10.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	BAMEP	535242N 0021609W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		-/145°	10.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	SETEL	540045N 0022609W							
(RNAV 5)		-/145°	6.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	OLPOP	540532N 0023208W							
(RNAV 5)		-/145°	10.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	IPNOX	541340N 0024222W							
(RNAV 5)		-/145°	37.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	DEAN CROSS DME (DCS)	544318.88N 0032026.30W							**Eastbound route only btn MAC and DCS.** Intersection with UL612 and UN864.
(RNAV 5)		-/120°	90.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	MACHRIHANISH DME (MAC)	552548.08N 0053901.49W							DRA Entry and Exit Fix. Extremity of UN57.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN58 (RNP/RNAV)									
▵	AMPOP	493148N 0060903W							**Westbound route only.** Extremity of UN58.
(RNAV 5)		353°/-	107.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	GATRA	511752N 0063755W							Extremity of UN58. Intersection with UN34.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between AMPOP and GATRA** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** H24.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN63 (RNP/RNAV)									
▵	LORKU	495618N 0022216W							**Westbound route only.** UIR Boundary. Extremity of UN63. Intersection with N866.
(RNAV 5)		-/206°	48.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	KAPEX	504030N 0015100W							Extremity of UN63.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.
- Route will not be available when Danger Area EG D023 activated by NOTAM above ALT 22000 ft. Late notice activations will result in traffic being routed via LELNA and UN621.
- Due to ATC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN80 (RNP/RNAV)									
▵	NAKID	494254N 0043723W							Extremity of UN80. Intersection with UM25 and UN160.
(RNAV 5)		297°/ 115°	142.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	ARKIL	503928N 0080000W							UIR Boundary. Extremity of UN80.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between NAKID and ARKIL** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN83 (RNP/RNAV)									
▵	NAKID	494254N 0043723W							Extremity of UN83. Intersection with UM25 and UN160.
(RNAV 5)		312°/ 131°	145.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LEDGO	511424N 0073405W							UIR Boundary. Extremity of UN83.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between NAKID and LEDGO** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN84 (RNP/RNAV)									
▵	NAKID	494254N 0043723W							Extremity of UN84. Intersection with UM25 and UN160.
(RNAV 5)		290°/ 109°	136.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LULOX	502200N 0080000W							UIR Boundary. Extremity of UN84.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN90 (RNP/RNAV)									
▵	SKESO	494929N 0030203W							**Southbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/173°	37.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	NOTRO	502612N 0031021W							Intersection with UY91.
(RNAV 5)		-/188°	52.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	LAMAT	511807N 0030103W							Extremity of UN90.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3**) (ENR 1.1, paragraph 1.1.7 refers).
  Availability subject to EG D013 activity.
  CDR 1 and 3 1600 Fri to 0745 Mon Winter (Summer 1hr earlier).
- Due to ATC operational requirements, the cruising level allocation between LAMAT and NOTRO is inappropriate to the MAG Track.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN160 (RNP/RNAV)									
▵	LIZAD	493525N 0041949W							Intersection with UL739. UIR Boundary. For continuation see AIP France.
(RNAV 5)		305°/ 125°	13.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	NAKID	494254N 0043723W							Intersection with UM25, UN80, UN83 and UN84.
(RNAV 5)		305°/ 125°	46.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LANDS END VOR/DME (LND)	500810.62N 0053812.96W							Intersection with UL620 and UM142.
(RNAV 5)		303°/ 123°	30.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Dual designation with UM142 between LND and INSUN. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	INSUN	502343N 0061924W							Intersection with UN34.
(RNAV 5)		320°/ 140°	49.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	BOGMI	505953N 0071217W							
(RNAV 5)		320°/ 140°	20 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LEDGO	511424N 0073405W							UIR Boundary. Extremity of UN160.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between LND and LEDGO** (ENR 1.1, paragraph 1.1.7 refers).
  Availability subject to SWMDA activity.
  CDR 1 and 3 H24.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN490 (RNP/RNAV)									
▵	TAKAS	490000N 0080000W							UIR Boundary. Extremity of UN490.
(RNAV 5)		092°/ 272°	19.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Shannon ACC.
▵	ALUTA	490019N 0072953W							
(RNAV 5)		092°/ 272°	11.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Brest ACC.
▵	MOSIS	490026N 0071253W							UIR Boundary. For continuation see AIP France.

Route Remarks:

- The section btn TAKAS and MOSIS is dual designated UN490/UN491.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN491 (RNP/RNAV)									
▵	TAKAS	490000N 0080000W							UIR Boundary. Extremity of UN491.
(RNAV 5)		092°/ 272°	19.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Shannon ACC.
▵	ALUTA	490019N 0072953W							
(RNAV 5)		092°/ 272°	11.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Brest ACC.
▵	MOSIS	490026N 0071253W							UIR Boundary. For continuation see AIP France.

Route Remarks:

- The section btn TAKAS and MOSIS is dual designated UN490/UN491.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN502 (RNP/RNAV)									
▵	PIKOD	492438N 0051559W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		276°/ 096°	21.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC.
▵	SUPAP	492602N 0054922W							Intersection with UP620.
(RNAV 5)		276°/ 096°	15.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC.
▵	PEMAK	492656N 0061305W							
(RNAV 5)		276°/ 095°	31.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC.
▵	PHILI	492831N 0070117W							
(RNAV 5)		275°/ 095°	38.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Shannon ACC.
▵	RATKA	493000N 0080000W							UIR Boundary. Extremity of UN502.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN512 (RNP/RNAV)									
▵	ADRUD	491014N 0062655W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		298°/ 118°	29.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.005 (FL 335 and above); Freq: 129.500 (Below FL 335).
▵	LARLA	492241N 0070715W							
(RNAV 5)		285°/ 105°	35.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Dual designation with UN521 btn LARLA and RATKA. ATS delegated to Shannon ACC. Shannon ACC Freq: 135.600 (All Levels).
▵	RATKA	493000N 0080000W							UIR Boundary. Extremity of UN512.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN514 (RNP/RNAV)									
▵	POMPI	504548N 0005715W							**Eastbound route only btn GIBSO and POMPI.** Extremity of UN514.
(RNAV 5)		-/090°	10.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 134.440 (Below FL 305).
▵	BEGTO	504545N 0011408W							
(RNAV 5)		-/090°	21.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between BEWLI and 10 nm before BEGTO: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305). Between 10 nm before BEGTO and BEGTO: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 134.440 (Below FL 305).
▵	BEWLI	504531N 0014837W							
(RNAV 5)		-/090°	27.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	GIBSO	504459N 0023107W							Intersection with UL620.
(RNAV 5)		278°/ 097°	56.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	DIDEL	505035N 0035950W							Intersection with UL149.
(RNAV 5)		277°/ 096°	72.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	PAVLO	505605N 0055344W							Intersection with UP620.
(RNAV 5)		276°/ 095°	79.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LESLU	510000N 0080000W							UIR Boundary. Extremity of UN514.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between DIDEL and LESLU** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity.
  CDR 1 and 3 Mon-Thu 1700-0900 and from 1700 on Friday, or the day preceding a PH, to 0900 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN521 (RNP/RNAV)									
▵	XAVAP	491402N 0060835W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		285°/ 105°	39.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.005 (FL 335 and above); Freq: 129.500 (Below FL 335).
▵	LARLA	492241N 0070715W							
(RNAV 5)		285°/ 105°	35.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Dual designation with UN512 btn LARLA and RATKA. ATS delegated to Shannon ACC. Shannon ACC Freq: 135.600 (All Levels).
▵	RATKA	493000N 0080000W							UIR Boundary. Extremity of UN521.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN537 (RNP/RNAV)									
▵	MACHRIHANISH DME (MAC)	552548.08N 0053901.49W							DRA Entry and Exit Fix. Extremity of UN537.
(RNAV 5)		060°/ 240°	48.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W							Extremity of UN537. Intersection with L983, UL602 and UP600.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN546 (RNP/RNAV)									
▵	SALCO	494414N 0033146W							UIR Boundary. Extremity of UN546. Intersection with UM30 and UN864 (see AIP France).
(RNAV 5)		339°/ 159°	147.3 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280	odd FL 450 / FL 290	Class C. Between SALCO and abm BABAX: London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305). Between abm BABAX and abm MERLY: London Control (Swanwick) Freq: 132.950 (All Levels) Between abm MERLY and STU: London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W							Intersection with UN26.
(RNAV 5)		305°/ 124°	27.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	BAKUR	521430N 0054049W							UIR Boundary. Extremity of UN546.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between SALCO and STU** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 Tue-Fri 0001-0745 and 2000 Fri to 0745 Mon Winter (Summer 1 hr earlier).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN552 (RNP/RNAV)									
▵	MACHRIHANISH DME (MAC)	552548.08N 0053901.49W							DRA Entry and Exit Fix. Extremity of UN552.
(RNAV 5)		089°/ 270°	78.6 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between MAC and 25 nm before TLA: Scottish Control (Prestwick) Freq: 129.225 (FL 255 and above); Freq: 124.825 (Below FL 255). Between 25 nm before TLA and TLA: Scottish Control (Prestwick) Freq: 129.225 (FL 255 and above); Freq: 126.300 (Below FL 255).
▵	TALLA VOR/DME (TLA)	552956.92N 0032110.20W							Extremity of UN552. Intersection with UL602.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN562 (RNP/RNAV)									
▵	SAINT ABBS VOR/DME (SAB)	555427.04N 0021222.81W							Extremity of UN562. Intersection with L983 and UM89.
(RNAV 5)		260°/ 078°	120.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between SAB and abm LAMMA: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255). Between abm LAMMA and 40 nm before MAC: Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 126.300 (Below FL 255). Between 40 nm before MAC and MAC: Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 124.825 (Below FL 255).
▵	MACHRIHANISH DME (MAC)	552548.08N 0053901.49W							DRA Entry and Exit Fix. Extremity of UN562.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN581 (RNP/RNAV)									
▵	VAXIT	563215N 0050000E							UIR Boundary. Extremity of UN581. Intersection with N581 (see AIP Denmark).
(RNAV 5)		283°/ 103°	43.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Copenhagen ACC.
▵	ELSAN	564219N 0034358E							
(RNAV 5)		283°/ 102°	15.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	GIBSU	564547N 0031610E							
(RNAV 5)		282°/ 102°	60.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	ODMIX	565812N 0012803E							
(RNAV 5)		282°/ 100°	123.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W							Intersection with UN591 and UP600.
(RNAV 5)		284°/ 103°	45.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	VADNO	572711N 0033738W							DRA Entry and Exit Fix. Extremity of UN581.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between VAXIT and ADN** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24. When airspace is required for essential military activity, the closure of this portion of UN581 will be notified through the AUP/CRAM issued by the AMC/CADF and by NOTAM.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN583 (RNP/RNAV)									
▵	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W							DRA Entry and Exit Fix. Extremity of UN583. Intersection with UN591.
(RNAV 5)		095°/ 276°	77.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between STN and 0043000W: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255). Between 0043000W and PIPEM: Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	PIPEM	580923N 0034419W							
(RNAV 5)		096°/ 278°	138.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	FORTY	575700N 0003545E							Extremity of UN583. Intersection with UP60, UP600 and UZ105.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between STN and FORTY** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN584 (RNP/RNAV)									
▵	BAMRA	592600N 0035710W							DRA Entry and Exit Fix. Extremity of UN584. Intersection with UN593.
(RNAV 5)		074°/ 255°	85.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	SUMBURGH VOR/DME (SUM)	595243.52N 0011711.52W							Extremity of UN584. Intersection with UM125, UN603 and UP612.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN590 (RNP/RNAV)									
▵	HALIF	534406N 0013450W							**Westbound route only.** Extremity of UN590.
(RNAV 5)		326°/-	56.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between HALIF and abm RIBEL: London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285). Between abm RIBEL and APPLE: Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	APPLE	543000N 0023050W							
(RNAV 5)		326°/-	15.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	ABEVI	544227N 0024629W							
(RNAV 5)		323°/-	90.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W							DRA Entry and Exit Fix. Extremity of UN590. Intersection with UL612.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN591 (RNP/RNAV)									
▵	RIVOT	562429N 0004637E							Intersection with M83 and UL619. Extremity of UN591.
(RNAV 5)		300°/ 119°	114 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W							Intersection with UN581 and UP600.
(RNAV 5)		297°/ 116°	136.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between ADN and 0043000W: Scottish Control (Prestwick) Freq: 129.225 (All Levels). Between 0043000W and STN: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W							Intersection with UL612, UN583, UN601, UN610 and UN614.
(RNAV 5)		296°/ 115°	111.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 132.730 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	NINEX	585120N 0093000W							Extremity of UN591. Intersection with UP59.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between RIVOT and ADN** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.
  For EGPD Arrs/Deps when EG D613A, B or C not active, dct routing below FL 245 may be avbl on request from Swanwick Military, otherwise the route is as detailed above.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN593 (RNP/RNAV)									
▵	NINEX	585120N 0093000W							Extremity of UN593. Intersection with UP59.
(RNAV 5)		082°/ 264°	174.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Between NINEX and 0083000W: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 127.275 (Below FL 255). Between 0083000W and BAMRA: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	BAMRA	592600N 0035710W							Extremity of UN593. Intersection with UN584 and UP60.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN601 (RNP/RNAV)									
▵	SANDY	510351N 0010403E							**Westbound route only btn SANDY and TLA.** Extremity of UN601.
(RNAV 5)		309°/-	22.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 275); Freq: 134.900 (Below FL 275).
▵	DETLING VOR/DME (DET)	511814.41N 0003550.19E							
(RNAV 5)		316°/-	37.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W							
(RNAV 5)		330°/-	23.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	POTON	520504N 0002538W							
(RNAV 5)		330°/-	9.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	BEDFO	521330N 0003348W							
(RNAV 5)		330°/-	9.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	EBOTO	522133N 0004140W							
(RNAV 5)		330°/-	17.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	PIPIN	523636N 0005630W							
(RNAV 5)		330°/-	9.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295)
▵	LESTA	524427N 0010419W							Intersection with UP6 and UY250.
(RNAV 5)		330°/-	15.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	EMBOR	525748N 0011745W							
(RNAV 5)		330°/-	23.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
								Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ XAPOS	531729N 0013751W							
(RNAV 5)	330°/-	12.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ BOLBI	532800N 0014845W							
(RNAV 5)	330°/-	9.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ ULSAX	533554N 0015700W							
(RNAV 5)	329°/-	10.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ POLE HILL VOR/DME (POL)	534437.56N 0020611.98W							Intersection with UP18.
(RNAV 5)	340°/-	7.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ NELSA	535148N 0021105W							
(RNAV 5)	340°/-	9.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ RIBEL	540058N 0021723W							
(RNAV 5)	340°/-	9.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ ERGAB	540922N 0022312W							
(RNAV 5)	340°/-	22.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
△ SHAPP	543000N 0023738W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		339°/-	13.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	ABEVI	544227N 0024629W							
(RNAV 5)		339°/-	11.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	INPIP	545236N 0025346W							
(RNAV 5)		339°/-	16.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	UTOGU	550740N 0030443W							
(RNAV 5)		339°/-	1.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	INREV	550857N 0030539W							
(RNAV 5)		339°/-	9.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	ESKDO	551756N 0031215W							
(RNAV 5)		339°/-	5.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	IPDOR	552239N 0031545W							
(RNAV 5)		339°/-	7.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	TALLA VOR/DME (TLA)	552956.92N 0032110.20W							Intersection with UL602 and UN864.
(RNAV 5)		334°/ 153°	66.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between TLA and 562000N: Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 126.300 (Below FL 255). Between 562000N and ERSON: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	ERSON	562748N 0041824W							
(RNAV 5)		333°/ 153°	16.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	NEVIS	564143N 0043241W							Intersection with UP24.
(RNAV 5)		333°/ 153°	105.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between NEVIS and 571500N: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255). Between 571500N and STN:

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 127.275 (Below FL 255).
△	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W							Intersection with UL612, UN583, UN591, UN610 and UN614.
(RNAV 5)		321°/ 140°	147.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
△	AKIVO	595752N 0093000W							Extremity of UN601. Intersection with UP60.

Route Remarks:

- Two areas of controlled airspace Class C are part of UN601:
  (FL 245 - FL 460)
  524757N 0004834W - 524523N 0005538W -
  532003N 0013042W - 532109N 0012904W -
  532012N 0011840W - 531755N 0010606W -
  530016N 0010043W - 524757N 0004834W.
  (FL 245 - FL 460)
  522632N 0003702W - 522630N 0002732W -
  524757N 0004834W - 524523N 0005538W -
  522632N 0003702W.
  Available H24.
- The area of airspace bounded by straight lines joining:
  552700N 0030000W - 535342N 0020655W -
  552358N 0031101W - 552700N 0030000W,
  is part of UN601.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN603 (RNP/RNAV)									
▵	BEREP	590209N 0014420E							UIR Boundary. Continues as N603 and intersects with Z107 (see AIP Norway).
(RNAV 5)		301°/ 120°	105.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (FL 255 and above); Freq: 134.850 (Below FL 255).
▵	SUMBURGH VOR/DME (SUM)	595243.52N 0011711.52W							Intersection with UL7, UM125, UN584 and UP612.
(RNAV 5)		277°/ 096°	142.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 300	odd FL 450 / FL 310	Class C. Scottish Control (Prestwick) Freq: 129.225 (FL 255 and above); Freq: 134.850 (Below FL 255).
▵	KESEG	600058N 0060056W							Intersection with UP61.
(RNAV 5)		276°/ 095°	76.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 300	odd FL 450 / FL 310	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	BILLY	600111N 0083408W							
(RNAV 5)		269°/ 089°	28.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 300	odd FL 450 / FL 310	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	AKIVO	595752N 0093000W							Extremity of UN603. Intersection with UP60.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN610 (RNP/RNAV)									
▵	LONAM	535022N 0035633E							UIR Boundary. Extremity of UN610. Intersection with UL7.
(RNAV 5)		292°/ 109°	210.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between LONAM and abm RIKUD: Scottish Control (Prestwick) Freq: 121.325 (All Levels). Between abm RIKUD and NATEB: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	NATEB	550218N 0014154W							Intersection with UL602.
(RNAV 5)		325°/ 145°	61.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	LAMMA	555130N 0024603W							
(RNAV 5)		325°/ 145°	38.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	FINDO	562209N 0032749W							Intersection with UP58 and UP600.
(RNAV 5)		325°/ 145°	39.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	LAGAV	565335N 0041210W							
(RNAV 5)		325°/ 145°	36.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	RUGID	572209N 0045355W							Intersection with M83 and UP59. →
(RNAV 5)		325°/ 144°	65.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W							Intersection with UL612, UN591, UN601 and UN614.
(RNAV 5)		331°/ 150°	131.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	BILLY	600111N 0083408W							
(RNAV 5)		330°/ 150°	43.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	BARKU	603618N 0092436W							
(RNAV 5)		330°/ 150°	29.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Reykjavik ACC.
▵	RATSU	610000N 0100000W							Shanwick Boundary. Extremity of UN610.
Route Remarks:									
• **CDR Category One and Three (CDR 1 and 3) between LONAM and NATEB** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3 H24.** Closure by NOTAM predicated on status of EG D323.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN614 (RNP/RNAV)									
▵	STORNOWAY VOR/DME (STN)	581225.01N 0061058.97W							Extremity of UN614. Intersection with UL612, UN591 and UN610.
(RNAV 5)		001°/ 181°	61.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	ADASI	591315N 0061731W							
(RNAV 5)		001°/ 181°	54.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	DOSUN	600703N 0062339W							Intersection with UP61. Extremity of UN614.
Route Remarks:									
• Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN621 (RNP/RNAV)									
△	LELNA	495857N 0020623W							**Westbound (southbound) route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/186°	15.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
△	MARUK	501447N 0020420W							Intersection with UM195.
(RNAV 5)		-/199°	10.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
△	BEVEL	502454N 0015907W							
(RNAV 5)		-/199°	16.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
△	KAPEX	504030N 0015100W							Intersection with UN63.
(RNAV 5)		-/230°	25.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
△	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							Intersection with UL620.
(RNAV 5)		-/214°	24 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
△	GOGSI	511727N 0010002W							Extremity of UN621.

Route Remarks:

- If necessary, traffic will be radar vectored to remain 5 nm from eastern edge of EG D023 until 2000 ft above the notified level of Unusual Air Activity.
- Due to Brest ACC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN859 (RNP/RNAV)									
▵	SITET	500600N 0000000E							**Eastbound (southbound) route only btn CPT and SITET.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		-/148°	53.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
▵	GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W							
(RNAV 5)		-/156°	26.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between GWC and abm MID: London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295). Between abm MID and VAPID: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	VAPID	511514N 0010242W							
(RNAV 5)		-/156°	15.7 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	COMPTON VOR/DME (CPT)	512929.66N 0011310.89W							Intersection with Y321.
(RNAV 5)		343°/ 163°	10 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	DIGUT	513901N 0011759W							
(RNAV 5)		343°/ 163°	7.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	KIDLI	514617N 0012141W							Intersection with UL151.
(RNAV 5)		343°/ 163°	36.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Manchester TMA deps that FPL a cruising level at FL 310 or above, will be required to achieve FL 310 level 5 nm before KIDLI. Between KIDLI and abm NEDEX: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between abm NEDEX and HON: London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	HONILEY VOR/DME (HON)	522124.04N 0013949.41W							**Eastbound (southbound) route only btn SANBA and HON.** Intersection with P155, UL10, UL15 and UL612.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		-/154°	44.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.390 (All Levels) for traffic via UL612 and UN859 after HON. Freq: 129.205 (All Levels) for traffic via P155, UL10 and UL15 after HON.
△	UTUXA	530030N 0021313W							
(RNAV 5)		-/154°	8.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	SANBA	530822N 0022003W							Extremity of UN859.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UN862 (RNP/RNAV)									
△	SKESO	494929N 0030203W							UIR Boundary. Intersection with UN90. For continuation see AIP France.
(RNAV 5)		334°/ 154°	11.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	SKERY	500000N 0031023W							
(RNAV 5)		334°/ 154°	26.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	BERRY HEAD VOR/DME (BHD)	502354.98N 0032937.46W							**Southbound route only between WAL and BHD.** Intersection with UL722, UN864 and UN26.
(RNAV 5)		-/200°	57.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	LAMAT	511807N 0030103W							Intersection with UN90.
(RNAV 5)		-/188°	23.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
△	ERNOK	514130N 0025644W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)		-/188°	1.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	PERUP	514234N 0025632W							
(RNAV 5)		-/184°	9.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	DOBEM	515211N 0025545W							
(RNAV 5)		-/184°	4.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	RILES	515655N 0025522W							Intersection with UL180.
(RNAV 5)		-/185°	10.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	AMRAL	520653N 0025433W							
(RNAV 5)		-/185°	23.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	RETSI	523042N 0025233W							
(RNAV 5)		-/180°	12.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	NENVO	524238N 0025315W							
(RNAV 5)		-/180°	5.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	ROBVA	524804N 0025334W							
(RNAV 5)		-/180°	5.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	KARNO	525340N 0025354W							Intersection with UT7.
(RNAV 5)		-/185°	8.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	RISLA	530151N 0025312W							Intersection with UL15.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min		Controlling Unit/ Airspace Class/ Remarks
							↓	↑	
(RNAV 5)		-/185°	2.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	NOKIN	530436N 0025258W							
(RNAV 5)		-/156°	21.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W							Extremity of UN862.

Route Remarks:

- Due to ATC operational requirements, the cruising level allocation between NOKIN and BHD is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN863 (RNP/RNAV)									
▵	KOTEM	500000N 0010314W							**Eastbound (northbound) route only.** For continuation see AIP France.
(RNAV 5)		006°/-	20.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (All Levels).
▵	PILIP	502003N 0010026W							
(RNAV 5)		006°/-	17.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (All Levels).
▵	SUSIX	503700N 0005803W							
(RNAV 5)		006°/-	12.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (All Levels).
▵	AVANT	504912N 0005618W							Extremity of UN863. Intersection with UL980.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.
- The use of UN863 may be interrupted when MoD (Navy) requires the activation of Danger Areas EG D037 and/or D038 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. In this instance, non-availability of UN863 will be notified to GAT by 'Brest Control' and tfc will be routed to GARMI and UN867. When UN867 is also unavailable traffic will be re-routed to ORIST and UY110.
- Due to ATC operational requirements, the cruising level allocation between KOTEM and AVANT is inappropriate to the MAG Track.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN864 (RNP/RNAV)									
▵	SALCO	494414N 0033146W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		003°/ 184°	39.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	BERRY HEAD VOR/DME (BHD)	502354.98N 0032937.46W							Intersection with UN26, UL722 and UN862.
(RNAV 5)		008°/ 188°	10.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	DAWLY	503427N 0032750W							Intersection with UL149.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		008°/ 188°	5.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	TINAN	504000N 0032654W							
(RNAV 5)		008°/ 188°	8.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	TIVER	504833N 0032526W							
(RNAV 5)		008°/ 188°	2.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	ATWEL	505051N 0032502W							
(RNAV 5)		008°/ 188°	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	MULIT	510047N 0032319W							
(RNAV 5)		008°/ 188°	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
▵	EXMOR	511043N 0032135W							**Northbound route only btn EXMOR and WAL.** Intersection with UM17.
(RNAV 5)		008°/-	26.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between EXMOR and overhead EGFF: London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305). Between overhead EGFF and NUMPO: London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	NUMPO	513636N 0031701W							
(RNAV 5)		008°/-	7.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	BRECON VOR/DME (BCN)	514331.89N 0031546.92W							
(RNAV 5)		004°/-	3.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	DIKAS	514637N 0031533W							Intersection with UL18.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min		Controlling Unit/ Airspace Class/ Remarks
							↓	↑	
(RNAV 5)		004°/-	1.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	NAVOV	514831N 0031525W							
(RNAV 5)		004°/-	5.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	GOGIG	515330N 0031502W							Intersection with UP17.
(RNAV 5)		004°/-	1.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	TOPRO	515442N 0031457W							
(RNAV 5)		004°/-	2.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	TALGA	515730N 0031444W							
(RNAV 5)		004°/-	10.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	UMOLO	520803N 0031357W							
(RNAV 5)		004°/-	25.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	NITON	523312N 0031201W							Intersection with UP17.
(RNAV 5)		004°/-	10 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	OKTEM	524310N 0031115W							
(RNAV 5)		004°/-	5.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	NILGI	524835N 0031050W							
(RNAV 5)		005°/-	5.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	MONTY	525334N 0031026W							
(RNAV 5)		004°/-	5.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	GODPA	525900N 0031001W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	**Significant Point Coordinates**							
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
						↓	↑	
(RNAV 5)	005°/-	5.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ REXAM	530400N 0030937W							
(RNAV 5)	005°/-	3.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ IVLOD	530746N 0030919W							
(RNAV 5)	005°/-	15.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W							Intersection with UL10, UL151 and UN862.
(RNAV 5)	357°/ 177°	12.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ GUNTU	533537N 0030954W							
(RNAV 5)	357°/ 177°	8.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ BILVO	534352N 0031109W							**Southbound route only btn TLA and BILVO.** Intersection with UP6.
(RNAV 5)	-/177°	39.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between SUBUK and 5415N: Scottish Control (Prestwick) Freq: 135.530 (All Levels). Between 5415N and BILVO: London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ SUBUK	542248N 0031711W							
(RNAV 5)	-/177°	20.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	DEAN CROSS DME (DCS)	544318.88N 0032026.30W							Intersection with UL612.
(RNAV 5)		-/182°	20.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	ASRUS	550321N 0032045W							
(RNAV 5)		-/182°	17.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	UNURO	552111N 0032102W							
(RNAV 5)		-/182°	8.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (All Levels).
▵	TALLA VOR/DME (TLA)	552956.92N 0032110.20W							Extremity of UN864.

Route Remarks:

- This route to be flown on a limited basis only - Availability of UN864 btn DCS - WAL may be subject to MoD requirements at certain times - such requirements will normally be of short duration and will be announced by London Control (Swanwick) or Scottish Control (Prestwick) as appropriate. The alternative route will be 'as directed by ATC'.
- Flts intending to join or leave UN864, south of BHD, must avoid Danger Areas EG D003 and EG D004 when they are active and must, therefore, FPL via BHD. Flts joining UN864 are to expect ATC to route them tactically via N862/UN862, under radar control, until they are above FL 245. Flts leaving UN864 are to expect ATC to vector flts into N862/UN862 before descent to levels below FL 245.
- Due to ATC operational requirements, the cruising level allocation between SALCO and WAL and between TLA and DCS is inappropriate to the MAG Track.

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Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UN867 (RNP/RNAV)									
▵	GARMI	500000N 0012250W							**Eastbound (northbound) route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		004°/-	31.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345).
▵	KATHY	503114N 0012000W							Intersection with UL980.
(RNAV 5)		360°/-	8.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	ELDER	503948N 0012014W							Intersection with UM185.
(RNAV 5)		360°/-	17.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345).
△	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							Extremity of UN867.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between GARMI and KATHY** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.
- The use of UN867 may be interrupted when MoD (Navy) requires the activation of Danger Area EG D036 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM.
  There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. In this instance, non-availability of UN867 will be notified to GAT by 'Brest Control' and tfc will be routed to ORIST and UY110.
- Due to Brest ACC operational requirements, the cruising level allocation between GARMI and SAM is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP2 (RNP/RNAV)									
▵	NIGIT	511847N 0011015W							**Eastbound route only btn STU and NIGIT.** Extremity of UP2. Intersection with UL18.
(RNAV 5)		-/104°	15 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between 8 nm before NIGIT and NIGIT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305). Between BEDEK and 8 nm before NIGIT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 275); Freq: 134.750 (Below FL 275).
▵	BEDEK	512215N 0013331W							
(RNAV 5)		-/104°	19.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 275); Freq: 134.750 (Below FL 275).
▵	OKESI	512636N 0020342W							
(RNAV 5)		-/104°	46.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265).
▵	NUMPO	513636N 0031701W							Intersection with UL607.
(RNAV 5)		-/111°	69.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between 20 nm before NUMPO and NUMPO: London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335 to FL 265); Freq: 134.750 (Below FL 265). Between STU and 20 nm before NUMPO: London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min		Controlling Unit/ Airspace Class/ Remarks
							↓	↑	
△	STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W							Intersection with UL9 and UN26.
(RNAV 5)		270°/ 089°	44.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between STU and the eastern boundary of the BANBA CTA (515729N 0060611W): London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335). Between the eastern boundary of the BANBA CTA (515729N 0060611W) and BANBA: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
△	BANBA	515710N 0061421W							UIR Boundary. Extremity of UP2.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP4 (RNP/RNAV)									
▵	DIKAS	514637N 0031533W							**Westbound route only.** Extremity of UP4.
(RNAV 5)		273°/-	123.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between DIKAS and the eastern boundary of the BANBA CTA (514716N 0060242W): London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335). Between the eastern boundary of the BANBA CTA (514716N 0060242W) and EVRIN: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	EVRIN	514656N 0063348W							UIR Boundary. Extremity of UP4.
Route Remarks: • EG D117 and EG D118 activity may affect the minimum overflying level.									

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Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP6 (RNP/RNAV)									
▵	MOGLI	521830N 0001609W							**Westbound route only.** Extremity of UP6.
(RNAV 5)		312°/-	39.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	LESTA	524427N 0010419W							Intersection with UN601.
(RNAV 5)		318°/-	28.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	TUMTI	530440N 0013615W							
(RNAV 5)		317°/-	13.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	RODOL	531417N 0015143W							Intersection with UL28.
(RNAV 5)		304°/-	37.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	KOLID	533426N 0024521W							Intersection with UL70.
(RNAV 5)		304°/-	18.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	BILVO	534352N 0031109W							
(RNAV 5)		303°/-	12.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	TUPEM	535017N 0032855W							
(RNAV 5)		303°/-	14.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 125.680 (FL 255 and above); Freq: 123.775 (Below FL 255).
△	REMSI	535737N 0034932W							DRA Entry Fix. Extremity of UP6.

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Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP16 (RNP/RNAV)									
△	ANNET	493905N 0040005W							**Northbound route only between ANNET and NOKIN.** UIR Boundary. Extremity of UP16.
(RNAV 5)		011°/-	46.8 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	BABAX	502511N 0034817W							
(RNAV 5)		008°/-	18.2 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	DEVOM	504318N 0034519W							Intersection with UL149 and UN26.
(RNAV 5)		008°/-	36.5 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	KESUP	511932N 0033917W							Intersection with UM17.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		008°/-	25.1 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	UNBIG	514427N 0033502W							
(RNAV 5)		004°/-	29.1 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	IDOVO	521326N 0033304W							Intersection with UT7.
(RNAV 5)		004°/-	26.9 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	BERUL	524016N 0033113W							
(RNAV 5)		045°/-	18.3 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	MONTY	525334N 0031026W							Intersection with UN864.
(RNAV 5)		045°/-	15.3 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	NOKIN	530436N 0025258W							Intersection with UN862 and UP17.
(RNAV 5)		022°/ 202°	23.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	ASMIM	532646N 0023911W							
(RNAV 5)		022°/ 202°	11.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	CROFT	533737N 0023220W							Intersection with UL612 and UY70.
(RNAV 5)		022°/ 202°	25.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	RIBEL	540058N 0021723W							**Southbound route only btn CUTEL and RIBEL.** Intersection with UN601.
(RNAV 5)		-/217°	10.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	BEGAM	540925N 0020715W							
(RNAV 5)		-/192°	24.8 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	BINTI	543345N 0015945W							
(RNAV 5)		-/192°	22.0 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
△	RAPUM	545518N 0015258W							
(RNAV 5)		-/224°	9.5 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
△	NATEB	550218N 0014154W							Intersection with UP18.
(RNAV 5)		-/224°	34.4 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
△	ROBEM	552733N 0010114W							
(RNAV 5)		-/250°	24.5 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
△	SUSIS	553617N 0002102W							
(RNAV 5)		-/251°	21.8 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
△	BEVAM	554353N 0001503E							
(RNAV 5)		-/264°	72.5 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
△	CUTEL	555309N 0022228E							Extremity of UP16.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between ANNET and KESUP** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 1600 Fri to 0800 Mon Winter (Summer 1hr earlier).
- **CDR Category One and Three (CDR 1 and 3) between KESUP and NOKIN** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 1700 Fri to 0800 Mon (Winter), 1700 Fri to 0700 Mon (Summer) and from 1700 the day before a PH to 0700 the day after.
  CDR 2 and 3 at all other times.
- Due to ATC operational requirements, the cruising level allocation between ANNET and BEGAM is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP17 (RNP/RNAV)									
▵	NITON	523312N 0031201W							**Northbound route only btn NITON and NOKIN.** Extremity of UP17.
(RNAV 5)		022°/-	33.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 133.600 (All Levels).
▵	NOKIN	530436N 0025258W							Intersection with UN862 and UP16.
(RNAV 5)		036°/ 216°	12.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	KUXEM	531511N 0024047W							
(RNAV 5)		036°/ 216°	15.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	BARTN	532814N 0022541W							**Northbound route only btn BARTN and DIGBI.**
(RNAV 5)		037°/-	20.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	POLE HILL VOR/DME (POL)	534437.56N 0020611.98W							Intersection with UN601 and UP18.
(RNAV 5)		017°/-	21.0 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	IPSIR	540454N 0015657W							
(RNAV 5)		017°/-	5.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	OBOXA	541036N 0015420W							
(RNAV 5)		017°/-	22.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	ARSAT	543206N 0014419W							
(RNAV 5)		017°/-	16.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 285 and above); Freq: 133.800 (Below FL 285).
△	TIPTA	544813N 0013641W							Intersection with UM82.
(RNAV 5)		041°/-	30.0 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
△	DIGBI	551106N 0010301W							Extremity of UP17. Intersection with P15.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation between NITON and POL is inappropriate to the MAG Track.									

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP18 (RNP/RNAV)									
▵	POLE HILL VOR/DME (POL)	534437.56N 0020611.98W							Extremity of UP18.
(RNAV 5)		012°/ 192°	21.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	IDKOL	540543N 0015945W							
(RNAV 5)		012°/ 192°	3.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	ABKAT	540853N 0015847W							
(RNAV 5)		012°/ 192°	4.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	GASKO	541329N 0015721W							Intersection with UY250.
(RNAV 5)		012°/ 192°	11.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	UVAVU	542500N 0015346W							
(RNAV 5)		012°/ 192°	8.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 285 and above); Freq: 133.800 (Below FL 285).
▵	TILNI	543251N 0015118W							
(RNAV 5)		012°/ 192°	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	GIRLI	544241N 0014811W							
(RNAV 5)		012°/ 192°	20 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	NATEB	550218N 0014154W							Intersection with P15 and UL602.
(RNAV 5)		012°/ 192°	4.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	ELMUD	550656N 0014024W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		012°/ 192°	20.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	ALASO	552650N 0013354W							
(RNAV 5)		350°/ 170°	15.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	RITSI	554209N 0013925W							Intersection with UM982.
(RNAV 5)		350°/ 170°	12.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	MADAD	555447N 0014402W							Intersection with UP58.
(RNAV 5)		350°/ 170°	18.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	NEXUS	561243N 0015041W							Intersection with N96, UM90, and UP59. →
(RNAV 5)		350°/ 170°	17.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	BALID	562949N 0015707W							
(RNAV 5)		350°/ 170°	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	UPGET	563935N 0020050W							
(RNAV 5)		350°/ 170°	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	OKPAL	564921N 0020435W							
(RNAV 5)		350°/ 170°	6.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	RATPU	565532N 0020659W							
(RNAV 5)		350°/ 170°	23.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W							Extremity of UP18.

Route Remarks:

- Btn POL and ADN only avbl for EGPD arrivals when ATSOCAS below FL 245 is avbl on request from Swanwick Military or during hours of availability of P18.
- Due to operational requirements, cruising levels are inappropriate to the MAG TR btn POL and ALASO.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP24 (RNP/RNAV)									
▵	NEVIS	564143N 0043241W							Extremity of UP24. Intersection with UN601.
(RNAV 5)		314°/ 134°	32.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	ORSUM	570307N 0051741W							
(RNAV 5)		314°/ 133°	97.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	KUVOX	580459N 0073624W							DRA Entry, Exit and Intermediate Fix.
(RNAV 5)		313°/ 133°	75.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	NINEX	585120N 0093000W							Extremity of UP24. Intersection with UP59.

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Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP44 (RNP/RNAV)									
▵	ARTOV	515419N 0012533E							**Eastbound route only.** Extremity of UP44.
(RNAV 5)		061°/-	10.8 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	RATLO	515929N 0014055E							
(RNAV 5)		061°/-	11.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	PIXAM	520447N 0015650E							
(RNAV 5)		062°/-	29.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	SOMVA	521826N 0023838E							UIR Boundary. Extremity of UP44. Intersection with P155.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP49 (RNP/RNAV)									
▵	XAMAN	514705N 0021327E							**Westbound (northbound) route only.** UIR Boundary. Extremity of UP49.
(RNAV 5)		298°/-	14.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	IDESI	515352N 0015308E							Extremity of UP49. Intersection with UM20 and UY6.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP58 (RNP/RNAV)									
▵	PELET	543912N 0032552E							Extremity of UP58. Intersection with UL7 and UL74.
(RNAV 5)		295°/ 115°	20.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	RODSI	544756N 0025335E							
(RNAV 5)		295°/ 113°	99.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	GIVEM	552754N 0001453E							
(RNAV 5)		293°/ 113°	22.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	SUSIS	553617N 0002102W							
(RNAV 5)		293°/ 113°	50.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	MADAD	555447N 0014402W							Intersection with L983. →
(RNAV 5)		298°/ 117°	64.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	FINDO	562209N 0032749W							DRA Entry and Exit Fix. Extremity of UP58.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP59 (RNP/RNAV)									
▵	ASKAM	545747N 0031350E							Extremity of UP59. Intersection with UL7.
(RNAV 5)		295°/ 114°	90.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	NAVEL	553513N 0005031E							
(RNAV 5)		294°/ 114°	21.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	BEVAM	554353N 0001503E							
(RNAV 5)		294°/ 114°	29.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	GOMOT	555510N 0003239W							Intersection with L983.
(RNAV 5)		294°/ 113°	47.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	NEXUS	561243N 0015041W							Intersection with N96 and UM90.
(RNAV 5)		308°/ 127°	122.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	RUGID	572209N 0045355W							Intersection with UN610.
(RNAV 5)		307°/ 125°	171.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between RUGID and 0060000W: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 127.275 (Below FL 255). Between 0060000W and NINEX: Scottish Control (Prestwick) Freq: 132.730 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	NINEX	585120N 0093000W							DRA Entry Fix. NTFSR Entry Fix. Intersection with UN591, UN593 and UP24.
(RNAV 5)		305°/ 125°	17.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 132.730 (FL 255 and above); Freq: 127.275 (Below FL 255).
▵	BALIX	590000N 0100000W							Shanwick Boundary. Extremity of UP59.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP60 (RNP/RNAV)									
▵	VAXIT	563215N 0050000E							Extremity of UP60.
(RNAV 5)		302°/ 121°	40.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Copenhagen ACC.
▵	ARTEX	565341N 0035738E							
(RNAV 5)		301°/ 121°	15.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	LAMRO	570151N 0033309E							
(RNAV 5)		301°/ 120°	110.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	FORTY	575700N 0003545E							Intersection with UL7, UM86, UN583 and UP600.
(RNAV 5)		305°/ 123°	168 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	BAMRA	592600N 0035710W							Intersection with UN584, UN593 and UP61.
(RNAV 5)		286°/ 104°	171.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	AKIVO	595752N 0093000W							Intersection with UL619, UM86, UN601 and UN603.
(RNAV 5)		284°/ 104°	15.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	ATSIX	600000N 0100000W							Shanwick boundary. Extremity of UP60.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP61 (RNP/RNAV)									
▵	BAMRA	592600N 0035710W							Extremity of UP61. Intersection with UP60.
(RNAV 5)		303°/ 119°	71.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	KESEG	600058N 0060056W							Intersection with UN603.
(RNAV 5)		303°/ 121°	12.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	DOSUN	600703N 0062339W							Intersection with UN614.
(RNAV 5)		303°/ 122°	42.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	MODGO	602643N 0073955W							Intersection with UL612.
(RNAV 5)		302°/ 122°	36.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	DEVBI	604254N 0084610W							
(RNAV 5)		302°/ 121°	40.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Reykjavik ACC.
▵	RATSU	610000N 0100000W							Shanwick Boundary. Extremity of UP61.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP69 (RNP/RNAV)									
△	LULOX	502200N 0080000W							UIR Boundary. Extremity of UP69.
(RNAV 5)		087°/ 269°	174.3 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
△	DAWLY	503427N 0032750W							Extremity of UP69. Intersection with UL620 and UY91.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between LULOX and DAWLY** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP70 (RNP/RNAV)									
△	DAWLY	503427N 0032750W							Extremity of UP70. Intersection with UL620 and UY91.
(RNAV 5)		275°/ 093°	173.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
△	ARKIL	503928N 0080000W							UIR Boundary. Extremity of UP70.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between DAWLY and ARKIL** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP71 (RNP/RNAV)									
▵	DAWLY	503427N 0032750W							Extremity of UP71. Intersection with UL620 and UY91.
(RNAV 5)		282°/ 100°	174.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LESLU	510000N 0080000W							UIR Boundary. Extremity of UP71.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between DAWLY and LESLU** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP72 (RNP/RNAV)									
▵	DAWLY	503427N 0032750W							Extremity of UP72. Intersection with UL620 and UY91.
(RNAV 5)		288°/ 106°	160.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LEDGO	511424N 0073405W							UIR Boundary. Extremity of UP72.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between DAWLY and LEDGO** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP73 (RNP/RNAV)									
▵	DAWLY	503427N 0032750W							Extremity of UP73. Intersection with UL620 and UY91.
(RNAV 5)		295°/ 114°	148.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between DAWLY and the eastern boundary of the BANBA CTA (512542.42N 0064745.90W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (512542.42N 0064745.90W) and MOPAT: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	MOPAT	512955N 0070537W							UIR Boundary. Extremity of UP73.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between DAWLY and MOPAT** (ENR 1.1, paragraph 1.1.7 refers). Availability subject to SWMDA activity. **CDR 1 and 3** Mon-Thu 1700-0800 and from 1700 on Friday, or the day preceding a PH, to 0800 on Monday, or the day following a PH, Winter (Summer 1hr earlier).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP87 (RNP/RNAV)									
▵	BOLRO	500000N 0014129W							**Northbound (eastbound) route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		004°/-	15.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 134.440 (FL 345 and above); Freq: 127.825 (Below FL 345).
▵	DOMUT	501543N 0014009W							Extremity of UP87. Intersection with UL980.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.
- The use of UP87 may be interrupted when MoD (Navy) requires the activation of Danger Area EG D036 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. In this instance, non-availability of UP87 will be notified to GAT by 'Brest Control' and tfc will be routed to ORIST and UY110.
- Due to ATC operational requirements, the cruising level allocation is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP137 (RNP/RNAV)									
▵	SONDO	520506N 0014842E							**Eastbound route only.** Extremity of UP137. Intersection with UM183.
(RNAV 5)		-/112°	41.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	UMBAG	522052N 0004657E							Extremity of UP137.

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ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	Significant Point Coordinates							
(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP600 (RNP/RNAV)								
△ TURNBERRY VOR/DME (TRN)	551848.28N 0044701.89W							DRA Entry and Exit Fix. Extremity of UP600. Intersection with P600 and UM89.
(RNAV 5)	022°/ 202°	35.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Part of UP600 lies within the Hebrides UTA. Scottish Control (Prestwick) Freq: 135.530 (FL 260 and above); Freq: 124.825 (FL 250).
△ GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W							
(RNAV 5)	050°/ 231°	44.6 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Part of UP600 lies within the Hebrides UTA. Scottish Control (Prestwick) Freq: 135.530 (FL 260 and above); Freq: 124.825 (FL 250).
△ FINDO	562209N 0032749W							Intersection with UN610.
(RNAV 5)	038°/ 218°	5.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 135.530 (FL 260 and above); Freq: 124.825 (FL 250).
△ PERTH VOR (PTH)	562632.63N 0032206.96W							
(RNAV 5)	037°/ 217°	63.6 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
△ ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W							Intersection with UN581.
(RNAV 5)	068°/ 249°	35.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
△ LESNI	573233N 0011622W							
(RNAV 5)	069°/ 249°	24.9 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
△ BUDON	574207N 0003343W							
(RNAV 5)	069°/ 249°	30.0 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
△ OVDAN	575321N 0001818E							
(RNAV 5)	069°/ 250°	10 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	FORTY	575700N 0003545E							Intersection with UL7, UM86, UN583 and UZ105.
(RNAV 5)		070°/ 251°	75.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	KLONN	582324N 0024944E							UIR Boundary. For continuation see AIP Norway.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UP612 (RNP/RNAV)									
▵	PEPIN	595931N 0000054E							UIR Boundary. Continues as P612 (see AIP Norway).
(RNAV 5)		262°/ 082°	39.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 129.225 (FL 255 and above); Freq: 134.850 (Below FL 255).
▵	SUMBURGH VOR/DME (SUM)	595243.52N 0011711.52W							Intersection with UL7, UM125, UN584 and UN603.
(RNAV 5)		290°/ 108°	205.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between SUM and 00500W: Scottish Control (Prestwick) Freq: 129.225 (FL 255 and above); Freq: 134.850 (Below FL 255). Between 00500W and BESGA: Scottish Control (Prestwick) Freq: 133.680 (FL 255 and above); Freq: 128.675 (Below FL 255).
▵	BESGA	604723N 0075446W							Intersection with UL612.
(RNAV 5)		288°/ 107°	62.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Reykjavik ACC.
▵	RATSU	610000N 0100000W							Shanwick Boundary. Extremity of UP612.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UP620 (RNP/RNAV)									
▵	CAMBO	491730N 0055135W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		012°/ 192°	8.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.005 (FL 335 and above); Freq: 129.500 (Below FL 335).
▵	SUPAP	492602N 0054922W							Intersection with UN502.
(RNAV 5)		012°/ 192°	5.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.005 (FL 335 and above); Freq: 129.500 (Below FL 335).
▵	TALIG	493059N 0054804W							
(RNAV 5)		012°/ 192°	37.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LANDS END VOR/DME (LND)	500810.62N 0053812.96W							**Southbound route only between BANBA and LND.** Intersection with UL620, UM142 and UN160.
(RNAV 5)		-/171°	49.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	PAVLO	505605N 0055344W							
(RNAV 5)		-/171°	29.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	DOKEK	512518N 0060329W							Intersection with UN54.
(RNAV 5)		-/171°	32.6 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Between DOKEK and the eastern boundary of the BANBA CTA (513816N 0060752W): London Control (Swanwick) Freq: 132.950 (All Levels). Between the eastern boundary of the BANBA CTA (513816N 0060752W) and BANBA: ATS delegated to Shannon ACC. Shannon ACC Freq: 132.150 (All Levels).
▵	BANBA	515710N 0061421W							UIR Boundary. Extremity of UP620

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between BANBA and LND** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

  Availability subject to SWMDA activity.
- The portion south of LND may not be avbl at certain times due to military activity in the France UIR, details of which will be published.
- Due to ATC operational requirements, the cruising level allocation between CAMBO and LND is inappropriate to the MAG Track.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UQ3 (RNP/RNAV)									
▵	OCKHAM VOR/DME (OCK)	511818.17N 0002649.86W							**Northbound route only.** Extremity of UQ3.
(RNAV 5)		003°/-	30.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	HEMEL	514820N 0002510W							Extremity of UQ3. Intersection with UT420.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UQ4 (RNP/RNAV)									
▵	TRENT VOR/DME (TNT)	530314.23N 0014011.89W							**Westbound route only btn TNT and VABKA and only available for traffic departing EGNX.** Extremity of UQ4.
(RNAV 5)		293°/-	41.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	VABKA	531808N 0024410W							**Eastbound route only btn GIGTO and VABKA.** Intersection with UL8.
(RNAV 5)		-/112°	15.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W							
(RNAV 5)		-/115°	37.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	GIGTO	533801N 0040551W							Extremity of UQ4.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UQ41 (RNP/RNAV)									
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							Extremity of UQ41. Intersection with UL620.
(RNAV 5)		016°/ 196°	11 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	ETRID	510756N 0011615W							
(RNAV 5)		016°/ 196°	4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 129.425 (Below FL 305).
▵	PEPIS	511148N 0011437W							
(RNAV 5)		016°/ 196°	10.4 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	TABEN	512149N 0011022W							
(RNAV 5)		016°/ 196°	7.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	NORRY	512847N 0010724W							
(RNAV 5)		016°/ 196°	8.5 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	COWLY	513658N 0010354W							
(RNAV 5)		016°/ 196°	14.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	WESTCOTT NDB (WCO)	515110.51N 0005744.67W							Extremity of UQ41.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UQ70 (RNP/RNAV)									
▵	VABIK	511447N 0020000E							**Eastbound route only.** UIR Boundary. Extremity of UQ70.
(RNAV 5)		-/094°	19.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 315 and above); Freq: 134.900 (Below FL 315).
▵	MOKBU	511610N 0012914E							
(RNAV 5)		-/094°	16.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 134.900 (Below FL 305).
▵	ITVIP	511714N 0010312E							Intersection with UL10.
(RNAV 5)		-/093°	17.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	DETLING VOR/DME (DET)	511814.41N 0003550.19E							
(RNAV 5)		-/095°	21.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E							Intersection with UL9 and UL15.
(RNAV 5)		-/113°	38.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	BENSU	513444N 0005508W							
(RNAV 5)		-/113°	5.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	COWLY	513658N 0010354W							Extremity of UQ70.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UT7 (RNP/RNAV)									
▵	ADRUD	491014N 0062655W							UIR Boundary. For continuation see AIP France.
(RNAV 5)		031°/ 211°	19.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.005 (FL 335 and above); Freq: 129.500 (Below FL 335).
▵	PEMAK	492656N 0061305W							
(RNAV 5)		031°/ 211°	5.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Brest ACC. Brest ACC Freq: 133.005 (FL 335 and above); Freq: 129.500 (Below FL 335).
▵	AMPOP	493148N 0060903W							Intersection with UN58.
(RNAV 5)		031°/ 211°	17.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	MABUG	494705N 0055612W							Intersection with UN12 and UN34.
(RNAV 5)		031°/ 211°	24.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.950 (All Levels).
▵	LANDS END VOR/DME (LND)	500810.62N 0053812.96W							Intersection with UL620 and UN18.
(RNAV 5)		034°/ 214°	97.9 nm		FL 460 / FL 295	10 nm	even FL 430 / FL 300	odd FL 450 / FL 310	Class C. London Control (Swanwick) Freq; 132.950 (All Levels).
▵	ASRAX	513117N 0041643W							Intersection with UL180.
(RNAV 5)		034°/ 215°	50.1 nm		FL 460 / FL 295	10 nm	even FL 430 / FL 300	odd FL 450 / FL 310	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq 129.375 (Below FL 335).
▵	IDOVO	521326N 0033304W							Intersection with UP16.
(RNAV 5)		035°/ 215°	23.6 nm		FL 460 / FL 275	10 nm	even FL 430 / FL 280	odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq 133.600 (Below FL 335).
▵	NITON	523312N 0031201W							**Westbound (southbound) route only btn KARNO and NITON.** Intersection with UN864 and UP17.
(RNAV 5)		-/210°	23.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq 133.600 (Below FL 335).
▵	KARNO	525340N 0025354W							Extremity of UT7.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between NITON and LND** (ENR 1.1, paragraph 1.1.7 refers).
  Mon to Thurs 1800-0800; Fri 1800 to Mon 0800 and from 1800 the day before a PH to 0800 the day after. (Summer 1 hr earlier).

  Availability subject to SWMDA activity.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes
Significant Point Name	**Significant Point Coordinates**

(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
• The portion south of LND may not be avbl at certain times due to military activity in the France UIR, details of which will be published. • Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.								

Route Designator/ (RNP/RNAV Type)	Route Usage Notes
Significant Point Name	**Significant Point Coordinates**

(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UT29 (RNP/RNAV)								
△ LAMIX	531829N 0004056W							**Eastbound route only.** Extremity of UT29.
(RNAV 5)	066°/-	13.1 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ VEGUS	532401N 0002111W							
(RNAV 5)	066°/-	17.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△ LIBSO	533129N 0000536E							Extremity of UT29. Intersection with UL975.

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Route Designator/ (RNP/RNAV Type)	Route Usage Notes
Significant Point Name	**Significant Point Coordinates**

(RNP/RNAV Type)	Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UT71 (RNP/RNAV)								
△ VAPID	511514N 0010242W							**Eastbound route only.** Extremity of UT71. Intersection with UN859.
(RNAV 5)	-/179°	5.8 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
△ TEVSI	512101N 0010301W							
(RNAV 5)	-/179°	16.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
△ COWLY	513658N 0010354W							Extremity of UT71.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UT256 (RNP/RNAV)									
▵	DEAN CROSS DME (DCS)	544318.88N 0032026.30W							**Eastbound route only.** Extremity of UT256. Intersection with UL612, UN57 and UN864.
(RNAV 5)		-/136°	19.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 124.825 (Below FL 255).
▵	RIPNO	545632N 0034415W							
(RNAV 5)		-/136°	17.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 124.825 (Below FL 255).
▵	OSMEG	550826N 0040603W							
(RNAV 5)		-/136°	3.2 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 124.825 (Below FL 255).
▵	NEW GALLOWAY NDB (NGY)	551038.52N 0041007.02W							
(RNAV 5)		-/144°	32.3 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.530 (FL 255 and above); Freq: 124.825 (Below FL 255).
▵	NORBO	553545N 0044543W							Extremity of UT256.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UT420 (RNP/RNAV)									
▵	ALESO	503432N 0011332E							**Northbound route only.** UIR Boundary.
(RNAV 5)		315°/-	24.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.425 (All Levels).
▵	ROTNO	505126N 0004641E							
(RNAV 5)		315°/-	9.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.425 (All Levels).
▵	ETVAX	505807N 0003556E							
(RNAV 5)		315°/-	8.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 128.425 (Below FL 305).
▵	TIGER	510402N 0002622E							
(RNAV 5)		316°/-	22 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between TIGER and 10 nm before BIG: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 255); Freq: 128.425 (Below FL 255). Between 10 nm before BIG and BIG: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E							
(RNAV 5)		330°/-	33.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	HEMEL	514820N 0002510W							
(RNAV 5)		330°/-	9.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between HEMEL and 3 nm north of HEMEL: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305). Between 3 nm north of HEMEL and BUZAD: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 127.880 (Below FL 305 to FL 295); Freq: 127.105 (Below FL 295).
▵	BUZAD	515632N 0003308W							
(RNAV 5)		330°/-	21.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
▵	WELIN	521450N 0005108W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		330°/-	16.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
△	AKUPA	522912N 0010528W							Intersection with UY250.
(RNAV 5)		329°/-	5.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
△	TIMPO	523332N 0010950W							
(RNAV 5)		329°/-	10.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
△	ELVOS	524201N 0011825W							
(RNAV 5)		329°/-	25.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295).
△	TRENT VOR/DME (TNT)	530314.23N 0014011.89W							Extremity of UT420. Intersection with UL28.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UT421 (RNP/RNAV)									
▵	KUNAV	503054N 0010356E							**Northbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		322°/-	32.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between KUNAV and 10 nm before NIVKO: London Control (Swanwick) Freq: 128.425 (All Levels). Between 10 nm before NIVKO and NIVKO: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 128.425 (Below FL 305).
▵	NIVKO	505606N 0003228E							
(RNAV 5)		322°/-	10.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between NIVKO and 5 nm before BISRU: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 128.425 (Below FL 305). Between 5 nm before BISRU and BISRU: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 255); Freq: 128.425 (Below FL 255).
▵	BISRU	510418N 0002203E							
(RNAV 5)		322°/-	20 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between BISRU and 10 nm before BIG: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 255); Freq: 128.425 (Below FL 255). Between 10 nm before BIG and BIG: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E							Extremity of UT421. Intersection with UL9 and UT420.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY4 (RNP/RNAV)									
▵	ODROB	513915N 0015445E							**Westbound (southbound) route only.** Intersection with UY76. Extremity of UY4.
(RNAV 5)		-/206°	30.2 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. Between 15 nm south of SONOG and ODROB: London Control (Swanwick) Freq: 128.160 (All Levels). Between SONOG and 15 nm south of SONOG: London Control (Swanwick) Freq: 133.940 (All Levels).
▵	SONOG	520620N 0021610E							Extremity of UY4.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY6 (RNP/RNAV)									
▵	SUMUM	513814N 0020628E							**Westbound (northbound) route only.** UIR Boundary. Extremity of UY6.
(RNAV 5)		332°/-	2.7 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	TOSVA	514037N 0020426E							
(RNAV 5)		332°/-	15 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	IDESI	515352N 0015308E							Intersection with UM20.
(RNAV 5)		332°/-	29.8 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between IDESI and 10 nm north of IDESI: London Control (Swanwick) Freq: 128.160 (All Levels). Between 10 nm north of IDESI and BANEM: London Control (Swanwick) Freq: 133.940 (All Levels).
▵	BANEM	522008N 0013019E							Extremity of UY6.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UY8 (RNP/RNAV)									
▵	KUNAV	503054N 0010356E							**Westbound route only btn KUNAV and GWC.** UIR Boundary. Extremity of UY8.
(RNAV 5)		279°/-	12.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 128.425 (All Levels).
▵	BANVA	503242N 0004512E							Intersection with UM733.
(RNAV 5)		279°/-	15.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 135.050 (Below FL 305).
▵	WAFFU	503457N 0002059E							
(RNAV 5)		292°/-	45.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 135.050 (Below FL 305).
▵	GOODWOOD VOR/DME (GWC)	505118.78N 0004524.25W							Intersection with UN859.
(RNAV 5)		286°/ 106°	23.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 305 and above); Freq: 134.440 (Below FL 305).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W							Extremity of UY8.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UY47 (RNP/RNAV)									
▵	DRAKE	501234N 0000434W							**Southbound route only.** Extremity of UY47. Intersection with UL151.
(RNAV 5)		-/193°	14.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	BENBO	502705N 0000037E							Intersection with UL612.
(RNAV 5)		-/193°	19.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.840 (FL 295 and above); Freq: 135.050 (Below FL 295).
△	SEAFORD VOR/DME (SFD)	504538.49N 0000718.89E							Extremity of UY47.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY53 (RNP/RNAV)									
△	NUGRA	530146N 0021814W							**Eastbound route only btn EKLAD and NUGRA.** Extremity of UY53.
(RNAV 5)		-/126°	11.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	NANTI	530815N 0023401W							
(RNAV 5)		-/129°	3.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	MOGTA	531008N 0023810W							
(RNAV 5)		-/129°	8.5 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	EKLAD	531514N 0024929W							
(RNAV 5)		309°/ 128°	13.9 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W							Extremity of UY53. Intersection with UL10.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY70 (RNP/RNAV)									
▵	RAVLO	525501N 0030854E							**Westbound route only.** UIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)		282°/-	7.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	KUBAX	525634N 0025713E							
(RNAV 5)		282°/-	12.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	BEKMO	525910N 0023710E							
(RNAV 5)		282°/-	4.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	SONOL	530005N 0023000E							
(RNAV 5)		282°/-	15 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	BODSO	530308N 0020541E							
(RNAV 5)		281°/-	55.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	SUPEL	531340N 0003528E							
(RNAV 5)		281°/-	20.5 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	OTBED	531717N 0000155E							Intersection with UL60.
(RNAV 5)		297°/-	15.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	VEGUS	532401N 0002111W							
(RNAV 5)		297°/-	9.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	SIVBU	532755N 0003444W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min		Controlling Unit/ Airspace Class/ Remarks
							↓	↑	
(RNAV 5)		296°/-	8.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	GIPLO	533131N 0004723W							
(RNAV 5)		296°/-	11.6 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	GOLES	533629N 0010500W							Intersection with UL975.
(RNAV 5)		284°/-	10.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	BATLI	533845N 0012137W							Intersection with UY250.
(RNAV 5)		284°/-	27.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	POLE HILL VOR/DME (POL)	534437.56N 0020611.98W							Intersection with UN601.
(RNAV 5)		247°/-	17.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	CROFT	533737N 0023220W							Intersection with UP16.
(RNAV 5)		249°/-	8.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△	KOLID	533426N 0024521W							Extremity of UY70. Intersection with UL70.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY76 (RNP/RNAV)									
▵	DETLING VOR/DME (DET)	511814.41N 0003550.19E							**Westbound (southbound) route only.** Extremity of UY76.
(RNAV 5)		-/235°	15.1 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 255); Freq: 134.900 (Below FL 255).
▵	TANET	512658N 0005532E							
(RNAV 5)		-/235°	9.7 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	KOPUL	513232N 0010814E							
(RNAV 5)		-/261°	18.0 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	ERING	513526N 0013643E							
(RNAV 5)		-/251°	11.9 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	ODROB	513915N 0015445E							
(RNAV 5)		-/251°	9.8 nm		FL 460 / FL 245	10 nm		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 128.160 (All Levels).
▵	RIMBU	514222N 0020943E							UIR Boundary. For continuation see AIP Netherlands.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY91 (RNP/RNAV)									
△	BIGNO	500000N 0024930W							**Southbound route only.** Extremity of UY91.
(RNAV 5)		-/154°	29.4 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	NOTRO	502612N 0031021W							
(RNAV 5)		-/128°	13.9 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 128.815 (FL 305 and above); Freq: 126.075 (Below FL 305).
△	DAWLY	503427N 0032750W							Extremity of UY91.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 1600 Fri to 0745 Mon Winter (Summer 1hr earlier).

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UY110 (RNP/RNAV)									
▵	ORIST	500000N 0015042W							**Northbound route only.** UIR Boundary. For continuation see AIP France.
(RNAV 5)		006°/-	8.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 129.425 (FL 345 and above); Freq: 127.825 (Below FL 345).
▵	VEXEN	500822N 0014934W							Intersection with UL980.
(RNAV 5)		006°/-	9.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 129.425 (FL 345 and above); Freq: 127.825 (Below FL 345).
▵	ASPEN	501734N 0014820W							Extremity of UY110.
Route Remarks: • Due to Brest ACC operational requirements, the cruising level allocation for the entire route is inappropriate to the MAG Track.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UY124 (RNP/RNAV)									
▵	MOGTA	531008N 0023810W							**Eastbound route only.** Extremity of UY124. Intersection with UY53.
(RNAV 5)		-/096°	20.1 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	AMPIT	531139N 0031133W							Intersection with UL15.
(RNAV 5)		-/096°	15.9 nm		FL 460 / FL 245	12 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	DOLOP	531251N 0033751W							
(RNAV 5)		-/096°	12.9 nm		FL 460 / FL 245	12 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
▵	BAGIT	531345N 0035918W							

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes							
Significant Point Name	**Significant Point Coordinates**							
(RNP/RNAV Type)	**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
						↓	↑	
(RNAV 5)	-/096°	13.2 nm		FL 460 / FL 245	12 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ PETUK	531436N 0042114W							
(RNAV 5)	-/096°	13.9 nm		FL 460 / FL 245	12 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.050 (Below FL 285).
△ LUTIP	531522N 0044416W							
(RNAV 5)	-/096°	15.9 nm		FL 460 / FL 245	12 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ LOMVO	531616N 0051046W							
(RNAV 5)	-/095°	11.6 nm		FL 460 / FL 245	12 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
△ DEXEN	531649N 0053000W							Extremity of UY124. FIR Boundary.

Route Remarks:

- **CDR Category One, Two and Three (CDR 1, 2 and 3)** (ENR 1.1, paragraph 1.1.7 refers).

  (i) FL 310 and above:

  CDR 1 H24.

  (ii) FL 300 and below:

  CDR 1 Mon-Thu 1800-0800 Winter (Summer 1 hr earlier) and from 1700 (Winter and Summer) on Friday or the day preceding a PH to 0800 (Winter), 0700 (Summer) on Monday or the day following a PH.
  CDR 2 Mon-Thu 0800-1800, Fri 0800-1700 (Winter); Mon-Fri 0700-1700 (Summer).

  The route may be closed tactically with 2 hrs notice in which case routings will be via LIFFY UL975.

- Between DEXEN and AMPIT UY124 is 12 nm wide with 7 nm north of the CL and 5 nm south of the CL.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY250 (RNP/RNAV)									
▵	DAVENTRY VOR/DME (DTY)	521048.51N 0010649.64W							**Northbound route only btn DTY and MAMUL.** Extremity of UY250.
(RNAV 5)		004°/-	18.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 285 and above); Freq: 127.105 (Below FL 285).
▵	AKUPA	522912N 0010528W							Intersection with UT420.
(RNAV 5)		004°/-	15.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 127.880 (FL 285 and above); Freq: 127.105 (Below FL 285).
▵	LESTA	524427N 0010419W							Intersection with UN601.
(RNAV 5)		351°/-	41.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260		Class C. Between LESTA and 15 nm from MAMUL: London Control (Swanwick) Freq: 127.880 (FL 285 and above); Freq: 127.105 (Below FL 285). Between 15 nm from MAMUL and MAMUL: London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	MAMUL	532505N 0011648W							Intersection with UL603.
(RNAV 5)		357°/ 177°	10.2 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	UPTON	533513N 0011803W							
(RNAV 5)		330°/ 150°	4.1 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	BATLI	533845N 0012137W							
(RNAV 5)		330°/ 150°	5.0 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	RIMTO	534303N 0012559W							
(RNAV 5)		330°/ 150°	32.3 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above);

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
									Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	OBOXA	541036N 0015420W							Intersection with UP17.
(RNAV 5)		330°/ 150°	3.4 nm		FL 460 / FL 245	10 nm	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	GASKO	541329N 0015721W							Extremity of UY250. Intersection with UP18.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation between DTY and LESTA is inappropriate to the MAG Track.									

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UY311 (RNP/RNAV)									
△	DOVER VOR/DME (DVR)	510945.44N 0012132.72E							**Eastbound route only.** Extremity of UY311. Intersection with UL9.
(RNAV 5)		-/090°	33.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 134.900 (Below FL 305).
△	ODVIK	510957N 0002909E							Extremity of UY311.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**							
Significant Point Name		**Significant Point Coordinates**							
(RNP/RNAV Type)		**Track MAG ↓/↑**	**Dist**	**COP**	**Upper limit/ lower limit**	**Lateral limits**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UY312 (RNP/RNAV)									
▵	DOVER VOR/DME (DVR)	510945.44N 0012132.72E							**Eastbound route only.** Extremity of UY312. Intersection with UL9.
(RNAV 5)		-/097°	33.0 nm		FL 460 / FL 245	10 nm		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 134.900 (Below FL 305).
▵	ADMAG	511402N 0002934E							Extremity of UY312.

ENR 3.2 UPPER ATS ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UZ105 (RNP/RNAV)									
△	FORTY	575700N 0003545E							Extremity of UZ105. Intersection with UL7, UN583 and UP600.
(RNAV 5)		045°/ 225°	70.7 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
△	RIGVU	584736N 0020918E							UIR Boundary. Continues as Z105 (see AIP Norway).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes							
Significant Point Name		Significant Point Coordinates							
(RNP/RNAV Type)		Track MAG ↓/↑	Dist	COP	Upper limit/ lower limit	Lateral limits	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UZ107 (RNP/RNAV)									
△	ABERDEEN VOR/DME (ADN)	571837.62N 0021601.95W							Extremity of UZ107. Intersection with UN581, UN591 and UP600.
(RNAV 5)		051°/ 233°	164.2 nm		FL 460 / FL 245	10 nm	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
△	BEREP	590209N 0014420E							UIR Boundary. Continues as Z107 and intersects with Z309 (see AIP Norway).

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ENR 3.3 AREA NAVIGATION ROUTES

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L17 (RNP/RNAV)							
△	MOLIX	524919N 0030407E					**Eastbound route only.** FIR Boundary. For continuation see AIP Netherlands. Intersection with L19 (See AIP Netherlands).
(RNAV 5)		-/111°	22.2 nm	FL 245 / FL 175		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
△	RAMID	525728N 0023000E					
(RNAV 5)		-/111°	15.8 nm	FL 245 / FL 175		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) Freq: 128.125 (All Levels).
△	BODSO	530308N 0020541E					Extremity of L17.
Route Remarks: • See also ENR 1.1, paragraph 1.1.3.							

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L46 (RNP/RNAV)							
△	NALAX	532900N 0002406E					**Westbound route only.** Extremity of L46.
(RNAV 5)		283°/-	11.3 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	LIBSO	533129N 0000536E					
(RNAV 5)		286°/-	36.1 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
△	MITSO	533907N 0005338W					
(RNAV 5)		283°/-	19.6 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Between MITSO and 10 nm before RIMTO: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285). Between 10 nm before RIMTO and RIMTO: London Control (Swanwick)

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
							Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	RIMTO	534303N 0012559W					Intersection with UY250.
(RNAV 5)		283°/-	5.4 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	HALIF	534406N 0013450W					
(RNAV 5)		282°/-	69.1 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 118.780 (Below FL 285).
▵	GETNO	535548N 0032947W					
(RNAV 5)		281°/-	11.8 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 125.680 (All Levels).
▵	REMSI	535737N 0034932W					DRA Entry Fix. Extremity of L46.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
L74 (RNP/RNAV)							
▵	TOPPA	532409N 0033341E					**Eastbound (southbound) route only.** FIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)		-/172°	12.2 nm	FL 245 / FL 175		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	LARDI	533616N 0033057E					
(RNAV 5)		-/186°	34.6 nm	FL 245 / FL 195		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	SOTUN	541036N 0033737E					
(RNAV 5)		-/186°	7.8 nm	FL 245 / FL 195		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	VENAS	541820N 0033908E					
(RNAV 5)		-/159°	6.8 nm	FL 245 / FL 195		odd FL 230 / FL 210	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	GOLVO	542441N 0033508E					Extremity of L74.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.
- Due to ATC operational requirements, the cruising level allocation between VENAS and LARDI is inappropriate to the MAG Track.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
UL74 (RNP/RNAV)							
▵	TOPPA	532409N 0033341E					**Eastbound (southbound) route only.** UIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)		-/172°	12.2 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	LARDI	533616N 0033057E					
(RNAV 5)		-/186°	34.6 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	SOTUN	541036N 0033737E					
(RNAV 5)		-/186°	7.8 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	VENAS	541820N 0033908E					Intersection with UL7.
(RNAV 5)		-/159°	6.8 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	GOLVO	542441N 0033508E					
(RNAV 5)		-/159°	15.5 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	PELET	543912N 0032552E					Extremity of UL74.

Route Remarks:

- Dual designation with UL7 btn PELET and VENAS.
- Due to ATC operational requirements, the cruising level allocation between VENAS and LARDI is inappropriate to the MAG Track.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
L90 (RNP/RNAV)							
▵	DOLAS	525843N 0010003E					Extremity of L90. Intersection with UL603.
(RNAV 5)		316°/136°	21.1 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	SUPEL	531340N 0003528E					
(RNAV 5)		316°/138°	25.3 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	LIBSO	533129N 0000536E					
(RNAV 5)		329°/147°	12.6 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285). Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵	OTTRINGHAM VOR/DME (OTR)	534153.57N 0000613.45W					Extremity of L90. Intersection with UL602.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
L602 (RNP/RNAV)							
▵	MIMVA	530603N 0031813E					**Westbound route only btn MIMVA and EMLON.** FIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)		282°/-	7.2 nm	FL 245 / FL 175	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	TOLSA	530737N 0030629E					
(RNAV 5)		282°/-	12.4 nm	FL 245 / FL 175	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	OKAMA	531015N 0024622E					
(RNAV 5)		282°/-	10.1 nm	FL 245 / FL 175	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	EMLON	531220N 0023000E					Extremity of partition of L602.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)	Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
			- / -			**ROUTE BREAK - THIS AIRWAY IS NOT CONTINUOUS.**
▵ GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W					DRA Entry and Exit Fix. Extremity of partition of L602. Intersection with L983, UL602 and (U)L612.
(RNAV 5)	299°/118°	13.0 nm	FL 255 / 5500 ft ALT	even FL 240 / FL 80	odd FL 250 / FL 70	FL 255/FL 195 Class C, FL 195/Alt 5500 ft Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ CLYDE	555748N 0044732W					
(RNAV 5)	298°/118°	12.0 nm	FL 255 / 5500 ft ALT	even FL 240 / FL 60	odd FL 250 / FL 70	FL 255/FL 195 Class C, FL 195/Alt 5500 ft Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ FYNER	560256N 0050655W					
(RNAV 5)	298°/118°	26.8 nm	FL 255 / 5500 ft ALT	even FL 240 / FL 60	odd FL 250 / FL 70	FL 255/FL 195 Class C, FL 195/Alt 5500 ft Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ BRUCE	561411N 0055028W					DRA Arrival and Departure Transition Fix. Intersection with Y958.
(RNAV 5)	298°/118°	37.8 nm	FL 255 / FL 115	even FL 240 / FL 120	odd FL 250 / FL 130	FL 255/FL 195 Class C, FL 195/FL 115 Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵ TIREE VOR/DME (TIR)	562935.56N 0065232.12W					Extremity of L602.

Route Remarks:

- The portion of L602 between GOW and TIR is for use by traffic climbing to or descending from the Shanwick OCA Boundary and the NOTA and below FL 195 is Class E and TMZ and extends 5 nm either side of the centre-line. However, within the confines of the Scottish TMA, L602 assumes the airspace classification of the Scottish TMA.
- ***Note:*** *Transponder carriage and operation required within that part of L602 notified as Class E and TMZ.*
- See also ENR 1.1, paragraph 1.1.3.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)	**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
UL602 (RNP/RNAV)						
▵ MIMVA	530603N 0031813E					**Westbound route only btn MIMVA and OTR.** UIR Boundary. For continuation see AIP Netherlands.
(RNAV 5)	282°/-	7.2 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵ TOLSA	530737N 0030629E					
(RNAV 5)	282°/-	12.4 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵ OKAMA	531015N 0024622E					
(RNAV 5)	282°/-	10.1 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵ EMLON	531220N 0023000E					Intersection with M79.
(RNAV 5)	282°/-	36.3 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵ LEGRO	531935N 0013046E					
(RNAV 5)	284°/-	41 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Between LEGRO and 0010000E: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335). Between 0010000E and NALAX: London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵ NALAX	532900N 0002406E					Intersection with L46.
(RNAV 5)	306°/-	22.2 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵ OTTRINGHAM VOR/DME (OTR)	534153.57N 0000613.45W					Intersection with L90.
(RNAV 5)	327°/146°	24.1 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335 to FL 285); Scottish Control (Prestwick) Freq: 133.800 (Below FL 285).
▵ UMBEL	540144N 0002907W					

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		326°/146°	34.0 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 133.800 (Below FL 255).
△	RIKUD	542940N 0010208W					
(RNAV 5)		326°/146°	40.0 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
△	NATEB	550218N 0014154W					Intersection with N97, P15, UN610 and UP18.
(RNAV 5)		298°/118°	63.2 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between NATEB and 0020000W: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255). Between 0020000W and TLA: Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.500 (Below FL 255).
△	TALLA VOR/DME (TLA)	552956.92N 0032110.20W					Intersection with UN552.
(RNAV 5)		304°/123°	43.3 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 126.300 (Below FL 255).
△	GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W					DRA Entry and Exit Fix. Extremity of UL602. Intersection with L602 and UL612.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
L983 (RNP/RNAV)							
△	GLASGOW VOR/DME (GOW)	555213.81N 0042644.61W					DRA Entry and Exit Fix. Extremity of L983.
(RNAV 5)		090°/271°	75.7 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.825 (Below FL 255).
△	SAINT ABBS VOR/DME (SAB)	555427.04N 0021222.81W					Intersection with UM89 and UN562.
(RNAV 5)		090°/271°	16.0 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
△	MADAD	555447N 0014402W					Intersection with UP58.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		091°/271°	40.2 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	GOMOT	555510N 0003239W					Intersection with UP59.
(RNAV 5)		091°/272°	98.6 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	CUTEL	555309N 0022228E					Intersection with P5, P15, T55, UL619 and UP16.
(RNAV 5)		087°/267°	38.1 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	SURAT	555456N 0033000E					Intersection with UM869.
(RNAV 5)		087°/268°	50.6 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	PETIL	555620N 0050000E					UIR Boundary. For continuation see AIP Denmark.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
L989 (RNP/RNAV)							
▵	BODSO	530308N 0020541E					**Westbound route only.** Extremity of L989. Intersection with Y70.
(RNAV 5)		-/257°	15.1 nm	FL 245 / FL 175		even FL 240 / FL 180	FL 245/FL 195 Class C, FL 195/FL 175 Class A. London Control (Swanwick) Freq: 128.125 (All Levels).
▵	SOPEK	530632N 0023000E					Extremity of L989.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
M16 (RNP/RNAV)							
▵	DOLAS	525843N 0010003E					**Eastbound route only.** Extremity of M16. Intersection with UL603.
(RNAV 5)		-/102°	68.7 nm	FL 460 / FL 285		odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	NAPEX	531223N 0005140W					
(RNAV 5)		-/101°	28.2 nm	FL 460 / FL 285		odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335).
▵	XAPOS	531729N 0013751W					
(RNAV 5)		-/101°	23.1 nm	FL 460 / FL 285		odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 133.705 (Below FL 335).
▵	MANCHESTER VOR/DME (MCT)	532125.29N 0021544.24W					
(RNAV 5)		-/095°	31.4 nm	FL 460 / FL 285		odd FL 450 / FL 290	Class C. London Control (Swanwick) Freq: 132.860 (FL 335 and above); Freq: 135.580 (Below FL 335).
▵	WALLASEY VOR/DME (WAL)	532330.97N 0030804.06W					Extremity of M16.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
M79 (RNP/RNAV)							
▵	EMLON	531220N 0023000E					**Westbound route only.** Extremity of M79.
(RNAV 5)		302°/-	77.8 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	ROVNI	535313N 0003901E					
(RNAV 5)		301°/-	16.7 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	TENDO	540144N 0001447E					
(RNAV 5)		313°/-	91.1 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
▵	NATEB	550218N 0014154W					Extremity of M79. Intersection with UL602, UN610 and UP18.
Route Remarks: • **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.							

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
M83 (RNP/RNAV)							
▵	PETIL	555620N 0050000E					UIR Boundary. Extremity of M83. Intersection with L983 (see AIP Denmark).
(RNAV 5)		285°/105°	52.4 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. ATS delegated to Copenhagen ACC.
▵	REKNA	561029N 0033000E					
(RNAV 5)		280°/098°	92.1 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	RIVOT	562429N 0004637E					Intersection with UL619.
(RNAV 5)		290°/108°	195.5 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between RIVOT and 0020000W: Scottish Control (Prestwick) Freq: 134.775 (All Levels). Between 0020000W and RUGID: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	RUGID	572209N 0045355W					DRA Entry and Exit Fix. Extremity of M83.
Route Remarks: • **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.							

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
M91 (RNP/RNAV)							
▵	IRKUN	505516N 0012800E					**Westbound route only btn IRKUN and LYD.** FIR Boundary. Extremity of M91.
(RNAV 5)		282°/-	22.8 nm	FL 245 / FL 75	even FL 240 / FL 80		FL 245/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 135.325 (Below FL 195).
▵	LYDD VOR/DME (LYD)	505958.87N 0005243.18E					**Eastbound route only btn EKNIV and LYD.**
(RNAV 5)		-/157°	16.2 nm	FL 245 / FL 85		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵	EMKAD	511450N 0004234E					
(RNAV 5)		-/162°	10.1 nm	FL 245 / FL 85		odd FL 230 / FL 90	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵	EKNIV	512426N 0003731E					Extremity of M91.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
M604 (RNP/RNAV)							
▵	ARTOV	515419N 0012533E					**Eastbound route only.** Extremity of M604.
(RNAV 5)		033°/-	14.2 nm	FL 460 / FL 105	odd FL 450 / FL 110		FL 460/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	OTBAP	520612N 0013800E					
(RNAV 5)		033°/-	16.1 nm	FL 460 / FL 195	odd FL 450 / FL 210		Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	ABEDA	521940N 0015216E					

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		033°/-	15.5 nm	FL 460 / FL 195	odd FL 450 / FL 210		Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	LEDBO	523235N 0020608E					
(RNAV 5)		040°/-	20.5 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	ENITO	524805N 0022803E					
(RNAV 5)		026°/-	12.4 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	BEKMO	525910N 0023710E					
(RNAV 5)		026°/-	12.4 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	OKAMA	531015N 0024622E					
(RNAV 5)		026°/-	7.8 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	GIVPO	531710N 0025209E					
(RNAV 5)		026°/-	25.4 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ROKAN	533948N 0031120E					
(RNAV 5)		022°/-	41.9 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	VENAS	541820N 0033908E					
(RNAV 5)		027°/-	37.8 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	LARGA	545150N 0040912E					Intersection with P144 and Z278.
(RNAV 5)		032°/-	31.6 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. ATS delegated to Copenhagen ACC.
▵	INPUT	551818N 0043905E					
(RNAV 5)		032°/-	21.7 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. ATS delegated to Copenhagen ACC.
▵	INBOB	553625N 0050000E					UIR Boundary. For continuation see AIP Denmark.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
M981 (RNP/RNAV)							
△	GODOS	531457N 0032547E					**Westbound route only.** FIR Boundary. Extremity of M981.
(RNAV 5)		302°/-	18.3 nm	FL 245 / FL 175	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
△	ROXAT	532449N 0030000E					Extremity of M981.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.
- See also ENR 1.1, paragraph 1.1.3.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
UM981 (RNP/RNAV)							
△	GODOS	531457N 0032547E					**Westbound route only.** UIR Boundary. Extremity of UM981.
(RNAV 5)		302°/-	18.3 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
△	ROXAT	532449N 0030000E					
(RNAV 5)		302°/-	192.1 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Between ROXAT and 543000N: Scottish Control (Prestwick) Freq: 121.325 (All Levels). Between 543000N and NATEB: Scottish Control (Prestwick) Freq: 126.925 (All Levels).
△	NATEB	550218N 0014154W					Extremity of UM981. Intersection with UL602.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
M982 (RNP/RNAV)							
▵	TOPPA	532409N 0033341E					**Eastbound route only.** FIR Boundary. Extremity of M982. Intersection with L74 (see AIP Netherlands).
(RNAV 5)		-/139°	20.6 nm	FL 245 / FL 175		odd FL 230 / FL 190	FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	ROKAN	533948N 0031120E					Extremity of M982.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.
- See also ENR 1.1, paragraph 1.1.3.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
UM982 (RNP/RNAV)							
▵	TOPPA	532409N 0033341E					**Eastbound route only btn ROKAN and TOPPA.** UIR Boundary. Extremity of UM982. Intersection with UL74 (see AIP Netherlands).
(RNAV 5)		-/139°	20.6 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ROKAN	533948N 0031120E					
(RNAV 5)		308°/126°	164.2 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ERLOT	551714N 0003506W					
(RNAV 5)		306°/126°	18.1 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	ROBEM	552733N 0010114W					
(RNAV 5)		306°/125°	26.2 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
▵	RITSI	554209N 0013925W					Intersection with UP18.
(RNAV 5)		305°/125°	22.3 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
△	SAINT ABBS VOR/DME (SAB)	555427.04N 0021222.81W					
(RNAV 5)		306°/125°	50.5 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
△	FINDO	562209N 0032749W					Extremity of UM982. Intersection with UL613 and UN610.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N96 (RNP/RNAV)							
▵	ROKAN	533948N 0031120E					Extremity of N96. Intersection with UM982.
(RNAV 5)		313°/131°	231.9 nm	FL 460 / FL 245	even FL 430 / FL 260	odd FL 450 / FL 250	Class C. Between ROKAN and abm ERLOT: Scottish Control (Prestwick) Freq: 121.325 (All Levels). Between abm ERLOT and NEXUS: Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	NEXUS	561243N 0015041W					Extremity of N96. Intersection with UP18 and UP59.
Route Remarks:							
• **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.							

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
N97 (RNP/RNAV)							
▵	ROKAN	533948N 0031120E					**Eastbound route only.** Extremity of N97. Intersection with UM982.
(RNAV 5)		-/116°	76.3 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Between ROKAN and abm UMBEL: Scottish Control (Prestwick) Freq: 121.325 (All Levels). Between abm UMBEL and NEPSO: Scottish Control (Prestwick) Freq: 126.925 (All Levels).
▵	NEPSO	541417N 0011611E					
(RNAV 5)		-/115°	114.1 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. Scottish Control (Prestwick) Freq: 126.925 (All Levels).
▵	NATEB	550218N 0014154W					Extremity of N97. Intersection with UL602.
Route Remarks:							
• **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers). **CDR 1 and 3** H24.							

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N552 (RNP/RNAV)							
△	RUBEX	551912N 0065607W					FIR Boundary. Extremity of N552.
(RNAV 5)		085°/265°	44.5 nm	FL 255 / FL 195	odd FL 250 / FL 210	even FL 240 / FL 200	Class C. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
△	MACHRIHANISH DME (MAC)	552548.08N 0053901.49W					DRA Arrival and Departure Transition Fix. Extremity of N552. Intersection with N562.
Route Remarks: • For use by tfc climbing to or descending from the NOTA. • See also ENR 1.1, paragraph 1.1.3.							

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
N562 (RNP/RNAV)							
△	TURNBERRY VOR/DME (TRN)	551848.28N 0044701.89W					Extremity of N562.
(RNAV 5)		287°/106°	7.6 nm	FL 255 / FL 105	even FL 240 / FL 120	odd FL 250 / FL 110	FL 255/FL 195 Class C, FL 195/FL 105 Class E and TMZ. **(See Note)** Within the confines of the Scottish TMA, N562 assumes the airspace classification of the Scottish TMA. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
△	HERON	552035N 0050000W					
(RNAV 5)		286°/106°	22.9 nm	FL 255 / FL 105	even FL 240 / FL 120	odd FL 250 / FL 110	FL 255/FL 195 Class C, FL 195/FL 105 Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
△	MACHRIHANISH DME (MAC)	552548.08N 0053901.49W					DRA Arrival and Departure Transition Fix. Intersection with N552.
(RNAV 5)		288°/107°	71.8 nm	FL 255 / FL 195	even FL 240 / FL 200	odd FL 250 / FL 210	Class C. Scottish Control (Prestwick) Freq: 127.275 (All Levels).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
▵	DONIB	554309N 0074144W					
(RNAV 5)		287°/106°	79.7 nm	FL 255 / FL 195	even FL 240 / FL 200	odd FL 250 / FL 210	Class C. Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵	MIMKU	560000N 0100000W					FIR Boundary. Extremity of N562.

Route Remarks:

- The portion of N562 between HERON and MAC below FL 195 is Class E and TMZ and extends 5 nm either side of the centre-line.
- For use by tfc climbing to or descending from the Shanwick OCA Boundary and the NOTA.
- See also ENR 1.1, paragraph 1.1.3.
- ***Note:*** *Transponder carriage and operation required within that part of N562 notified as Class E and TMZ.*

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
N866 (RNP/RNAV)							
▵	LORKU	495618N 0022216W					**Westbound route only btn IPRIL and LORKU.** FIR/UIR Boundary. Continues as UN866 (see AIP France).
(RNAV 5)		-/186°	20.5 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	RUBMI	501646N 0021943W					
(RNAV 5)		-/199°	14.2 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	ROKSI	503013N 0021251W					
(RNAV 5)		-/199°	10.9 nm	FL 460 / FL 165		odd FL 450 / FL 170	FL 460/FL 195 Class C, FL 195/FL 165 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	BILNI	504031N 0020733W					
(RNAV 5)		-/242°	34.1 nm	FL 460 / FL 155		odd FL 450 / FL 170	FL 460/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 129.425 (All Levels).
▵	SOUTHAMPTON VOR/DME (SAM)	505718.90N 0012042.20W					Intersection with (U)L620.
(RNAV 5)		-/225°	21.0 nm	FL 460 / FL 75		odd FL 450 / FL 90	FL 460/FL 195 Class C, FL 195/FL 75 Class A. London Control (Swanwick) Freq: 129.425 (FL 155 and above); Freq: 134.125 (Below FL 155).
▵	GASGU	511224N 0005736W					

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
(RNAV 5)		-/225°	39.4 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. Between IPRIL and abm LON VOR: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305). Between abm LON VOR and GASGU: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
▵	IPRIL	514029N 0001335W					
(RNAV 5)		045°/225°	6.3 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305).
▵	BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W					
(RNAV 5)		059°/240°	32.1 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Dual designation with UM185 btn BPK and DIGSU. Between BPK and 15 nm before DIGSU: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305). Between 15 nm before DIGSU and DIGSU: London Control (Swanwick) Freq: 133.940 (All Levels).
▵	DIGSU	520126N 0003805E					Intersection with P5 and P144.
(RNAV 5)		060°/240°	37.2 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	BANEM	522008N 0013019E					
(RNAV 5)		060°/240°	25.2 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	LEDBO	523235N 0020608E					**Westbound route only btn UPGAS and LEDBO.**
(RNAV 5)		-/243°	28.6 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	BUKUT	524530N 0024802E					Intersection with P7.
(RNAV 5)		-/206°	12.4 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	KUBAX	525634N 0025713E					
(RNAV 5)		-/206°	12.4 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	TOLSA	530737N 0030629E					

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min**		**Controlling Unit/ Airspace Class/ Remarks**
					↓	↑	
(RNAV 5)		-/206°	7.5 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	AKOKO	531416N 0031207E					
(RNAV 5)		-/207°	11.1 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	BINBO	532406N 0032029E					
(RNAV 5)		-/207°	13.7 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	LARDI	533616N 0033057E					
(RNAV 5)		-/207°	67.4 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	TIPAN	543554N 0042356E					
(RNAV 5)		-/207°	44.1 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	UPGAS	551441N 0050000E					UIR Boundary. For continuation see AIP Denmark.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between SAM and LORKU** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 and 3 H24.
- There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. In this instance, non-availability of N866 will be notified to GAT by 'London Control' and traffic will be routed to LELNA and UN621.
- Due to Brest ACC operational requirements, the cruising level allocation is inappropriate to the MAG Track between GASGU and LORKU.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
P1 (RNP/RNAV)							
▵	GODOS	531457N 0032547E					**Westbound route only.** FIR Boundary. Intersection with M981. For continuation see AIP Netherlands.
(RNAV 5)		340°/-	9.7 nm	FL 245 / FL 175	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	BINBO	532406N 0032029E					
(RNAV 5)		340°/-	16.6 nm	FL 245 / FL 175	even FL 240 / FL 180		FL 245/FL 195 Class C, FL 195/FL 175 Class A. ATS delegated to Amsterdam ACC.
▵	ROKAN	533948N 0031120E					
(RNAV 5)		006°/-	22.6 nm	FL 245 / FL 195	even FL 240 / FL 200		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	TINDI	540214N 0031529E					Extremity of P1.

Route Remarks:

- See also ENR 1.1, paragraph 1.1.3.
- Due to ATC operational requirements, the cruising level allocation between ROKAN and TINDI is inappropriate to the MAG Track.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
UP1 (RNP/RNAV)							
▵	GODOS	531457N 0032547E					**Westbound route only.** UIR Boundary. Intersection with UM981. For continuation see AIP Netherlands.
(RNAV 5)		340°/-	9.7 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	BINBO	532406N 0032029E					
(RNAV 5)		340°/-	16.6 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ROKAN	533948N 0031120E					Intersection with N96 and UM982.
(RNAV 5)		006°/-	22.6 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	TINDI	540214N 0031529E					

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)	**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
(RNAV 5)	006°/-	16.2 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵ ROLUM	541820N 0031831E					Intersection with P13 and UM90.
(RNAV 5)	345°/-	18.8 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵ GIGUL	543626N 0031010E					
(RNAV 5)	320°/-	15 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵ RODSI	544756N 0025335E					Extremity of UP1. Intersection with UP58.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation between ROKAN and ROLUM is inappropriate to the MAG Track.						

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)	**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
P5 (RNP/RNAV)						
▵ DIGSU	520126N 0003805E					Extremity of P5. Intersection with N866 and UM185.
(RNAV 5)	016°/196°	20.2 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵ UMBAG	522052N 0004657E					
(RNAV 5)	014°/195°	63.4 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵ ELNAB	532211N 0011251E					
(RNAV 5)	015°/196°	156.5 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵ CUTEL	555309N 0022228E					Intersection with L983, P15, T55, UL7 and UP16.
(RNAV 5)	029°/210°	60.6 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵ GIBSU	564547N 0031610E					
(RNAV 5)	030°/210°	18.6 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	LAMRO	570151N 0033309E					
(RNAV 5)		030°/210°	37.6 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 129.225 (All Levels).
▵	NIVUN	573412N 0040813E					UIR Boundary. For continuation see AIP Norway. Intersection with M82, P609 and Z321 (see AIP Norway).

Route Remarks:

- **CDR Category One (CDR 1) between DIGSU and CUTEL** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 1800 Fri to 0600 Mon Winter (Summer 1 hr earlier) or 2300 the day before or 0600 the day following a Public Holiday (Summer 1 hr earlier).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P7 (RNP/RNAV)							
▵	LOGAN	514451N 0013643E					**Westbound route only.** Extremity of P7. Intersection with (U)L980.
(RNAV 5)		-/228°	13.6 nm	FL 460 / FL 85		even FL 430 / FL 100	FL 460/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 128.160 (FL 245 and above); Freq: 118.480 (Below FL 245 to FL 215); Freq: 135.425 (Below FL 215).
▵	IDESI	515352N 0015308E					
(RNAV 5)		-/229°	18.9 nm	FL 460 / FL 85		even FL 430 / FL 100	FL 460/FL 195 Class C, FL 195/FL 85 Class A. Between 5 nm before IDESI and IDESI: London Control (Swanwick) Freq: 128.160 (FL 245 and above); Freq: 118.480 (Below FL 245 to FL 215); Freq: 135.425 (Below FL 215). Between SONOG and 5 nm before IDESI: London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 135.425 (Below FL 215).
▵	SONOG	520620N 0021610E					Intersection with (U)Y4.
(RNAV 5)		-/206°	25.0 nm	FL 460 / FL 215		even FL 430 / FL 220	Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	BARMI	522842N 0023414E					Intersection with P25.
(RNAV 5)		-/206°	18.8 nm	FL 460 / FL 245		even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
▵	BUKUT	524530N 0024802E					Extremity of P7.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
P13 (RNP/RNAV)							
▵	ROLUM	541820N 0031831E					**Westbound route only.** Extremity of P13.
(RNAV 5)		356°/-	39.6 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. Scottish Control (Prestwick) Freq: 121.325 (All Levels).
▵	ASKAM	545747N 0031350E					Extremity of P13. Intersection with UL7 and UP59.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
P15 (RNP/RNAV)							
▵	NATEB	550218N 0014154W					**Eastbound route only btn NATEB and CUTEL.** Extremity of P15.
(RNAV 5)		070°/-	24 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	DIGBI	551106N 0010301W					
(RNAV 5)		070°/-	17.1 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	ERLOT	551714N 0003506W					
(RNAV 5)		070°/-	30.4 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	GIVEM	552754N 0001453E					
(RNAV 5)		071°/-	21.5 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	NAVEL	553513N 0005031E					
(RNAV 5)		071°/-	55.0 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	CUTEL	555309N 0022228E					Intersection with L983, P5, T55, UL619 and UP16.
(RNAV 5)		065°/245°	41.7 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
▵	REKNA	561029N 0033000E					
(RNAV 5)		065°/246°	54.6 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
▵	VAXIT	563215N 0050000E					UIR Boundary. For continuation see AIP Denmark. Intersection with N581 and Z716 (See AIP Denmark).

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P25 (RNP/RNAV)							
▵	LAPRA	520707N 0011236E					**Westbound route only.** Extremity of P25.
(RNAV 5)		-/246°	15.8 nm	FL 460 / FL 105		even FL 430 / FL 120	FL 460/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	MIPVO	521329N 0013609E					
(RNAV 5)		-/247°	8.9 nm	FL 460 / FL 165		even FL 430 / FL 180	FL 460/FL 195 Class C, FL 195/FL 165 Class A. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	DITOB	521701N 0014927E					
(RNAV 5)		-/247°	10 nm	FL 460 / FL 195		even FL 430 / FL 200	Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	MEGEL	522058N 0020425E					
(RNAV 5)		-/247°	19.8 nm	FL 460 / FL 195		even FL 430 / FL 200	Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
▵	BARMI	522842N 0023414E					Extremity of P25.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
P144 (RNP/RNAV)							
▵	DIGSU	520126N 0003805E					**Eastbound route only.** Extremity of P144. Intersection with M85 and N866.
(RNAV 5)		035°/-	91.2 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. London Control (Swanwick) Freq: 126.780 (FL 335 and above); Freq: 128.125 (Below FL 335).
▵	LATMU	531525N 0020522E					
(RNAV 5)		036°/-	121.0 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
▵	LARGA	545150N 0040912E					Intersection with M604 and Z278.
(RNAV 5)		047°/-	39.5 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. ATS delegated to Copenhagen ATC.
▵	SOPTO	551820N 0050000E					UIR Boundary. For continuation see AIP Denmark.

Route Remarks:

- **CDR Category One (CDR 1) between DIGSU and LARGA** (ENR 1.1, paragraph 1.1.7 refers).
  CDR 1 1800 Fri to 0600 Mon Winter (Summer 1 hr earlier) or 2300 the day before or 0600 the day following a Public Holiday (Summer 1 hr earlier).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
P155 (RNP/RNAV)							
△	SOMVA	521826N 0023838E					**Eastbound route only.** FIR Boundary. Continues as UP155 (see AIP Netherlands).
(RNAV 5)		-/092°	28.5 nm	FL 460 / FL 245		odd FL 450 / FL 250	Class C. London Control (Swanwick) Freq: 133.940 (All Levels).
△	ABEDA	521940N 0015216E					Intersection with M604.
(RNAV 5)		-/092°	13.5 nm	FL 460 / FL 195		odd FL 450 / FL 210	Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△	BANEM	522008N 0013019E					
(RNAV 5)		-/092°	26.6 nm	FL 460 / FL 195		odd FL 450 / FL 210	Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 121.225 (Below FL 215).
△	UMBAG	522052N 0004657E					Intersection with (U)P137.
(RNAV 5)		-/091°	27.7 nm	FL 460 / FL 195		odd FL 450 / FL 210	Class C. London Control (Swanwick) Freq: 133.940 (FL 215 and above); Freq: 124.930 (Below FL 215).
△	SIVDA	522122N 0000147E					
(RNAV 5)		-/091°	9.7 nm	FL 460 / FL 195		odd FL 450 / FL 210	Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295 to FL 215); Freq: 130.925 (Below FL 215).
△	BANTO	522128N 0001357W					
(RNAV 5)		-/091°	17.0 nm	FL 460 / FL 195		odd FL 450 / FL 210	Class C. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295 to FL 215); Freq: 130.925 (Below FL 215).
△	EBOTO	522133N 0004140W					
(RNAV 5)		-/091°	25.7 nm	FL 460 / FL 105		odd FL 450 / FL 110	FL 450/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295 to FL 215); Freq: 130.925 (Below FL 215).
△	UNGAP	522129N 0012339W					
(RNAV 5)		-/091°	9.9 nm	FL 460 / FL 105		odd FL 450 / FL 110	FL 450/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 127.880 (FL 295 and above); Freq: 127.105 (Below FL 295 to FL 215); Freq: 130.925 (Below FL 215).
△	HONILEY VOR/DME (HON)	522124.04N 0013949.41W					Extremity of P155.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
P166 (RNP/RNAV)							
▵	OLNEY	520740N 0004403W					**Eastbound route only.** Extremity of P166.
(RNAV 5)		054°/-	23.1 nm	FL 245 / FL 165	odd FL 230 / FL 170		FL 245/FL 195 Class C, FL 195/FL 165 Class A. London Control (Swanwick) Freq: 127.105 (FL 215 and above); Freq: 121.025 (Below FL 215).
▵	BANTO	522128N 0001357W					Extremity of P166. Intersection with P155.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
Q60 (RNP/RNAV)							
▵	OKTAD	514904N 0023246W					**Westbound route only.** Extremity of Q60.
(RNAV 5)		290°/-	27.3 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	TALGA	515730N 0031444W					
(RNAV 5)		306°/-	50.4 nm	FL 460 / FL 245	even FL 430 / FL 260		Class C. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 133.600 (Below FL 335).
▵	LANON	522552N 0042221W					Extremity of Q60. Intersection with UL18.

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3)** (ENR 1.1, paragraph 1.1.7 refers).

  (i) **FL 305 and above**:
  CDR 1 H24;

  (ii) **Below FL 305**:
  CDR 1 Mon-Thu 1800-0900 Winter (Summer 1 hr earlier) and from 1700 (Winter and Summer) on Friday, or the day preceding a PH, to 0900 (Winter), 0800 (Summer) on Monday, or the day following a PH.
  CDR 3 at all other times.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
Q63 (RNP/RNAV)							
▵	STRUMBLE VOR/DME (STU)	515940.88N 0050224.69W					**Westbound route only.** Extremity of Q63.
(RNAV 5)		314°/-	17.4 nm	FL 460 / FL 155	even FL 430 / FL 160		FL 460/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	LANPI	521115N 0052330W					Intersection with UN14.
(RNAV 5)		352°/-	22.4 nm	FL 460 / FL 155	even FL 430 / FL 160		FL 460/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 135.255 (FL 335 and above); Freq: 129.375 (Below FL 335).
▵	VATRY	523316N 0053000W					FIR Boundary. Extremity of Q63. Intersection with M17 (see AIP Ireland).

Route Remarks:

- **CDR Category One and Three (CDR 1 and 3) between STU and VATRY** (ENR 1.1, paragraph 1.1.7 refers).
  Availability subject to EG D201A/F/G activity.
  CDR 1 and 3 H24.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)	**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
• Pilots who depart Q63 within the confines of EG D201F/G are encouraged to seek a DACS from Aberporth or Swanwick Mil, as detailed at ENR 5.1. • See also ENR 1.1, paragraph 1.1.3.						

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)	**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Q70 (RNP/RNAV)						
▵ VABIK	511447N 0020000E					**Eastbound route only.** FIR Boundary. For continuation see AIP Belgium.
(RNAV 5)	-/094°	19.4 nm	FL 245 / FL 105		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.900 (FL 135 and above); Freq: 135.325 (Below FL 135).
▵ MOKBU	511610N 0012914E					
(RNAV 5)	-/094°	16.4 nm	FL 245 / FL 105		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵ ITVIP	511714N 0010312E					
(RNAV 5)	-/093°	17.2 nm	FL 245 / FL 105		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 120.525 (Below FL 195).
▵ DETLING VOR/DME (DET)	511814.41N 0003550.19E					
(RNAV 5)	-/095°	21.2 nm	FL 245 / FL 105		odd FL 230 / FL 110	FL 245/FL 195 Class C, FL 195/FL 105 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 120.525 (Below FL 215).
▵ BIGGIN VOR/DME (BIG)	511951.15N 0000205.32E					
(RNAV 5)	-/113°	38.8 nm	FL 245 / FL 155		odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 119.775 (Below FL 215).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
△	BENSU	513444N 0005508W					Intersection with M605.
(RNAV 5)		-/113°	5.9 nm	FL 245 / FL 155		odd FL 230 / FL 170	FL 245/FL 195 Class C, FL 195/FL 155 Class A. London Control (Swanwick) Freq: 132.165 (FL 215 and above); Freq: 119.775 (Below FL 215).
△	COWLY	513658N 0010354W					Extremity of Q70.
Route Remarks: • See also ENR 1.1, paragraph 1.1.3.							

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
Q295 (RNP/RNAV)							
△	COMPTON VOR/DME (CPT)	512929.66N 0011310.89W					Extremity of Q295.
(RNAV 5)		070°/251°	44.4 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305).
△	BROOKMANS PARK VOR/DME (BPK)	514459.05N 0000624.25W					**Eastbound route only btn BPK and CLN.**
(RNAV 5)		083°/-	11.4 nm	FL 460 / FL 85	odd FL 450 / FL 90		FL 460/FL 195 Class C, FL 195/FL 85 Class A. Between BPK and 5 nm before TOTRI: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 215); Freq: 127.950 (Below FL 215 to FL 155); Freq: 129.275 (Below FL 155 to FL 115); Freq: 118.825 (Below FL 115). Between 5 nm before TOTRI and TOTRI: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 245); Freq: 124.425 (Below FL 245 to FL 155); Freq: 118.825 (Below FL 155).
△	TOTRI	514630N 0001148E					
(RNAV 5)		083°/-	2.0 nm	FL 460 / FL 85	odd FL 450 / FL 90		FL 460/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 245); Freq: 124.425 (Below FL 245 to FL 155); Freq: 118.825 (Below FL 155).
△	MATCH	514645N 0001500E					
(RNAV 5)		083°/-	15.1 nm	FL 460 / FL 85	odd FL 450 / FL 90		FL 460/FL 195 Class C, FL 195/FL 85 Class A.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
							Between MATCH and 10 nm before BRAIN: London Control (Swanwick) Freq: 127.430 (FL 305 and above); Freq: 132.605 (Below FL 305 to FL 245); Freq: 124.425 (Below FL 245 to FL 155); Freq: 118.825 (Below FL 155). Between 10 nm before BRAIN and BRAIN: London Control (Swanwick) Freq; 133.940 (FL 245 and above); Freq: 124.425 (Below FL 245 to FL 155); Freq: 118.825 (Below FL 155).
▵	BRAIN	514840N 0003906E					
(RNAV 5)		083°/-	5.3 nm	FL 460 / FL 85	odd FL 450 / FL 90		FL 460/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 133.940 (FL 245 and above); Freq: 124.425 (Below FL 245 to FL 155); Freq: 118.825 (Below FL 155).
▵	DAGGA	514919N 0004739E					
(RNAV 5)		083°/-	13.2 nm	FL 460 / FL 85	odd FL 450 / FL 90		FL 460/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 133.940 (FL 245 and above); Freq: 124.425 (Below FL 245 to FL 155); Freq: 121.225 (Below FL 155).
▵	CLACTON VOR/DME (CLN)	515054.50N 0010851.32E					Extremity of Q295. Intersection with (U)L620.

Route Remarks:

- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base FL 85, upper limit FL 245, bounded by great circle lines joining:
  520045N 0004724E - 515548N 0010705E -
  515426N 0004840E - 520045N 0004724E,
  is part of Q295.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	FL series IFR cruising levels max/min ↑	Controlling Unit/ Airspace Class/ Remarks
T55 (RNP/RNAV)							
△	CUTEL	555309N 0022228E					Extremity of T55. Intersection with L983, UL619 and UP16.
(RNAV 5)		075°/256°	39.2 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. Scottish Control (Prestwick) Freq: 134.775 (All Levels).
△	ITSUX	560300N 0033000E					
(RNAV 5)		076°/256°	51.8 nm	FL 460 / FL 245	odd FL 450 / FL 250	even FL 430 / FL 260	Class C. ATS delegated to Copenhagen ACC.
△	TINAC	561503N 0050000E					UIR Boundary. For continuation see AIP Denmark. Intersection with T138.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Y96 (RNP/RNAV)							
▵	NATEB	550218N 0014154W					Extremity of Y96. Intersection with P18 and UL602.
(RNAV 5)		302°/122°	10 nm	FL 460 / FL 195	even FL 430 / FL 200	odd FL 450 / FL 210	Class C. Scottish Control (Prestwick) Freq: 126.925 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	AGPED	550719N 0015657W					
(RNAV 5)		302°/121°	19.2 nm	FL 460 / FL 195	even FL 430 / FL 200	odd FL 450 / FL 210	Class C. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	OTBUN	551650N 0022600W					
(RNAV 5)		301°/121°	10.0 nm	FL 460 / FL 155	even FL 430 / FL 160	odd FL 450 / FL 170	FL 460/FL 195 Class C, FL 195/FL 155 Class A. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	IPSAD	552145N 0024114W					
(RNAV 5)		301°/121°	12.1 nm	FL 460 / FL 115	even FL 430 / FL 120	odd FL 450 / FL 130	FL 460/FL 195 Class C, FL 195/FL 115 Class A. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	HAVEN	552740N 0025947W					
(RNAV 5)		283°/103°	12.4 nm	FL 460 / FL 95	even FL 430 / FL 100	odd FL 450 / FL 110	FL 460/FL 195 Class C, FL 195/FL 95 Class D. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.500 (Below FL 255).
▵	TALLA VOR/DME (TLA)	552956.92N 0032110.20W					**Eastbound route only btn NORBO and TLA.** Intersection with UL602.
(RNAV 5)		-/099°	48.4 nm	FL 460 / 6000 ft ALT		odd FL 450 / FL 70	FL 460/FL 195 Class C, FL 195/Alt 6000 ft Class D. Scottish Control (Prestwick) Freq: 135.855 (FL 255 and above); Freq: 124.825 (Below FL 255).
▵	NORBO	553545N 0044543W					Extremity of Y96.

Route Remarks:

- AGPED - IPSAD may not be available due to activity within either EG D512 or EG D512A (Otterburn Danger Areas).
- The portion of Y96 between OTBUN and HAVEN below FL 195 is Class A and extends 5 nm either side of the centre-line.
- An area of controlled airspace, Class C above FL 195 and Class A below FL 195, base level FL 115 bounded by great circle lines joining: 553805N 0025111W - 552606N 0023655W - 551724N 0024532W - 551742N 0030000W - 552201N 0030000W - 553100N 0025156W - 553805N 0025111W is part of Y96.

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)	Route Usage Notes					
Significant Point Name	Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)	Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
Y321 (RNP/RNAV)						
△ PEPIS	511148N 0011437W					**Southbound route only** except for specified aerodrome arriving tfc; See DNM RAD Annex EG. Extremity of Y321. Intersection with (U)Q41.
(RNAV 5)	004°/184°	8.5 nm	FL 460 / FL 85	even FL 240 / FL 100	odd FL 450 / FL 90	FL 460/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 215); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 105); Freq: 134.125 (Below FL 105).
△ NUBRI	512017N 0011356W					
(RNAV 5)	004°/184°	9.2 nm	FL 460 / FL 85	even FL 240 / FL 100	odd FL 450 / FL 90	FL 460/FL 195 Class C, FL 195/FL 85 Class A. Between 5 nm south of CPT and NUBRI: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 215); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 105); Freq: 134.125 (Below FL 105). Between CPT and 5 nm south of CPT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 215); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135).
△ COMPTON VOR/DME (CPT)	512929.66N 0011310.89W					Intersection with (U)L9.
(RNAV 5)	-/171°	29.6 nm	FL 460 / FL 85		odd FL 450 / FL 90	FL 460/FL 195 Class C, FL 195/FL 85 Class A. Between 10 nm north of CPT and CPT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 215); Freq: 135.800 (Below FL 215 to FL 155); Freq: 129.080 (Below FL 155 to FL 135); Freq: 134.125 (Below FL 135). Between 15 nm north of CPT and 10 nm north of CPT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 215); Freq: 135.800 (Below FL 215 to FL 155); Freq: 131.130 (Below FL 155 to FL 125); Freq: 119.775 (Below FL 125). Between EMKUK and 15 nm north of CPT: London Control (Swanwick) Freq: 134.460 (FL 305 and above); Freq: 132.165 (Below FL 305 to FL 215); Freq: 133.080 (Below FL 215).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
▵	EMKUK	515837N 0012115W					Intersection with (U)L612.
(RNAV 5)		-/171°	23.4 nm	FL 460 / FL 85		odd FL 450 / FL 90	FL 460/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 134.390 (FL 225 and above); Freq: 133.080 (Below FL 225).
▵	ADMEX	522139N 0012745W					Extremity of Y321.
Route Remarks: • Due to ATC operational requirements, the cruising level allocation between CPT and PEPIS is inappropriate to the MAG Track.							

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Y803 (RNP/RNAV)							
▵	MIDHURST VOR/DME (MID)	510314.23N 0003730.01W					Extremity of Y803.
(RNAV 5)		122°/302°	33.4 nm	FL 245 / FL 85	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 135.050 (FL 175 and above); Freq: 133.175 (Below FL 175).
▵	SEAFORD VOR/DME (SFD)	504538.49N 0000718.89E					
(RNAV 5)		064°/244°	32.1 nm	FL 245 / FL 85	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. London Control (Swanwick) Freq: 128.425 (FL 195 and above); Freq: 120.175 (Below FL 195).
▵	LYDD VOR/DME (LYD)	505958.87N 0005243.18E					
(RNAV 5)		062°/242°	8.1 nm	FL 245 / FL 85	odd FL 230 / FL 90	even FL 240 / FL 100	FL 245/FL 195 Class C, FL 195/FL 85 Class A. Dual designation with M189 btn LYD and DVR. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 135.325 (Below FL 195).

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
▵	SANDY	510351N 0010403E					
(RNAV 5)		062°/242°	12.5 nm	FL 245 / FL 65	odd FL 230 / FL 70	even FL 240 / FL 80	FL 245/FL 195 Class C, FL 195/FL 65 Class A. Dual designation with M189 btn LYD and DVR. London Control (Swanwick) Freq: 134.900 (FL 195 and above); Freq: 135.325 (Below FL 195).
▵	DOVER VOR/DME (DVR)	510945.44N 0012132.72E					Extremity of Y803. Intersection with L9 and M140.

Route Designator/ (RNP/RNAV Type)		Route Usage Notes					
Significant Point Name		Significant Point Coordinates		Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST			
(RNP/RNAV Type)		Initial Track MAG ↓/↑	Great circle Dist.	Upper limit/ lower limit	FL series IFR cruising levels max/min ↓	↑	Controlling Unit/ Airspace Class/ Remarks
Y958 (RNP/RNAV)							
▵	BRUCE	561411N 0055028W					DRA Arrival and Departure Transition Fix. Extremity of Y958. Intersection with L602.
(RNAV 5)		330°/150°	37.8 nm	FL 255 / FL 115	even FL 240 / FL 120	odd FL 250 / FL 130	FL 255/FL 195 Class C, FL 195/FL 115 Class E and TMZ. **(See Note)** Scottish Control (Prestwick) Freq: 127.275 (All Levels).
▵	TOBMO	564538N 0062811W					Extremity of Y958.

Route Remarks:

- For use by traffic climbing to or descending from the Shanwick OCA Boundary.
- The portion of Y958 below FL 195 is Class E and TMZ and extends 5 nm either side of the centre-line.
- ***Note:*** *Transponder carriage and operation required within that part of Y958 notified as Class E and TMZ.*

ENR 3.3 AREA NAVIGATION ROUTES (continued)

Route Designator/ (RNP/RNAV Type)		**Route Usage Notes**					
Significant Point Name		**Significant Point Coordinates**		**Way Point: IDENT of VOR/DME (ELEV of DME antenna), BRG & DIST**			
(RNP/RNAV Type)		**Initial Track MAG ↓/↑**	**Great circle Dist.**	**Upper limit/ lower limit**	**FL series IFR cruising levels max/min** ↓	↑	**Controlling Unit/ Airspace Class/ Remarks**
Z278 (RNP/RNAV)							
▵	LARGA	545150N 0040912E					**Eastbound route only.** Extremity of Z278.
(RNAV 5)		009°/-	137.0 nm	FL 460 / FL 245	odd FL 450 / FL 250		Class C. ATS delegated to Copenhagen ACC.
▵	PENUN	570636N 0045011E					UIR Boundary. For continuation see AIP Norway.

ENR 3.6 EN-ROUTE HOLDING

HLDG ID/ FIX/WPT Coordinates	INBD TR (MAG)	Direction of PTN	MAX IAS (KT)	MNM/ MAX HLDG LVL	TIME or DIST OUBD	Controlling unit and Frequency	Remarks
1	2	3	4	5	6	7	8
AMDUT 504028N 0004746E	313°	Right	240	FL 160 / FL 190	1 min		Aircraft inbound to Gatwick via TIMBA from KUNAV or NEVIL may be instructed to hold at AMDUT.
ARNUN 510326N 0005553E	217°	Right	220	FL 100 / FL 140	1 min		Aircraft inbound to Gatwick via TIMBA from ERING, TEBRA or KONAN may be instructed to hold at ARNUN.
BKY VOR 515923.17N 0000342.87E	207°	Left	220	- / FL 140	1 min / 8 nm		Aircraft joining the Airways System via Barkway VOR may be instructed to hold at Barkway to await onward clearance.
BEL VOR 543940.12N 0061347.67W	127°	Right		FL 250 / FL 390	1.5 min		Holding interval 1000ft
BILNI 504031N 0020733W	108°	Left	265	FL 200 / FL 300	1.5 min		RNAV hold. Aircraft inbound to London Heathrow via OCK/TOMMO, London Gatwick via WILLO/ ASTRA and Northolt traffic from AWYs/UARs L620/ UL620, UM17, UN514 above FL 200 may be instructed to hold at BILNI
BOMBO 515944N 0002347W	092°	Left	220	- / FL 140	5 nm		Aircraft inbound to London City, London Luton or London Stansted Airports from the north or west may be required to hold at BOMBO
BONBY 575330N 0042036W	158°	Left	210	- / FL 100	1 min		N560
BRASO 514107N 0004100E	264°	Left	240	FL 180 / FL 240	1.5 min		Aircraft inbound to London Heathrow via Lambourne may be instructed to hold at BRASO.
BRASO 514107N 0004100E	278°	Left	240	FL 180 / FL 240	1.5 min		When Lambourne VOR and/or DME are out of service (eg when TAWNY STAR is in use or when advised by ATC) holding at BRASO is to be aligned on Brookmans Park VOR RDL 098
DCS DME 544318.88N 0032026.30W	154°	Right	255	FL 250 / FL 370	1.5 min		RNAV hold. Holding interval 1000ft.
DTY VOR 521048.51N 0010649.64W	148°	Left	240	- / -	1.5 min		For holding at Westcott NDB when DTY VOR is out of service see remarks against DTY on AWY M605
DELBO 515237N 0011624W	155°	Right	240	- / -	1.5 min		During periods of congestion in the London TMA aircraft inbound to London Gatwick from ATS Routes via HON, WAL and KEPAD may be re-quired to hold at DELBO. Note: DELBO is not aligned with the ATS Routes (L612/UL612; N859) serving Gatwick inbound traffic. Traffic via L612/ UL612 may be required to route from DISIT to DELBO (True 129.724 MAG TR 132/21nm). Traffic via N859 may be required to route from HON VOR to DELBO.
DET VOR 511814.41N 0003550.19E	310°	Right	220	- / -	1.5 min		For aircraft on AWY N57
DET VOR 511814.41N 0003550.19E	236°	Left	220	- / -	1.5 min		For aircraft on AWY Y76
DOMUT 501543N 0014009W	040°	Right	240	FL 230 / -	1.5 min		Aircraft inbound to London Heathrow via OCK/ TOMMO, London Gatwick via WILLO/ASTRA and Northolt traffic from AWYs/UARs Q41/UQ41, P87/ UP87, Y110/UY110 may be instructed to hold at DOMUT.
FOYLE 560834N 0042256W	191°	Left		- / -	3.5 nm		N560
FYNER 560256N 0050655W	119°	Left		- / -	4 nm		L602
GARVA 574118N 0042941W	124°	Right	210	- / -	5 nm		Y906
GAVEL 592300N 0012422W	009°	Left		- / -	4 nm		Y905 Holding for propeller aircraft only.
GOW VOR 555213.81N 0042644.61W	138°	Right		FL 250 / FL 370	1.5 min		Holding interval 1000ft

ENR 3.6 EN-ROUTE HOLDING (continued)

HLDG ID/ FIX/WPT Coordinates	INBD TR (MAG)	Direction of PTN	MAX IAS (KT)	MNM/ MAX HLDG LVL	TIME or DIST OUBD	Controlling unit and Frequency	Remarks
1	2	3	4	5	6	7	8
GWC VOR 505118.78N 0004524.25W	177°	Left	230	FL 70 / FL 100	1 min		Aircraft inbound to London Gatwick via WILLO may be instructed to hold at Goodwood.
GUSSI 571247N 0040727W	011°	Right	210	- / -	5 nm		N560
HON VOR 522124.04N 0013949.41W	147°	Right	240	FL 200 / -	1.5 min		Direction of PTN: Left below FL200
KATHY 503114N 0012000W	041°	Left	240	FL 160 / FL 190	1.5 min		RNAV hold. Aircraft inbound to London Heathrow via OCK/TOMMO, London Gatwick via WILLO/ ASTRA and Northolt traffic from AWYs/UARs L620, N63/UN63, Q41/UQ41, P87/UP87, Y110/UY110 above FL 160 may be instructed to hold at KATHY
LAPRA 520707N 0011236E	246°	Right	240	FL 150 / FL 210	1.5 min		Aircraft inbound to London Luton, London Stansted and Cambridge via ABBOT may be instructed to hold at LAPRA on BPK RDL 066
LAPRA 520707N 0011236E	234°	Right	240	FL 150 / FL 210	1.5 min		When Brookmans Park VOR and/or DME are out of service holding is to be aligned on Lambourne VOR RDL 054
LOGAN 514451N 0013643E	290°	Left	240	- / -	1.5 min		At the discretion of ATC, for example when the Lambourne holding pattern is oversubscribed, the LOGAN intersection may be used as a common holding point for westbound aircraft en-route to or overflying the London TMA from AWYs/UARs L608/UL608, L980/UL980 and P7.
LYD VOR 505958.87N 0005243.18E	317°	Left	240	FL 150 / -	1.5 min		LYD VOR is used as a common holding point for westbound aircraft on AWYs N57 and T420. The VOR may also be used for aircraft required to be held en-route from Dover to Mayfield. Direction of PTN: Right at or below FL140
MCT VOR 532125.29N 0021544.24W	150°	Right		- / -	1.5 min		
MCT VOR 532125.29N 0021544.24W	150°	Right	240	FL 200 / -	1.5 min		Aircraft using AWY L612 at FL 200, or above, may be instructed to hold en-route at Manchester VOR MCT
MERLY 512000N 0050000W	072°	Right		- / -	1.5 min		
OKESI 512636N 0020342W	103°	Left	240	- / -	1.5 min		
OKVAP 505749N 0011956E	002°	Left	220	FL 130 / FL 150	1 min		Aircraft inbound to London City/Biggin Hill/ Southend from RATUK and NEVIL may be instructed to hold at OKVAP.
PETOX 573333N 0014902W	189°	Left		- / -	1 min		Y905 Holding for propeller aircraft only.
PLYMO 502045N 0043737W	074°	Left		- / -	1.5 min		
ROPMU 520614N 0002917E	098°	Right	220	FL 160 / FL 210	1 min		Aircraft inbound to London City/Biggin Hill via JACKO from MCT, WAL or HON may be instructed to hold at ROPMU.
RUDMO 504640N 0010127W	278°	Left	210	FL 70 / FL 110	1 min		Aircraft inbound to Southampton/Bournemouth via SAM from ELDAX may be instructed to hold at RUDMO.
SABER 514214N 0005658E	264°	Left	240	- / -	1.5 min		Aircraft inbound to London Heathrow via Lambourne may be instructed to hold at SABER.
SMOKI 574637N 0023556W	162°	Right		- / -	4 nm		Y904 Holding for propeller aircraft only.
SAM VOR 505718.90N 0012042.20W	075°	Left		- / -	1.5 min		
STN VOR 581225.01N 0061058.97W	138°	Right		FL 250 / FL 390	1.5 min		Holding interval 1000ft
TLA VOR 552956.92N 0032110.20W	153°	Left		FL 250 / FL 350	1.5 min		Holding interval 1000ft

ENR 4 RADIO NAVIGATION AIDS/SYSTEMS

ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

Name of Station/ MAG Var/ VOR Declination	Ident	Frequency (Channel)	Hours of Operation	Coordinates	DME Aerial Elevation	Remarks
1.	2.	3.	4.	5.	6.	7.
ABERDEEN VOR/DME 2.15°W (2017) 3.1°W	ADN	114.300 MHz 90X	H24	571837.62N 0021601.95W	600 ft	APCH Aid to Aberdeen/Dyce. VOR/DME DOC: 90 nm/50000 ft (200 nm/ 50000 ft in Sector R048º-138º). ENR Purpose: 571838N 0021602W
BARKWAY VOR/DME 0.5°W (2017) 1.3°W	BKY	116.250 MHz 109Y	H24	515923.17N 0000342.87E	486 ft	VOR/DME DOC: 40 nm/25000 ft.
BELFAST VOR/DME 3.32°W (2017) 4.0°W	BEL	117.200 MHz 119X	H24	543940.12N 0061347.67W	224 ft	APCH Aid to Belfast/Aldergrove. On Belfast/Aldergrove AD. VOR/DME DOC: 40 nm/50000 ft (200 nm/ 50000 ft in Sector R229º-349º). ENR Purpose: 543940N 0061348W
BENBECULA DME	BEN	86Y 113.950 MHz	H24	572840.57N 0072155.08W	36 ft	No associated En-route VOR. APCH Aid to Benbecula. On Benbecula AD. DME DOC: 150 nm/50000 ft (200 nm/ 50000 ft in Sector R200º-005º). ENR Purpose: 572841N 0072155W
BERRY HEAD VOR/DME 1.57°W (2017) 1.5°W	BHD	112.050 MHz 57Y	H24	502354.98N 0032937.46W	215 ft	VOR DOC: 85 nm/50000 ft. DME DOC: 85 nm/50000 ft (160 nm in Sector R212º-017º). Due to terrain effects significant bearing errors may occur below 3000 ft in Sector R012º-027º at ranges between 14 nm and 19 nm.
BIGGIN VOR/DME 0.43°W (2017) 0.4°W	BIG	115.100 MHz 98X	H24	511951.15N 0000205.32E	590 ft	APCH Aid to Biggin Hill. On Biggin Hill AD. VOR/DME DOC: 60 nm/50000 ft (125 nm/ 50000 ft in Sector R285º-045º and 100 nm/ 50000 ft in Sector R045º-135º). Due to terrain, coverage at low level is reduced in Sector R115º-220º. In addition DME un-locks may occur in Sector R005º-040º at ranges up to 25 nm. ENR Purpose: 511951N 0000205E
BOVINGDON VOR/DME 0.68°W (2017) 1.2°W	BNN	113.750 MHz 84Y	H24	514334.19N 0003259.10W	500 ft	VOR/DME DOC: 60 nm/50000 ft.
BRECON VOR/DME 1.67°W (2017) 2.3°W	BCN	117.450 MHz 121Y	H24	514331.89N 0031546.92W	1450 ft	VOR DOC: 65 nm/50000 ft. DME DOC: 65 nm/50000 ft (125 nm/50000 ft in Sector R137º-002º).
BROOKMANS PARK VOR/DME 0.53°W (2017) 1.1°W	BPK	117.500 MHz 122X	H24	514459.05N 0000624.25W	382 ft	VOR/DME DOC: 40 nm/50000 ft (80 nm/ 50000 ft in Sector R286º-001º).
CLACTON VOR/DME 0.12°W (2017) 0.1°W	CLN	114.550 MHz 92Y	H24	515054.50N 0010851.32E	100 ft	VOR/DME DOC: 100 nm/50000 ft (150 nm/50000 ft in Sector R315º-045º).
COMPTON VOR/DME 0.9°W (2017) 0.7°W	CPT	114.350 MHz 90Y	H24	512929.66N 0011310.89W	498 ft	VOR/DME DOC: 80 nm/50000 ft (150 nm/ 50000 ft in Sector R226º-046º and 130 nm/ 50000 ft in Sector R046º-136º).
DAVENTRY VOR/DME 0.95°W (2017) 0.9°W	DTY	116.400 MHz 111X	H24	521048.51N 0010649.64W	600 ft	VOR/DME DOC: 60 nm/50000 ft (75 nm/ 50000 ft in Sector R286º-346º)
DEAN CROSS DME	DCS	99X 115.200 MHz	H24	544318.88N 0032026.30W	700 ft	No associated VOR. Any VOR indications should be ignored. DME DOC: 100 nm/50000 ft. Due to terrain, coverage at low level is reduced in Sector R093º-163º.

ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE (continued)

Name of Station/ MAG Var/ VOR Declination	Ident	Frequency (Channel)	Hours of Operation	Coordinates	DME Aerial Elevation	Remarks
1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
DETLING VOR/DME 0.25°W (2017) 0.7°W	DET	117.300 MHz 120X	H24	511814.41N 0003550.19E	645 ft	VOR/DME DOC: 60 nm/50000 ft.
DOVER VOR/DME 0.03°E (2017) 0.3°W	DVR	114.950 MHz 96Y	H24	510945.44N 0012132.72E	315 ft	VOR/DME DOC: 80 nm/50000 ft (200 nm/ 50000 ft in Sector R015º-075º).
GAMSTON VOR/DME 1.02°W (2017) 0.6°W	GAM	112.800 MHz 75X	H24	531653.28N 0005649.79W	115 ft	VOR/DME DOC: 80 nm/25000 ft.
GLASGOW VOR/DME 2.82°W (2017) 3.5°W	GOW	115.400 MHz 101X	H24	555213.81N 0042644.61W	37 ft	APCH Aid to Glasgow. On Glasgow AD. VOR/DME DOC: 70 nm/50000 ft (300 nm/ 70000 ft in Sector R243º-003º). Due to terrain, coverage at low level is reduced in Sectors R348º-028º and R183º- 203º ENR Purpose: 555214N 0042645W
GOODWOOD VOR/DME 0.67°W (2017) 1.1°W	GWC	114.750 MHz 94Y	H24	505118.78N 0004524.25W	113 ft	APCH Aid to Chichester/Goodwood. On Chichester/Goodwood AD. VOR/DME DOC: 80 nm/50000 ft. Due to terrain, coverage at low level is reduced in Sector R301º-046º. ENR Purpose: 505119N 0004524W
HENTON NDB 0.78°W	HEN	433.500 kHz	H24	514535.07N 0004725.05W		Range 30 nm.
HONILEY VOR/DME 1.17°W (2017) 1.8°W	HON	113.650 MHz 83Y	H24	522124.04N 0013949.41W	435 ft	VOR/DME DOC: 60 nm/50000 ft (85 nm/ 50000 ft in Sector R182º-242º and 100 nm/ 50000 ft in Sector R317º-002º).
ISLE OF MAN VOR/DME 2.62°W (2017) 2.9°W	IOM	112.200 MHz 59X	H24	540400.72N 0044548.51W	573 ft	APCH Aid to Isle of Man. VOR/DME DOC: 60 nm/50000 ft. ENR Purpose: 540401N 0044549W
JERSEY VOR/DME 0.92°W (2017) 2.14°W	JSY	112.200 MHz 59X	H24	491315.97N 0020246.15W	264 ft	APCH Aid to Jersey. DOC: 60 nm/50000 ft (40 nm/50000 ft in Sector 048°-183°M). Due to terrain effects DME coverage is reduced in Sector R180°-360° and unlocks occur. DME unlocks may occur on the 08 Ap- proach Procedure. ENR Purpose: 491316N 0020246W
LAMBOURNE VOR/DME 0.43°W (2017) 0.2°W	LAM	115.600 MHz 103X	H24	513845.69N 0000906.13E	200 ft	VOR/DME DOC: 40 nm/50000 ft (110 nm/ 50000 ft in Sector R315°-135°).
LANDS END VOR/DME 2.3°W (2017) 2.2°W	LND	114.200 MHz 89X	H24	500810.62N 0053812.96W	800 ft	VOR/DME DOC: 200 nm/50000 ft
LONDON VOR/DME 0.63°W (2017) 1°W	LON	113.600 MHz 83X	H24	512914.09N 0002759.54W	110 ft	VOR/DME DOC: 40 nm/50000 ft (100 nm/ 50000 ft in Sector R181°-256° and 80 nm/ 50000 ft in Sector R256°-316°). DME unlocks may occur in the Sector R181°-251° at ranges greater than 50 nm.
LYDD VOR/DME 0.12°W (2017) 0.7°W	LYD	114.050 MHz 87Y	H24	505958.87N 0005243.18E	30 ft	VOR/DME DOC: 80 nm/50000 ft (100 nm/ 50000 ft in Sector R196º-256º).

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
ABAPO	520610N 0044812W	UN14	
ABBOT	520058N 0003558E		EGGW STARs - EGSS STARs
ABDAL	512646N 0015148W		EGFF STARs
ABDUK	513834N 0034801W	UL180, UL607	
ABEDA	521940N 0015216E	M604, P155	
ABEVI	544227N 0024629W	N601, UN590, UN601	
ABKAT	540853N 0015847W	P18, UL613, UP18	
ABKIM	505043N 0015858W	L620, UL620	
ABLIN	524658N 0045933W	L18	
ABSAV	503829N 0011029W	L980	
ABSUN	541732N 0061518W	N34	
ABTUM	512604N 0012229E	M84, UM84	EGKK STARs
ADASI	591315N 0061731W	UN614	
ADELU	532630N 0013213W	L60, M868, UL60, UM868	EGCN STARs
ADGEG	531343N 0021906E	UM185	
ADMAG	511402N 0002934E	Y312, UY312	EGKK SIDs
ADMEX	522139N 0012745W	Y321	EGBB SIDs
ADMIS	515949N 0001036E	M183, M189, UM183	
ADNAM	520617N 0004419E		EGSS STARs
ADODO	583000N 0100000W		DRA Entry and Exit Fix
ADRUD	491014N 0062655W	UN512, UT7	
ADVAS	514053N 0012633E		EGMC STARs
AGORI	570000N 0130000W		NOTA. See also AIP Ireland
AGPED	550719N 0015657W	Y96	
AKIVO	595752N 0093000W	UL619, UM86, UN601, UN603, UP60	
AKOKO	531416N 0031207E	N866	
AKUPA	522912N 0010528W	T420, Y250, UT420, UY250	
ALASO	552650N 0013354W	P18, UP18	
ALESO	503432N 0011332E	T420, UT420	EGLL STARs
ALOTI	575427N 0033630E	UM89	
ALUTA	490019N 0072953W	UN490, UN491	
ALVIN	513945N 0024042W	L9	EGFF SIDs
AMDUT	504028N 0004746E		En-Route Hold - EGKK STARs
AMLAD	561552N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix
AMLET	531607N 0015018W		EGCC STARs
AMMAN	515026N 0035954W	L9	EGGD STARs - EGFF STARs
AMPIT	531139N 0031133W	L15, Y124, UL15, UY124	EGBB STARs - EGNX STARs
AMPOP	493148N 0060903W	UN58, UT7	
AMRAL	520653N 0025433W	N862, UN862	EGGD STARs - EGFF STARs
AMTAP	582225N 0093000W		Oceanic Landfall point
AMVEL	531103N 0000155W	L603, UL603	
ANNET	493905N 0040005W	UL722, UM25, UN32, UP16	
APPLE	543000N 0023050W	UN590	EGPF STARs - EGPK STARs
APSOV	554923N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix
ARKIL	503928N 0080000W	UN80, UP70	SOTA UIR Boundary - NTFSR Entry Point
ARNUN	510326N 0005553E		En-Route Hold - EGKK STARs
ARPUB	533534N 0011428W	L975, UL975	
ARSAT	543206N 0014419W	UP17	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
ARTEX	565341N 0035738E	UP60	
ARTHA	534659N 0021707W		EGCC STARs
ARTIX	532342N 0010209W	L60, UL60	
ARTOV	515419N 0012533E	L620, M604, P44, UL620, UP44	
ASKAM	545747N 0031350E	UL7, UL975, UP59, P13	
ASKEY	520050N 0000310W		EGGW STARs - EGSS STARs
ASLIB	544928N 0030339W		EGPF STARs - EGPK STARs
ASMIM	532646N 0023911W	L975, P16, UL975, UP16	EGCC SIDs
ASNIP	532843N 0025426W	L8, L28, UL8, UL28	
ASNUD	564139N 0030320W	N864, P600	
ASPEN	501734N 0014820W	Q41, Y110, UY110	
ASRAX	513117N 0041643W	UL180, UT7	
ASRUS	550321N 0032045W	N864, UN864	
ASTRA	505156N 0000847W		EGKK STARs
ATNAK	570000N 0050000E	UM185	
ATSAP	512716N 0013017E		EGMC STARs
ATSIX	600000N 0100000W	UP60	
ATSUR	500000N 0140000W		SOTA landfall point. See also AIP Ireland
ATWEL	505051N 0032502W	N864, UN864	
AVANT	504912N 0005618W	L980, N863, UL980, UN863	EGKK STARs - EGGW STARs - EGSS STARs - EGKB STARs - EGLC STARs
AVRAL	553034N 0034259E	UL619	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	2.	3.	4.
BABAX	502511N 0034817W	UN22, UP16	
BABRA	533739N 0035643W	L70, UL70	
BADIM	513838N 0023040W	L9	EGGD SID
BADSI	523930N 0044617W	L18, UL18	
BAGIT	531345N 0035918W	Y124, UY124	
BAGSO	534048N 0053000W	L70, UL70	
BAKER	512942N 0001753E	N601	
BAKUR	521430N 0054049W	N546, UL149, UN14, UN546	
BALID	562949N 0015707W	P18, UP18	
BALIX	590000N 0100000W	UP59	
BAMBO	515237N 0013700W		EGHH STARs - EGHI STARs
BAMEP	535242N 0021609W	N57, UN57	
BAMLI	540828N 0063904W		Co-ordination point on Shannon/Scottish FIR boundary
BAMRA	592600N 0035710W	UL613, UN584, UN593, UP60, UP61	DRA Entry and Exit Fix
BANBA	515710N 0061421W	P2, UN28, UN30, UP2, UP620	
BANEM	522008N 0013019E	Y6, UY6, N866, P155	
BANTO	522128N 0001357W	P155, P166	
BANVA	503242N 0004512E	M733, Y8, UM733, UY8	EGGW STARs - EGSS STARs
BARKU	603618N 0092436W	UN610	
BARMI	522842N 0023414E	P7, P25	EGGW STARs - EGSS STARs
BAROS	532422N 0032643W		EGGP STARs
BARTN	532814N 0022541W	L612, L975, P17, UL612, UL975, UP17	EGGP SIDs - EGCN STARs
BATLI	533845N 0012137W	Y70, Y250, UY70, UY250	EGCN STARs
BEBNI	545906N 0033514W	L612, UL612	
BEDEK	512215N 0013331W	P2, UP2	EGKK STARs - EGLL STARs - EGGW STARs - EGSS STARs - EGKB STARs - EGLC STARs
BEDFO	521330N 0003348W	N601, UN601	
BEDRA	490000N 0150000W		SOTA. See also AIP Ireland
BEGAM	540925N 0020715W	UP16	EGBB STARs - EGNX STARs - EGCC STARs
BEGID	563000N 0140000W		NOTA landfall point. See also AIP Ireland
BEGTO	504545N 0011408W	M185, N514, UN514	EGKK STARs - EGLL STARs - EGGW STARs - EGSS STARs - EGKB STARs - EGLC STARs
BEKET	585313N 0013120W	Y905	
BEKMO	525910N 0023710E	UY70, M604	
BELOX	535316N 0032923W	UL603	
BENBO	502705N 0000037E	L612, Y47, UL612, UY47	
BENSU	513444N 0005508W	M605, UM605, UQ70, Q70	
BEREP	590209N 0014420E	UN603, UZ107	
BERUL	524016N 0033113W	UP16	
BESGA	604723N 0075446W	UL612, UP612	
BETAX	530033N 0005403W	UL613	
BETPO	514754N 0004328W	L15, UL15	
BEVAM	554353N 0001503E	UP16, UP59	
BEVEL	502454N 0015907W	N621, UN621	
BEVUP	504800N 0021420W	L620, UL620	
BEWLI	504531N 0014837W	N514, UN514	EGLL STARs - EGKK STARs
BIDVA	504339N 0005839W		EGKB STARs - EGLC STARs - EGMC STARs
BIGNO	500000N 0024930W	Y91, UY91	EGJB STARs - EGJJ STARs

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
BILLY	600111N 0083408W	UN603, UN610	
BILNI	504031N 0020733W	M17, N866, UM17	En-route Hold - EGKK STARs - EGLL STARs
BILTO	563000N 0150000W		NOTA. See also AIP Ireland
BILVO	534352N 0031109W	N864, UL8, UN864, UP6	
BIMGO	493000N 0140000W		SOTA landfall point. See also AIP Ireland
BINBO	532406N 0032029E	N866, P1, UP1	
BINTI	543345N 0015945W	UP16	
BISRU	510418N 0002203E	T421, UT421	
BLACA	545300N 0050932W	P600, P620	DRA Arrival and Departure Transition Fix - EGPH STARs - EGPF STARs - EGPK STARs
BODSO	530308N 0020541E	Y70, UY70, L17, L989	
BOGMI	505953N 0071217W	N160, UN160	
BOGNA	504207N 0001506W	L612, UL612	EGKK SIDs
BOLBI	532800N 0014845W	N601, UL60, UN601	
BOLRO	500000N 0014129W	P87, UP87	
BOMBO	515944N 0002347W		En-route Hold - EGLC STARs - EGGW STARs - EGSS STARs - EGMC STARs - EGKB STARs
BONBY	575330N 0042036W	N560	En-route Hold
BOVVA	514334N 0003259W		EGLL STARs
BOYNE	534602N 0053000W	Y911	
BRAIN	514840N 0003906E	Q295	EGLC STARs - EGMC STARs - EGKB STARs
BRASO	514107N 0004100E	L980, UL980	En-route Hold - EGLL STARs
BRIPO	504227N 0024500W	L620, UL620	
BRUCE	561411N 0055028W	L602, Y958	DRA Arrival and Departure Transition Fix
BUDON	574207N 0003343W	P600, UP600	
BUKUT	524530N 0024802E	L603, UL603, N866, P7	
BUMUX	504816N 0032058W	UN20	
BURNI	534338N 0023104W		EGCC STARs
BUSTA	520534N 0000404E		EGGW STARs - EGSS STARs
BUZAD	515632N 0003308W	L10, Q75, T420, UL10, UT420	EGBB STARs - EGLL SIDs - EGSS SIDs - EGWU SIDs
CALDA	534627N 0023838W	L612, UL612	EGCN STARs
CAMBO	491730N 0055135W	UP620	
CASEL	534952N 0041057W	L10, UL10	
CASEY	520031N 0003459E		EGGW STARs - EGSS STARs
CEDAR	523107N 0014912W		EGBB STARs
CHASE	523648N 0015502W		EGBB STARs
CHINN	575751N 0041117W	N560	
CLIPY	520003N 0010509W		EGGW STARs - EGSS STARs - EGMC STARs
CLYDE	555748N 0044732W	L602	EGPF SIDs/STARs
COWLY	513658N 0010354W	L612, Q41, T71, UL612, UQ41, UQ70, UT71, Q70	EGBB SIDs
CREWE	524907N 0021827W		EGBB STARs - EGNX STARs
CROFT	533737N 0023220W	L612, P16, Y70, UL612, UP16, UY70	EGBB STARs - EGNX STARs - EGGP STARs
CUTEL	555309N 0022228E	UL7, UL619, UP16, L983, P5, P15, T55	
DAGGA	514919N 0004739E	M85, Q295	EGKK SIDs
DALEY	534008N 0022057W		EGCC STARs
DAVOT	572042N 0040529W	N560	
DAWLY	503427N 0032750W	L620, N864, Y91, UL149, UL620, UN864, UP69, UP70, UP71, UP72, UP73, UY91	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	2.	3.	4.
DAYNE	531419N 0020145W		EGCC STARs
DEGOS	541121N 0065423W		DRA Entry and Exit Fix
DELBO	515237N 0011624W		En-route Hold - EGKK STARs
DENBY	533113N 0015740W	L975, N57, UL975	EGCN STAR
DENOG	572553N 0014516W	UL619	
DESIG	533138N 0015334W	L70, L603, L975, UL70, UL603, UL975	EGBB STARs - EGNX STARs - EGGP STARs - EGCC SIDs/STARs
DEVAL	505125N 0012800E	N57	
DEVBI	604254N 0084610W	UP61	
DEVOM	504318N 0034519W	UL149, UN26, UP16	
DEXEN	531649N 0053000W	Y124, UY124	
DIBAL	524750N 0023000E	L603, UL603	
DIDEL	505035N 0035950W	UL149, UN514	
DIGBI	551106N 0010301W	UP17, P15	
DIGSU	520126N 0003805E	UM185, N866, P5, P144	
DIGUT	513901N 0011759W	N859, UN859	
DIKAS	514637N 0031533W	L180, N864, UL9, UL18, UL180, UN864, UP4	
DIKVU	511747N 0001902E	L9, UL9	
DIMLI	545647N 0063655W		DRA Intermediate Fix
DINIM	510000N 0150000W		SOTA. See also AIP Ireland
DIPSO	530313N 0012039W		EGNX STARs
DISIT	520611N 0014241W	L151, UL151	EGKK STARs
DITOB	521701N 0014927E	P25	EGGW STARs - EGSS STARs
DIXOV	540720N 0042338W	P6	
DOBEM	515211N 0025545W	N14, N862, UN14, UN862	EGGD STARs - EGFF STARs
DOGAL	540000N 0150000W		NOTA. See also AIP Ireland
DOKEK	512518N 0060329W	UN40, UN54, UP620	
DOLAS	525843N 0010003E	UL603, L90, M16	
DOLOP	531251N 0033751W	Y124, UY124	
DOLUR	492904N 0050326W	UM142, UN12, UN38, UN54	
DOMUT	501543N 0014009W	L980, P87, UL980, UP87	En-route Hold - EGKK STARs - EGLL STARs - EGKB STARs - EGLC STARs - EGMC STARs
DONIB	554309N 0074144W	N562	DRA Intermediate Fix
DONNA	514200N 0004437W		EGLL STARs
DOPEK	532304N 0005532W	L60, UL60	EGNM SIDs
DORKI	511633N 0001552W		EGLL STARs
DOSUN	600703N 0062339W	UN614, UP61	
DRAKE	501234N 0000434W	L151, N859, Y47, UL151, UM189, UY47	
DUFFY	543053N 0055139W	L10, L15	
EBOTO	522133N 0004140W	N601, UN601, P155	
EDONU	561736N 0033341W	P600	
EDUXO	532424N 0011301W	L603, UL603	
EKLAD	531514N 0024929W	Y53, UY53	EGCC SIDs
EKNIV	512426N 0003731E	M87, M91	EGLC SIDs
ELBOB	544358N 0074438W		Scottish/Shannon FIR boundary fix. Inbound/outbound fix for EIDL
ELDAX	502918N 0003930E	M8, N20, UM8	EGKK STARs - EGHI STARs - EGHH STARs
ELDER	503948N 0012014W	M185, N867, UM185, UN867	EGLL STARs

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
ELKOG	602648N 0093000W		Oceanic Landfall Fix for Reduced Lateral (RLAT) Boundary Points
ELMUD	550656N 0014024W	P18, UP18	
ELNAB	532211N 0011251E	P5	
ELNOD	532826N 0013524W	L603, UL603	
ELRAG	511028N 0050621W	UN18	
ELSAN	564219N 0034358E	UN581	
ELSOX	510000N 0140000W		SOTA landfall point. See also AIP Ireland
ELVOS	524201N 0011825W	T420, UT420	
EMBOR	525748N 0011745W	N601, Q4, UN601	EGCN STAR
EMKAD	511450N 0004234E	L9, M91, UL9	
EMKUK	515837N 0012115W	L612, UL612, Y321	
EMLIP	532408N 0032124W	L975, UL975	
EMLON	531220N 0023000E	L602, UL602, M79	
EMPER	490000N 0090000W		SOTA. See also AIP Ireland
ENIPI	550111N 0031510W		EGPF STARs - EGPK STARs
ENITO	524805N 0022803E	UL603, M604	
ENOKA	552010N 0033946W		EGPK STARs
ENUKU	561400N 0033819W	P600	
EPUNA	503000N 0140000W		SOTA landfall point. See also AIP Ireland
ERAKA	580000N 0100000W		DRA Entry and Exit Fix
ERDOG	592003N 0012504W	Y905	
ERGAB	540922N 0022312W	N601, UN601	
ERING	513526N 0013643E	L179, Y76, UL179, UY76	EGKK STARs
ERKEX	505241N 0011937E		EGKB STARs - EGLC STARs - EGMC STARs
ERLOT	551714N 0003506W	UM982, P15	
ERNAN	541644N 0072334W		DRA Entry and Exit Fix
ERNOK	514130N 0025644W	L9, N862, UN862	
ERSON	562748N 0041824W	N560, UN601	
ESKDO	551756N 0031215W	N601, UN601	EGPH STARs
ESTRY	533952N 0031542W		Traffic routing from/to EGNO/EGNH via WAL/PENIL.
ETARI	553000N 0150000W		NOTA. See also AIP Ireland
ETILO	573000N 0100000W		DRA Entry and Exit Fix
ETRID	510756N 0011615W	Q41, UQ41	
ETSOM	575331N 0093000W		NTFSR Entry Fix
ETVAX	505807N 0003556E	T420, UT420	EGLL STARs
EVBEV	574710N 0074041W		DRA Intermediate Fix
EVEXU	504116N 0003441W	N20, N859	EGLC STARs - EGKB STARs - EGMC STARs - EGHI STARs - EGHH STARs
EVMEK	514741N 0011218E	M84, UM84	
EVNAL	572431N 0093000W		Oceanic Landfall point
EVRIN	514656N 0063348W	UL607, UN34, UN40, UP4	
EVSEM	514350N 0012745W		EGHH STARs - EGHI STARs
EVSON	532127N 0013949W	M868, UM868	EGCN STARs
EXMOR	511043N 0032135W	N864, UM17, UM140, UN864	EGGD SIDs/STARs - EGFF SIDs/STARs
FENIK	554255N 0041731W	L612, P600, UL612	
FERIT	513759N 0003221E	L179, UL179, UM14	
FIMLI	511804N 0004006W		EGLL STARs
FINCH	513336N 0001059W	T420	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
FINDO	562209N 0032749W	UL613, UN610, UP58, UP600, UM982	DRA Entry and Exit Fix
FINMA	515947N 0010313W	L15, M605, UL15, UM605	EGGW STARs - EGSS STARs
FORTY	575700N 0003545E	UL7, UM86, UN583, UP60, UP600, UZ105	
FOYLE	560834N 0042256W	N560	En-route Hold - EGPF SIDs/STARs
FYNER	560256N 0050655W	L602	En-Route Hold - EGPF STARs

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	2.	3.	4.
GANKI	564548N 0025808W	P600	
GAPLI	500000N 0080000W	UL620, UL739, UM25, UM197, UN20, UN21	SOTA UIR Boundary
GARMI	500000N 0012250W	N867, UN867	
GARVA	574118N 0042941W	Y906	En-route Hold
GASGU	511224N 0005736W	N866	EGLL SIDs
GASKO	541329N 0015721W	P16, P18, Y250, UP18, UY250	EGCN STAR - EGCC STARs
GATRA	511752N 0063755W	UN28, UN34, UN58	
GAVEL	592300N 0012422W	Y905	En-Route Hold
GAVGO	513350N 0014236W	UL9, UL18	
GETNO	535548N 0032947W	L46	
GIBSO	504459N 0023107W	L620, M17, N514, UL620, UM17, UN514	EGGW STARs - EGSS STARs - EGKB STARs - EGLC STARs
GIBSU	564547N 0031610E	UN581, P5	
GIGTO	533801N 0040551W	L15, L70, Q4, UL15, UL70, UQ4	EGCC STARs
GIGUL	543626N 0031010E	UP1	
GILDA	513606N 0003501E	L610, UL610, UL620, UM14	
GILTI	513413N 0020318E	L179, UL179	
GINGA	565530N 0093000W		NTFSR Entry Fix
GINIS	532739N 0045129W	L975, UL975	
GIPER	510000N 0120000W		SOTA. See also AIP Ireland
GIPLO	533131N 0004723W	Y70, UY70	
GIRLI	544241N 0014811W	P18, UP18	EGNT SIDs
GIRVA	551108N 0045347W	P600	EGPH STARs - EGPF STARs
GISOK	513009N 0050728W	UL149, UN18	
GITUS	502000N 0054200W	UN20	
GIVEM	552754N 0001453E	UM90, UP58, P15	
GIVPO	531710N 0025209E	M604	
GIVUN	504358N 0004803W		EGHH STARs - EGHI STARs
GLESK	565400N 0024745W	P600	
GODLU	510958N 0011704E		EGKB STARs - EGLC STARs - EGMC STARs
GODOS	531457N 0032547E	M981, UM981, P1, UP1	
GODPA	525900N 0031001W	N864, UN864	
GOGIG	515330N 0031502W	N864, UN864	
GOGSI	511727N 0010002W	N621, UN621	EGLL SIDs
GOLES	533629N 0010500W	L975, Y70, UL975, UY70	EGCC STARs
GOLVO	542441N 0033508E	UL7, L74, UL74	
GOMOT	555510N 0003239W	UP59, L983	
GOMUP	570000N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix
GONUT	610000N 0043500W		Scottish/Reykjavik FIR Boundary Fix available below FL 255 only.
GOREV	560312N 0050000E	UM869	
GOSAM	554719N 0041202W	P600	EGPH SID
GOTNA	543541N 0053553W	P600	DRA Arrival Transition Fix
GOXUL	512132N 0001033W	L9, UL9	
GRICE	561148N 0034108W	N601, P600	EGPH SIDs/STARs - EGPF STARs
GROVE	522338N 0015544W		EGBB STARs
GUNPA	610000N 0000000E		UIR Boundary
GUNSO	490310N 0114606W		SOTA. See also AIP Ireland
GUNTU	533537N 0030954W	L70, N864, UL70, UN864	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
GUSSI	571247N 0040727W	N560	En-route Hold
HALIF	534406N 0013450W	UL613, UN590, L46	
HANKY	510646N 0010751W		EGHH STARs - EGHI STARs
HARDY	502816N 0002928E	M605, UM605	EGKK SIDs
HASTY	504342N 0003200E	M189	
HAVEN	552740N 0025947W	Y96	EGPH STARs - EGPF STARs
HAWKE	502227N 0000525E	L612, M189, UL612, UM189	
HAZEL	510019N 0005904W	L620, M185, UM185	EGLL STARs - EGGW STARs - EGSS STARs
HEIDI	520644N 0003724W	M189, N57	
HEMEL	514820N 0002510W	L610, Q3, T420, UL610, UQ3, UT420	
HERON	552035N 0050000W	N562	
HILLY	512006N 0001437E		EGLL STARs
HOGBA	511341N 0002943W		EGLL STARs
HOLLY	505312N 0000542W		EGKK STARs
IBOLU	562310N 0030803W	N864	
IBRAR	533154N 0034111W	Q4	EGCC STARs
IBROD	563000N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix - NTFSR Entry Fix
IDESI	515352N 0015308E	M20, P7, P49, Y6, UM20, UP49, UY6	EGGW STARs - EGSS STARs
IDEXA	532814N 0050951W	L975, UL975	
IDKOL	540543N 0015945W	P18, UP18	
IDOKI	495137N 0061139W	UM25, UN12	
IDOVO	521326N 0033304W	UP16, UT7	
INBAS	564200N 0041459W	N560	
INBOB	553625N 0050000E	M604	
INGUR	514242N 0025137W		EGGD STARs
INKEK	503853N 0003209W	N859	
INLAK	512841N 0013127W	UL18, UL179, UL607	
INLIM	515423N 0011913E		EGKB STARs - EGLC STARs
INPIP	545236N 0025346W	N601, UN601	
INPUT	551818N 0043905E	UL975, M604	
INREV	550857N 0030539W	N601, UN601	
INRUB	514910N 0035141W	L9	
INSUN	502343N 0061924W	UM142, UN34, UN160	
IPDOR	552239N 0031545W	N601, UN601	
IPNOX	541340N 0024222W	N57, UN57	
IPRIL	514029N 0001335W	UM197, N866	
IPSAD	552145N 0024114W	Y96	
IPSIR	540454N 0015657W	P17, UP17	
IRKUM	525948N 0052239W	L18	
IRKUN	505516N 0012800E	M91	
ITSUX	560300N 0033000E	T55	
ITVIP	511714N 0010312E	L10, M85, UL10, UQ70, Q70	
IVLOD	530746N 0030919W	N864, UN864	
IXURA	520405N 0012540W	L612, UL612	
JACKO	514409N 0012536E	L980, M189	EGKB STARs - EGLC STARs - EGMC STARS

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
KAPEX	504030N 0015100W	N621, UN63, UN621	
KARNO	525340N 0025354W	N862, UN862, UT7	
KATHY	503114N 0012000W	L980, N867, UL980, UN867	En-route Hold - EGKK STARs - EGLL STARs - EGGW STARs - EGSS STARs - EGKB STARs - EGLC STARs - EGMC STARs
KEGUN	531133N 0030901W		EGGP STARs
KELLY	535419N 0042151W	L10, UL10	DRA Entry and Exit Fix - EGCC STARs
KEMPY	520739N 0003846E		EGSS STARs
KENET	513114N 0012718W	L9, N14, UL9, UN14	EGHH STARs - EGKK SIDs/STARs - EGLL STARs - EGGW STARs - EGSS STARs - EGHI STARs - EGMC STARs - EGLC STARs - EGKB STARs
KEPAD	524835N 0022844W	L15, L151, UL15, UL151	
KESEG	600058N 0060056W	UN603, UP61	
KESIX	565700N 0140000W		NOTA landfall point. See also AIP Ireland
KESUP	511932N 0033917W	UM17, UP16	
KIDLI	514617N 0012141W	L151, N859, UL151, UN859	EGHH STARs - EGKK STARs - EGHI STARs
KLONN	582324N 0024944E	UP600	
KOGAD	493000N 0150000W		SOTA. See also AIP Ireland
KOKAL	585735N 0025338W	N560	
KOKIB	543000N 0140000W		NOTA landfall point. See also AIP Ireland
KOLAG	530237N 0031518E	L60, UL60	
KOLID	533426N 0024521W	L70, Y70, UL70, UP6, UY70	
KONAN	510751N 0020000E	L9, M84, UL9, UL607, UM84	EGKB STARs - EGLC STARs - EGKK STARs
KOPUL	513232N 0010814E	L610, Y76, UL610, UY76	EGLL STARs
KOTEM	500000N 0010314W	N863, UN863	
KUBAX	525634N 0025713E	UY70, N866	
KUGUR	553000N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix - NTFSR Entry Fix
KUKIS	514156N 0030437W		EGFF STARs
KUMIL	503431N 0013639W	M17, Q41, UM17	EGKK STARs - EGLL STARs
KUNAV	503054N 0010356E	N20, T421, Y8, UT421, UY8	EGKK STARs
KUVOX	580459N 0073624W	UP24	DRA Entry, Exit and Intermediate Fix
KUXEM	531511N 0024047W	P17, UP17	EGCC SIDs

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
LAGAV	565335N 0041210W	N560, UN610	
LAKEY	541420N 0025852W	L612, UL612	EGCC STARs
LAMAT	511807N 0030103W	N90, N862, UN90, UN862	
LAMIX	531829N 0004056W	L603, UL603, UT29	EGNM SIDs
LAMMA	555130N 0024603W	UN610	
LAMRO	570151N 0033309E	UP60, P5	
LAMSO	524358N 0025940E	L603, UL603	
LAMVI	534700N 0040358W	L10, UL10	
LANAK	554201N 0035619W		EGPF STARs
LANON	522552N 0042221W	L18, UL18, Q60	
LANPI	521115N 0052330W	N14, UN14, Q63	Only available during activation of EG D201A
LAPRA	520707N 0011236E	M20, P25, UM20	En-route Hold - EGGW STARs - EGSS STARs
LARCK	505442N 0002648E		EGKK STARs
LARDI	533616N 0033057E	L74, UL74, N866	
LARGA	545150N 0040912E	M604, P144, Z278	
LARLA	492241N 0070715W	UN512, UN521	
LASNO	483554N 0090000W		SOTA. See also AIP Ireland
LATMU	531525N 0020522E	P144	
LAVRI	511549N 0003449E	UL9	
LEDBO	523235N 0020608E	M604, N866	
LEDGO	511424N 0073405W	N160, UN83, UN160, UP72	
LEGRO	531935N 0013046E	UL602	
LELNA	495857N 0020623W	N621, UN621	EGJB STARs - EGJJ STARs
LESLU	510000N 0080000W	UL180, UM142, UN38, UN514, UP71	SOTA UIR Boundary
LESNI	573233N 0011622W	P600, UP600	
LESRA	552308N 0050000E	UL975	
LESTA	524427N 0010419W	N601, P6, Y250, UN601, UP6, UY250	EGGP STARs - EGCC STARs
LIBBA	554326N 0034443W		EGPF STARs
LIBSO	533129N 0000536E	UL975, UT29, L46, L90	EGCC STARs
LIFFY	532848N 0053000W	L975, UL975	
LINDY	512814N 0010257W	L151, UL9, UL151	
LIPGO	530350N 0053000W	L18, UL18	
LISBO	543130N 0060524W	L603	
LISTO	530836N 0021157W	L612, P18, UL612	EGLC STARs - EGGW STARs - EGSS STARs - EGCC SIDs - EGMC STARs - EGKB STARs
LIVSU	514149N 0005058E	L980, UL980	
LIZAD	493525N 0041949W	UL739, UN160	EGJJ SIDs
LOGAN	514451N 0013643E	L608, L980, P7, UL608, UL980	En-route Hold - EGLC STARs - EGLL STARs - EGGW STARs - EGSS STARs - EGKB STARs - EGMC STARs
LOMON	560346N 0043448W		EGPF SID
LOMVO	531616N 0051046W	Y124, UY124	
LONAM	535022N 0035633E	UL7, UM90, UN610	
LONLO	524649N 0020051W		EGNX STARs
LOREL	520050N 0000310W		EGGW STARs - EGSS STARs
LORKU	495618N 0022216W	UM195, UN63, N866	
LOVEL	531506N 0021628W	L612, UL612	
LULOX	502200N 0080000W	UN12, UN84, UP69	SOTA UIR Boundary
LUMBA	505644N 0001542E		EGKK STARs

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
LUSEN	603000N 0100000W		FIR/UIR Boundary - Not available for Flight Planning
LUSIV	554002N 0041441W	L612, UL612	EGPF SIDs
LUTIP	531522N 0044416W	Y124, UY124	
LUTOV	551422N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix
LYNAS	532633N 0042000W	L975, UL975	EGGP STARs - EGCC STARs
MABUG	494705N 0055612W	UL739, UN12, UN34, UT7	
MADAD	555447N 0014402W	P18, UP18, UP58, L983	
MAKUX	535830N 0045228W	L15	DRA Departure Transition Fix - EGCC STARs - EGGP STARs
MALBY	513533N 0020342W	L9	
MALUD	532448N 0033630W	L15, L975, UL15, UL975	EGGP STARs - EGCC STARs
MAMUL	532505N 0011648W	L60, L603, Y250, UL60, UL603, UL613, UY250	EGCN STAR
MANGO	514134N 0004726E	L980, UL620, UL980	
MANIG	494707N 0031534W	UN26	
MAPLE	522336N 0014051W		EGBB STARs
MARUK	501447N 0020420W	N621, UM195, UN621	
MASOP	540921N 0042115W		DRA Arrival Transition and Intermediate Fix
MATCH	514645N 0001500E	Q295	EGGW SIDs - EGWU SIDs
MATIK	610000N 0080400W	UL612	
MAVET	540257N 0033104W		NTFSR Entry and Exit Fix
MAYLA	513741N 0004312E		EGMC STARs
MEDOG	515701N 0033258W	UL18, UN14	
MEGEL	522058N 0020425E	P25	EGGW STARs - EGSS STARs
MERLY	512000N 0050000W	UL22, UL149, UL180, UM140, UN21	En-Route Hold
MIMBI	513257N 0014136W	L9	
MIMKU	560000N 0100000W	N562	NOTA UIR Boundary - DRA Entry and Exit Fix - NTFSR Entry Fix
MIMVA	530603N 0031813E	L602, UL602	
MIPVO	521329N 0013609E	P25	
MIRSI	533217N 0024242W		EGCC STARs
MITSO	533907N 0005338W	L46	
MIVLA	504630N 0011558W		EGHH STARs - EGHI STARs
MOCHA	593256N 0012159W	Y905	
MODGO	602643N 0073955W	UL612, UP61	
MOGLI	521830N 0001609W	UL613, UP6	
MOGLO	553000N 0140000W		NOTA landfall point. See also AIP Ireland
MOGMO	532443N 0011251W	L60, UL60	
MOGTA	531008N 0023810W	Y53, Y124, UY53, UY124	
MOKBU	511610N 0012914E	UQ70, Q70	
MOLAK	543649N 0093023W		DRA Entry and Exit Fix
MOLIX	524919N 0030407E	L17	
MONTY	525334N 0031026W	N42, N864, UN42, UN864, UP16	EGGP STARs - EGCC SIDs/STARs
MOPAT	512955N 0070537W	UL22, UP73	
MORAG	524510N 0053000W		NTFSR Entry Point
MOSIS	490026N 0071253W	UN490, UN491	
MOSUN	515338N 0022610W		Tactical Way Point only for use by flights arriving and departing EGBB via the adjacent ATS Route structure.
MOTOX	505728N 0012800E	UL15	
MOVEN	520343N 0014847W		EGHH STAR - EGHI STAR

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
MULIT	510047N 0032319W	N864, UN864	EGFF Training Flights
NAKID	494254N 0043723W	UM25, UN80, UN83, UN84, UN160	
NALAN	610000N 0060000W		Scottish/Reykjavik UIR Boundary Fix.
NALAX	532900N 0002406E	L46, UL602	
NANEV	573429N 0022714W	Y904	
NANTI	530815N 0023401W	L8, Y53, UL8, UY53	EGGP SIDs/STARs
NANUM	520135N 0013747W	L151, UL151	Oxford Airways departure joining CAS at KENET
NAPEX	531223N 0005140W	M16	
NATEB	550218N 0014154W	P18, UN610, UP16, UP18, UL602, M79, UM981, N97, P15, Y96	
NATKO	532712N 0043807W	L975, UL975	
NAVEL	553513N 0005031E	UP59, P15	
NAVOV	514831N 0031525W	N864, UN864	
NAVPI	523250N 0025026E		
NAVSO	551322N 0034849W	L612, UL612	
NAXAT	514721N 0015756W		EGVN Departures for L9
NAXIL	565724N 0024326W	P600	
NEDEX	515237N 0012820W	L151, UL151	EGHH STARs - EGHI STARs
NEDUL	503958N 0013252W	Q41	EGHH STARs - EGHI STARs
NEKAP	514335N 0051726W	UL149, UL607	
NELBO	542924N 0051810W	P6, P620	DRA Arrival and Departure Transition Fix
NELSA	535148N 0021105W	N601, UN601	EGNM SIDs
NENVO	524238N 0025315W	N862, UN862	
NEPNA	512958N 0002657E		EGGW SIDs
NEPSO	541417N 0011611E	N97	
NERTU	490000N 0140000W		SOTA landfall point. See also AIP Ireland
NESDI	570718N 0040848W	N560	
NESON	541346N 0070724W		Co-ordination point on Shannon/Scottish FIR Boundary
NETKI	550000N 0140000W		NOTA landfall point. See also AIP Ireland
NETVU	502445N 0002854E		EGKB STARs - EGKK STARs - EGLC STARs - EGMC STARs
NEVIL	500000N 0002206W	M189	EGKB STARs - EGKK STARs - EGLC STARs - EGMC STARs
NEVIS	564143N 0043241W	UN601, UP24	
NEVRI	540406N 0061611W	N34	DRA Entry Fix
NEXUS	561243N 0015041W	P18, UM90, UP18, UP59, N96	
NIBOG	550000N 0100000W		NOTA UIR Boundary - DRA Entry and Exit Fix - NTFSR Entry Fix
NIGIT	511847N 0011015W	P2, UL18, UP2	EGKK STARs - EGLL STARs - EGGW STARs - EGSS STARs
NIGOL	545418N 0022932E	UL975	
NILGI	524835N 0031050W	N864, UN864	
NILON	513546N 0003804E	L610, UL610	
NIMAT	535754N 0054432W	P620	DRA Exit Fix
NINEX	585120N 0093000W	UN591, UN593, UP24, UP59	NTFSR Entry Fix and DRA Entry Fix
NIPIT	542709N 0082410W		DRA Entry and Exit Fix
NISBI	532129N 0003921W	L60, UL60	
NITON	523312N 0031201W	N864, P17, UN864, UP17, UT7	
NIVKO	505606N 0003228E	T421, UT421	
NIVUN	573412N 0040813E	UM82, P5	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
NOKIN	530436N 0025258W	N862, P16, P17, UN862, UP16, UP17	EGBB STARs - EGNX STARs
NONVA	513846N 0012144E	M84, UM84	
NORBO	553545N 0044543W	L186, T256, UT256, Y96	EGPF SIDs
NORLA	513709N 0065211W	UM140	
NORRY	512847N 0010724W	L9, Q41, UL9, UQ41	EGGW STARs - EGSS STARs
NOTGI	503510N 0002503W	N20	EGHI STARs - EGHH STARs
NOTRO	502612N 0031021W	N90, Y91, UM30, UN32, UN90, UY91	
NOVBA	561200N 0031051W	N864	
NUBRI	512017N 0011356W	Y321	EGHH STARs - EGHI STARs
NUDNA	520355N 0005017E		EGKB STARs - EGLC STARs
NUGBO	515822N 0000412W	M183	EGSS SIDs
NUGRA	530146N 0021814W	Y53, UY53	EGLL STARs - EGNX STARs
NUMPI	540840N 0053536W	P620	DRA Arrival Transition Fix
NUMPO	513636N 0031701W	N864, P2, UL607, UN864, UP2	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
OBOXA	541036N 0015420W	P17, Y250, UP17, UY250	
OBUNI	535440N 0024433W	L612, UL612	
ODIGI	551144N 0032539W		EGPF STARs
ODMIX	565812N 0012803E	UL7, UN581	
ODPEX	592436N 0093000W		DRA Intermediate Fix
ODROB	513915N 0015445E	Y4, Y76, UY4, UY76	
ODVIK	510957N 0002909E	Y311, UY311	EGKK SIDs
ODVOD	520756N 0000853E		EGKB STARs - EGLC STARs
OGAGI	492722N 0050157W	UM142	
OGTUG	534012N 0050850W	L70, UL70	
OKAMA	531015N 0024622E	L602, UL602, M604	
OKESI	512636N 0020342W	P2, UP2	En-Route Hold
OKPAL	564921N 0020435W	P18, UP18	
OKTAD	514904N 0023246W	N14, UN14, Q60	
OKTEM	524310N 0031115W	N864, UN864	
OKVAP	505749N 0011956E		En-route Hold - EGKB STARs - EGLC STARs - EGMC STARs
OLIVE	522412N 0015612W		EGBB STARs
OLNEY	520740N 0004403W	M189, T420, P166	EGBB STARs - EGGW SIDs
OLPOP	540532N 0023208W	N57, UN57	
OMOKO	485020N 0120000W		SOTA. See also AIP Ireland
ORIST	500000N 0015042W	Y110, UY110	
ORSUM	570307N 0051741W	UL612, UP24	
ORTAC	495957N 0020018W	L980, M185, Q41, UL980, UM185	EGJA Arrivals - EGJB SIDs/STARs - EGJJ SIDs/STARs
ORTAV	593000N 0100000W		FIR/UIR Boundary
ORVIK	593818N 0004009E	UM125	
OSBON	610000N 0050000W		Scottish/Reykjavik UIR Boundary Fix.
OSBOX	564823N 0124806W		NOTA. See also AIP Ireland
OSKOT	522030N 0020330W		EGBB STARs
OSLEL	572858N 0013158W	P600	
OSLOR	532505N 0034303W	L975, UL975	
OSMEG	550826N 0040603W	T256, UT256	
OSPOL	500900N 0001108W	M189	EGKB STARs - EGKK STARs - EGLC STARs - EGMC STARs
OTBAP	520612N 0013800E	M604	
OTBED	531717N 0000155E	L60, Y70, UL60, UY70	EGCC STARs
OTBUN	551650N 0022600W	Y96	
OTSID	511023N 0001351W	N16, UN16	
OVDAN	575321N 0001818E	P600, UP600	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
PAVLO	505605N 0055344W	UN514, UP620	
PEDIG	524448N 0014310W	M605, Y53	EGGP STARs - EGLC STARs - EGGW STARs - EGSS STARs - EGMC STARs - EGKB STARs
PELET	543912N 0032552E	UL7, UP58, UL74	
PEMAK	492656N 0061305W	UN502, UT7	
PEMOB	520838N 0050941W	M17, N14, UM17, UN14, UN18, UN24, UN30	
PEMOS	610000N 0040000W		Scottish/Reykjavik UIR Boundary Fix.
PENIL	533657N 0033949W	L10, L28, L70, UL10, UL28, UL60, UL70	EGGP STARs - EGCC STARs
PENUN	570636N 0045011E	Z278	
PENUX	510632N 0003412E	UM140	
PEPIN	595931N 0000054E	UP612	
PEPIS	511148N 0011437W	Q41, UQ41, Y321	EGHH STARs - EGHI STARs
PEPOD	541616N 0053409W	L15, L603	DRA Departure Transition Fix
PEPUL	521603N 0015314W	L151, UL151	EGHH STARs - EGHI STARs
PERUP	514234N 0025632W	N862, UN862	
PETIL	555620N 0050000E	L983, M83	
PETOX	573333N 0014902W	Y905	En-Route Hold
PETUK	531436N 0042114W	Y124, UY124	
PHILI	492831N 0070117W	UN502	
PIGOT	522943N 0010407W		EGNX STARs
PIKIL	560000N 0150000W		NOTA. See also AIP Ireland
PIKOD	492438N 0051559W	UN502	
PILIP	502003N 0010026W	N863, UN863	
PIPAR	560700N 0031206W	N864	
PIPEM	580923N 0034419W	UL613, UN583	
PIPIN	523636N 0005630W	N601, UN601	
PIXAM	520447N 0015650E	P44, UP44	
PIXUP	520151N 0010640W	L15, UL15	
PLYMO	502045N 0043737W		En-Route Hold
POMAX	513138N 0020452W		EGGD STARs
POMPI	504548N 0005715W	N514, UN514	
POTON	520504N 0002538W	M189, N601, UN601	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
RAMID	525728N 0023000E	L17	
RAMOX	533937N 0045022W	L70, UL70	
RAPIX	512638N 0020000E	L610, UL610	
RAPUM	545518N 0015258W	UP16	
RATKA	493000N 0080000W	UN502, UN512, UN521	SOTA UIR Boundary
RATLO	515929N 0014055E	P44, UM197, UP44	
RATPU	565532N 0020659W	P18, UP18	
RATSU	610000N 0100000W	UN610, UP61, UP612	
RAVDI	592957N 0012242W	Y905	
RAVLO	525501N 0030854E	UY70	
REDFA	520653N 0022917E	L620, M183, UL620, UM183, UM197	
REGSI	525119N 0000151E		
REKNA	561029N 0033000E	M83, P15	
REMSI	535737N 0034932W	UL603, UP6, L46	DRA Entry and Exit Fix
RESNO	550000N 0150000W		NOTA. See also AIP Ireland
RETSI	523042N 0025233W	N42, N862, UN42, UN862	EGGD STARs - EGFF STARs
REXAM	530400N 0030937W	N864, UN864	EGCN STAR - EGGP SIDs - EGCC STARs
RIBEL	540058N 0021723W	N601, P16, UN601, UP16	EGPF STARs - EGPK STARs
RIGDI	501615N 0055929W	UN20	
RIGVA	532809N 0031858W	L10, UL10	
RIGVU	584736N 0020918E	UZ105	
RIKUD	542940N 0010208W	UL602	
RILES	515655N 0025522W	L180, N862, UL180, UN862	EGGD STARs - EGFF STARs
RIMBU	514222N 0020943E	Y76, UY76	
RIMOL	573233N 0040230W	N560, Y906	
RIMTO	534303N 0012559W	Y250, UY250, L46	
RINGA	542354N 0053416W	L10	
RINIS	515430N 0021921E	M20, UM20	
RINTI	510158N 0013656E	L10, UL10	
RIPNO	545632N 0034415W	T256, UT256	
RISDU	573631N 0014824W	Y905	
RISIN	514139N 0012628W		EGHH STARs - EGHI STARs
RISLA	530151N 0025312W	L15, N862, UL15, UN862	
RITSI	554209N 0013925W	P18, UP18, UM982	
RIVOT	562429N 0004637E	UL619, UM82, UM89, UN591, M83	
RIXUN	610000N 0030000W		Scottish/Reykjavik UIR Boundary Fix.
ROBBO	555323N 0045437W		EGPF SIDs/STARs
ROBEM	552733N 0010114W	UM82, UP16, UM982	
ROBVA	524804N 0025334W	N862, UN862	
RODEL	503000N 0150000W		SOTA. See also AIP Ireland
RODOL	531417N 0015143W	L28, P6, UL28, UM65, UP6	
RODSI	544756N 0025335E	UP58, UP1	
ROGAG	531406N 0001745W	L603, UL603	
ROGBI	521747N 0012006W		EGLC STARs - EGGW STARs - EGSS STARs - EGMC STARs - EGKB STARs
ROKAN	533948N 0031120E	M604, M982, UM982, N96, N97, P1, UP1	
ROKSI	503013N 0021251W	N866	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
ROKUP	530102N 0013057W		EGNX STARs
ROLEX	532542N 0035804W	L975, UL975	EGGP STARs
ROLUM	541820N 0031831E	UM90, UP1, P13	
ROPAL	550817N 0035643E	UL975	
ROPMU	520614N 0002917E		En-route Hold - EGLC STARs - EGKB STARs
ROSUN	534008N 0022057W		EGCC STARs
ROTEV	540144N 0060358W	P600	DRA Entry Fix
ROTNO	505126N 0004641E	T420, UT420	EGLL STARs
ROVNI	535313N 0003901E	UL975, M79	
ROXAT	532449N 0030000E	M981, UM981	
RUBEX	551912N 0065607W	N552	
RUBMI	501646N 0021943W	N866	
RUBOV	541222N 0043553W	P6	
RUDMO	504640N 0010127W		En-route Hold - EGHI STARs - EGHH STARs
RUGER	532858N 0032652W		EGGP STARs
RUGID	572209N 0045355W	UN610, UP59, M83	DRA Entry and Exit Fix

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
SABER	514214N 0005658E	L980, UL980	En-route Hold - EGLL STARs
SALCO	494414N 0033146W	UM30, UN22, UN546, UN864	
SAMON	511921N 0072504W		NTFSR entry point
SANBA	530822N 0022003W	N859, UN859	EGCC SIDs
SANDY	510351N 0010403E	L613, M189, N57, N601, UL15, UL613, UN57, UN601, Y803	EGLL STARs
SAPCO	523225N 0012125W	N57, Y53, UN57	
SETEL	540045N 0022609W	N57, UN57	EGCN STAR - EGCC STARs
SHAPP	543000N 0023738W	N601, UN601	
SILVA	515051N 0010019W	M183, M605, UM605	
SIREN	513415N 0015229W	L9	
SIRGO	513746N 0003847E	L179, UL179, UL620	
SITET	500600N 0000000E	L151, N859, UL151, UN859	
SIVBU	532755N 0003444W	Y70, UY70	
SIVDA	522122N 0000147E	P155	
SKERY	500000N 0031023W	N862, UN862	EGJA Arrivals - EGJB SIDs/STARs - EGJJ SIDs/STARs
SKESO	494929N 0030203W	N90, N862, UN90, UN862	
SKINA	524817N 0014623W		EGBB STARs
SLANY	520931N 0055032W	L9, UL9, UN24	
SLYDA	541204N 0050515W	L10	
SMOKI	574637N 0023556W	Y904	En-route Hold
SOBDO	500426N 0070700W		Tactical Way Point to assist flights to route clear of the South West MDA between LULOX and LND
SOMAX	500000N 0150000W		SOTA. See also AIP Ireland
SOMVA	521826N 0023838E	P44, UP44, P155	
SONDO	520506N 0014842E	M183, P137, UM183, UP137	
SONEX	532953N 0021021W	L975, UL60, UL975	EGCC SIDs
SONOG	520620N 0021610E	M183, P7, Y4, UM183, UY4	
SONOL	530005N 0023000E	UY70	
SOPAX	533849N 0042708W	L70, UL70	
SOPEK	530632N 0023000E	L60, UL60, L989	
SOPIT	515730N 0010626W		EGLL STARs
SOPTO	551820N 0050000E	P144	
SOSAR	610000N 0020000W		Scottish/Reykjavik UIR Boundary Fix.
SOSIM	534856N 0043030W	L15, L28, UL15, UL28	EGCC STARs - EGGP STARs - DRA Exit Fix
SOTUN	541036N 0033737E	UM90, L74, UL74	
SOVAT	504646N 0012800E	L613, UL613	EGLC STARs - EGKB STARs - EGMC STARs
SOVED	560000N 0140000W		NOTA landfall point. See also AIP Ireland
SOXON	585806N 0035222W	UL613, UM86	
SOXUX	503546N 0005545E		EGLC STARs - EGKB STARs - EGMC STARs
SPEAR	513434N 0004201E		EGMC STARs
STAFA	525141N 0021435W	L8, P18, UL8	EGBB STARs
STIRA	560802N 0035001W		EGPH STARs - EGPF STARs
STOAT	520133N 0000115W	UL613, UM14	
SUBIP	502644N 0005306E	M8, M733, UM8, UM733	
SUBUK	542248N 0031711W	N864, UN864	
SUMIN	551946N 0040318W		EGPK STARs
SUMUM	513814N 0020628E	L608, Y6, UL608, UY6	EGLC STARs - EGKB STARs - EGMC STARs
SUNOT	570000N 0150000W		NOTA. See also AIP Ireland

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
SUNUP	512731N 0015227E	L610, UL610	
SUPAP	492602N 0054922W	UN502, UP620	
SUPEL	531340N 0003528E	Y70, UY70, L90	
SUPIT	571957N 0070506W		DRA Intermediate Fix
SURAT	555456N 0033000E	UM869, L983	
SUSIS	553617N 0002102W	UP16, UP58	
SUSIX	503700N 0005803W	N863, UN863	
SWANY	513334N 0040748W	UL180, UM17	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
TABEN	512149N 0011022W	Q41, UQ41	
TABIS	520032N 0002644E		EGGW STARs
TADAL	533514N 0030135W	L8, L70, UL8, UL70	
TADEX	545124N 0081401W		DRA Intermediate Fix
TAKAS	490000N 0080000W	UN490, UN491	SOTA UIR Boundary
TALGA	515730N 0031444W	N864, UN864, Q60	EGGD STARs - EGFF STARs
TALIG	493059N 0054804W	UN34, UP620	
TAMEL	484343N 0102950W		SOTA. See also AIP Ireland
TANET	512658N 0005532E	Y76, UY76	EGLL STARs
TARTN	554302N 0030819W		EGPH STARs
TAWNY	513846N 0000906E		EGLL STARs
TEBRA	512920N 0013643E	L610, UL610	EGKK STARs
TEDSA	520303N 0010739E	M183, UM183	
TELBA	523952N 0021907W	L151, P18, UL151	
TENDO	540144N 0001447E	M79	
TENSO	533602N 0021227W	UL603, UM65	
TERKO	513732N 0004448E	L179, UL179	
TESDO	500726N 0070700W	UN12, UN20	
TEVMO	511025N 0012459E		EGKB STARs - EGLC STARs
TEVSI	512101N 0010301W	T71, UT71	
THRED	502955N 0013950W	Q41	EGHH STARs - EGHI STARs
TIGER	510402N 0002622E	T420, UT420	En-route Hold - EGKK SIDs - EGLL STARs
TILNI	543251N 0015118W	P18, UP18	EGCC STARs
TIMBA	505644N 0001542E		EGKK STARs
TIMPO	523332N 0010950W	T420, UT420	
TINAC	561503N 0050000E	T55	
TINAN	504000N 0032654W	N864, UN864	EGGD STARs - EGFF STARs
TINDI	540214N 0031529E	P1, UP1	
TIPAN	543554N 0042356E	UM185, N866	
TIPIL	531000N 0014423W	M868, N57, UM868	EGCN STAR
TIPOD	532608N 0031705W		EGGP STARs
TIPTA	544813N 0013641W	UM82, UP17	
TIVER	504833N 0032526W	N864, UN864	EGGD STARs - EGFF STARs
TIXEX	520748N 0010043W		EGLC STARs - EGKB STARs
TOBID	521300N 0012759W		EGLL STARs
TOBIX	513617N 0011651E	L179, UL179	
TOBMO	564538N 0062811W	Y958	
TOLSA	530737N 0030629E	L602, UL602, N866	
TOMMO	511852N 0002146W		EGLL STARs
TOPPA	532409N 0033341E	L74, UL74, M982, UM982	
TOPRO	515442N 0031457W	N864, UN14, UN864	
TORGO	530757N 0031559W		EGGP STARs
TOSVA	514037N 0020426E	Y6, UY6	
TOTRI	514630N 0001148E	Q295	
TRIPO	514247N 0010458E	L980, UL980	EGLL STARs
TUBSU	520406N 0014028W	L151, UL151	
TUGPO	513710N 0005452E	L179, UL179	
TULTA	483437N 0080000W		SOTA. See also AIP Ireland and AIP France
TUMTI	530440N 0013615W	UP6	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
TUNBY	511008N 0001929E		
TUNSO	550640N 0045741W	P600	EGPH STAR
TUPEM	535017N 0032855W	UP6	
TURLU	500435N 0080000W		NTFSR Entry Point
TUVDO	533540N 0033644W	L10, UL10	
TUXOS	555824N 0073135W		DRA Intermediate Fix
TWEED	554037N 0031638W		EGPH STARs
UDEGO	535842N 0040250W	P6	
UGBUD	514714N 0033910W	L9	
UGNUS	514232N 0020823W	N14, UN14	
ULLAP	575400N 0051009W	Y906	
ULSAX	533554N 0015700W	N601, UN601	
UMBAG	522052N 0004657E	P137, UP137, P5, P155	
UMBEL	540144N 0002907W	UL602	
UMBUR	512733N 0000708E		EGHH STARs - EGHI STARs
UMKIL	531106N 0023723W	L8, UL8	
UMOLO	520803N 0031357W	N864, UN864	
UMOPO	541803N 0044953W	P6	
UMTUM	511227N 0010103E	L9, M87, UL9	EGKB STARs - EGLC STARs
UNBIG	514427N 0033502W	UP16	
UNDUG	504724N 0002530E	M733, UM733	En-route Hold - EGGW STARs - EGSS STARs
UNDUX	533830N 0041839W	L70, UL70	
UNGAP	522129N 0012339W	M189, P155	EGBB SIDs
UNIGO	533340N 0013339W	L975, UL975	
UNSAD	513340N 0005746E	L610, UL610	
UNURO	552111N 0032102W	N864, UN864	
UPDUK	523427N 0005630W		EGNX STARs
UPGAS	551441N 0050000E	N866	
UPGET	563935N 0020050W	P18, UP18	
UPTON	533513N 0011803W	L975, Y250, UL975, UY250	EGCN SIDs/STARs - EGCC STARs
UTAVA	515847N 0000419W	Q75	EGSS SIDs
UTOGU	550740N 0030443W	N601, UN601	
UTUXA	530030N 0021313W	N859, P18, UN859	
UVAVU	542500N 0015346W	P18, UP18	
VABIK	511447N 0020000E	M140, UQ70, Q70	
VABKA	531808N 0024410W	L8, Q4, UL8, UQ4	
VADNO	572711N 0033738W	UL613, UN581	DRA Entry and Exit Fix
VALBO	550743N 0050000E	UL619	
VAMEB	540010N 0024832W	L612, UL612	
VAPID	511514N 0010242W	N859, T71, UL18, UN859, UT71	
VATON	512604N 0002056W		En-route Hold - EGGW STARs - EGSS STARs
VATRY	523316N 0053000W	M17, UM17, Q63	
VAXIT	563215N 0050000E	UN581, UP60, P15	
VEGAR	530234N 0015823W		EGNX STARs - EGBB STARs
VEGUS	532401N 0002111W	Y70, UT29, UY70	
VELAG	522436N 0010050W		EGNX STARs
VENAS	541820N 0033908E	UL7, L74, UL74, M604	
VENER	543000N 0150000W		NOTA. See also AIP Ireland
VEXEN	500822N 0014934W	L980, Y110, UL980, UY110	

ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS (continued)

Name Code	Coordinates	ATS route or other route	Terminal area
1.	**2.**	**3.**	**4.**
VIDOK	522439N 0020231W	L151, UL151	
WAFFU	503457N 0002059E	M8, M189, M605, Y8, UM8, UM189, UM605, UY8	
WEALD	511951N 0000205E		EGLL STARs
WELIN	521450N 0005108W	N57, T420, UN57, UT420	EGBB STARs EGNX STARs
WESUL	514015N 0002909E	L980, UL980, UM14	
WILLO	505906N 0001130W		EGKK STARs
WIZAD	510700N 0005711E	M140	EGKK SIDs
WOBUN	520110N 0004400W	L10, UL10	EGLL SIDs
WOTAN	513726N 0022006W	L9	EGGD SIDs
XAMAB	501216N 0001553E	L612, UL612	
XAMAN	514705N 0021327E	L980, P49, UL980, UP49	EGLC STARs - EGKB STARs - EGMC STARs
XAPOS	531729N 0013751W	N601, UN601, M16	
XAVAP	491402N 0060835W	UN521	
XIDIL	502106N 0003829E	M605, UM605	

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ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS

Name Lateral Limits	Upper - lower Limit System/means of activation announcement/information for Civil Flights	Remarks and time of activity
1	2	3
Air combat and exercises		
MTA EAST ANGLIAN (EAMTA) - AREA A 525836N 0003322W - 524210N 0015344E - 523947N 0015344E - 522528N 0011245E - 522624N 0000434W - 525836N 0003322W	Upper limit: FL550 Lower limit: FL245	Because of the nature of the military activity within the East Anglian and North Wales MTAs, no Air Traffic Services can normally be provided within this airspace during their periods of activation. For exemptions, see ENR 1.1, paragraph 1.6.3.5. **Hours:** Mon-Thu 0830-2300, Fri 0830-1800 UTC Winter (Summer 1hr earlier). ***Note:*** *Area A may also be booked 0800-0830 UTC Winter (Summer 1hr earlier) by NOTAM. Aircrew wishing to use this area between these times are to book via the Military Airspace Booking Co-ordination Cell (Tel: 01489-612495).* **Remarks:** **Penetrating routes:** P5, P144 and UM185. **Adjacent routes:** M16, N866, P155, UL603, UL613 and UP6.
MTA NORTH WALES (NWMTA - NORTH HIGH) 531810N 0050753W - 531505N 0034316W - 530603N 0032604W - 520911N 0033007W - 531234N 0052117W - 531810N 0050753W	Upper limit: FL660 Lower limit: FL285	**Hours:** Activation by NOTAM, to be issued by D-1 (1100 Winter; 1000 Summer). Exceptionally, activate by NOTAM at 2 hours notice for weekdays and 36 hours for weekend/PH activity. **Remarks:** **Adjacent Routes:** UL15, UL975 and UN864. **Traversing Route:** Those sections of UP16 UNBIG to BERUL to MONTY and UY124 and UT7 within the bounds of NWMTA (North High) may only be used outside the NWMTA notified hours of activity.
MTA NORTH WALES (NWMTA - NORTH LOW) 531810N 0050753W - 531505N 0034316W - 530603N 0032604W - 520911N 0033007W - 531234N 0052117W - 531810N 0050753W	Upper limit: FL285 Lower limit: FL195	**Hours:** Mon-Thu 0800-1800, Fri 0800-1700 Winter; Mon-Fri 0700-1700 Summer. Winter/Summer, Sat and Sun occasional use subject to NOTAM action. ***Note:*** *Activation beyond the published hours is permitted on weekdays, weekends and PH. Notice is required of changes to Swanwick (Mil) West Supervisor, 2 hours for weekdays and 36 hours for weekend/PH activity.* **Remarks:** **Adjacent Routes:** (U)L15, (U)L975 and (U)N864. **Traversing Route:** Those sections of UP16 UNBIG to BERUL to MONTY and (U)Y124 within the bounds of NWMTA (North Low) may only be used outside the NWMTA notified hours of activity. **NOTAM** action for weekend/PH activation to be taken by SATCO Valley.
MTA NORTH WALES (NWMTA - SOUTH HIGH) 531234N 0052117W - 520911N 0033007W - 520149N 0033037W - 520911N 0043030W - 523827N 0051555W - 524529N 0052146W - 531224N 0052141W - 531234N 0052117W	Upper limit: FL660 Lower limit: FL285	**Hours:** Activation by NOTAM, to be issued by D-1 (1100 Winter; 1000 Summer). Exceptionally, activate by NOTAM at 2 hours notice for weekdays and 36 hours for weekend/PH activity. **Remarks:** **Adjacent routes:** UM17, UN14 and UN864. **Traversing routes:** UL18, UP16 and UT7. The section of UL18 between MEDOG and LIPGO and UP16 between UNBIG to BERUL and UT7 between NITON and ASRAX that traverse the NWMTA (South) may only be used outside the hours of the NWMTA (South) activity, or at short notice as directed by ATC, when operations in EG D201, D201B, D201C, and D201D terminate earlier than published, and no military operations are taking place within the NWMTA (South). The authority for the tactical use of UL18 in these circumstances is vested in the Military Airspace Manager at Swanwick (Mil). Additionally, L18 between LANON and LIPGO may be used at short notice under the same conditions.
MTA NORTH WALES (NWMTA - SOUTH LOW) 531234N 0052117W - 520911N 0033007W - 520149N 0033037W - 520911N 0043030W - 523827N 0051555W - 524529N 0052146W - 531224N 0052141W - 531234N 0052117W	Upper limit: FL285 Lower limit: FL195	**Hours:** Mon-Thu 0900-1800, Fri 0900-1700 Winter, Mon-Fri 0800-1700 Summer. Winter/Summer, Sat and Sun occasional use subject to NOTAM action. ***Note:*** *Activation beyond the published hours is permitted on weekdays, weekends and PH. Notice is required of changes to Swanwick (Mil) West Supervisor, 2 hours for weekdays and 36 hours for weekend/PH activity.* **Remarks:** **Adjacent routes:** UM17, UN14 and UN864. **Traversing routes:** (U)L18 and UP16. The section of (U)L18 between MEDOG and LIPGO and UP16 between UNBIG to BERUL that traverse the NWMTA (South) may only be used outside the hours of the NWMTA (South) activity, or at short notice as directed by ATC, when operations in EG D201, D201B, D201C, and D201D terminate earlier than published, and no military operations are taking place within the NWMTA (South). The authority for the tactical use of (U)L18 in these circumstances is vested in the Military Airspace Manager at Swanwick (Mil). Additionally, L18 between LANON and LIPGO may be used at short notice under the same conditions. ***Note:*** *When not required by Military users, the NWMTA (South) may be deactivated during normal hours. Subsequent re-activation may be*

ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS (continued)

Name Lateral Limits	Upper - lower Limit System/means of activation announcement/information for Civil Flights	Remarks and time of activity
1	**2**	**3**
		requested by providing 30 minutes notice to the Swanwick (Mil) West Supervisor. **NOTAM** action for weekend/PH activation to be taken by SATCO Valley.
Military operations		
TRA 001 515440N 0050309W - 513946N 0032432W - 502257N 0033739W - 494809N 0030940W - 485000N 0080000W - 510000N 0080000W - 511106N 0074003W - 505627N 0071802W - 510318N 0070630W - 511741N 0072805W - 512528N 0071351W - 512400N 0065305W - 514034N 0060027W - 515234N 0060431W - 515440N 0050309W	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0830 to 1700 UTC Winter; Mon-Fri 0730 to 1700 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM.
TRA 002 512608N 0031050W - 511935N 0014320W - 511617N 0012057W - 510123N 0012711W - 504123N 0031845W - 512608N 0031050W	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0830 to 1700 UTC Winter; Mon-Fri 0730 to 1700 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM. **Remarks:** TRA 002 does not include controlled airspace within AWYs N862 and N90 during the hours: 1600 Fri to 0800 Mon UTC Winter (Summer 1hr earlier) and English PHs.
TRA 003 531755N 0010606W - 530618N 0000428W - 531232N 0000108W - 525820N 0020321E - 525206N 0023000E - 524010N 0023000E - 523704N 0025356E - 522819N 0024644E - 522842N 0023414E - 523412N 0015410E - 522510N 0012816E - 522630N 0002732W - 530016N 0010043W - 531755N 0010606W	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0830 to 1700 UTC Winter; Mon-Fri 0730 to 1700 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM.
TRA 004 550806N 0043002W - 550603N 0041419W - 543019N 0032659W - 534103N 0031910W - 534150N 0033653W - 535436N 0040740W - 540248N 0035759W - 541618N 0043113W - 543138N 0050836W - 545121N 0050119W - 550250N 0045120W - 550806N 0043002W	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0830 to 1700 UTC Winter; Mon-Fri 0730 to 1700 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM.
TRA 005 551735N 0025427W - 551724N 0024532W - 550049N 0015445W - 542156N 0020653W - 542156N 0021546W - 544628N 0023625W - 551735N 0025427W	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0900 to 1700 UTC Winter; Mon-Fri 0800 to 1600 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM.
TRA 006 554053N 0021314E - 541108N 0032313E - 534412N 0030000E - 531608N 0030000E - 532000N 0023000E - 531139N 0023000E - 530815N 0020534E - 532204N 0000431E - 534114N 0010214W - 534312N 0011636W - 541152N 0014544W - 550000N 0013017W - 550000N 0004703W - 551710N 0001428E - 554053N 0021314E	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0830 to 1700 UTC Winter; Mon-Fri 0730 to 1700 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM.
TRA 007A 571946N 0014810W - 571437N 0020959W - 562341N 0031445W - 561400N 0033259W - 560700N 0032938W - 560700N 0025608W - 560008N 0024849W - 553805N 0025111W - 552606N 0023655W - 550637N 0013731W - 550218N 0014154W - 550101N 0012957W - 550000N 0013017W - 550000N 0005916W - 555000N 0011800W - 561750N 0012507W - 571946N 0014810W	Upper limit: FL245 Lower limit: FL195	Access requirements for civil aircraft are specified in ENR 1.1, paragraph 5.1.5. **Hours:** Mon-Fri 0830 to 1700 UTC Winter; Mon-Fri 0730 to 1700 UTC Summer; Excluding English Public Holidays. TRA may be activated at other times by NOTAM. **Remarks:** (1) TRA 007A does not include controlled airspace within AWY P18 during the published hours of P18 (see ENR 3.1). (2) TRA 007A does not include airspace within AWY N864 during weekend promulgated hours 0001 Sat to 2359 Sun. During this period, between PIPAR and ASNUD, the western extremity of TRA 007A reverts to the eastern boundary of N864.

ENR 5.3 OTHER ACTIVITIES OF A DANGEROUS NATURE (continued)

Name Lateral Limits	Vertical Limits	Advisory Measures	Authority responsible for information	Remarks Activity times
1	2	3	4	5
CASTLELAW FLARES AND ILLUMINANTS 555355N 0031651W - 555357N 0031301W - 555113N 0031646W - 552133N 0031256W - 555355N 0031651W	Upper limit: 1000 ft Lower limit: SFC		Army.	Parachute flares reach a maximum height of 1000 ft agl and burn with a bright white light for approximately 30 seconds. Rocket flares do not exceed 300 ft agl. Mini and Pistol flares reach a height of approximately 100 ft agl. Non-parachute flares only burn for a few seconds.
PIPPINGFORD PARK TRAINING AREA FLARES AND ILLUMINANTS A circle, 1200 m radius centred at 510346N 0000404E	Upper limit: 1000 ft Lower limit: SFC		Army.	Parachute flares reach a maximum height of 1000 ft agl and burn with a bright white light for approximately 30 seconds. Rocket flares do not exceed 300 ft agl. Mini and Pistol flares reach a height of approximately 100 ft agl. Non-parachute flares only burn for a few seconds.
SANDHURST FLARES AND ILLUMINANTS 512147N 0004635W	Upper limit: 1000 ft Lower limit: SFC		Army.	Parachute flares reach a maximum height of 1000 ft agl and burn with a bright white light for approximately 30 seconds. Rocket flares do not exceed 300 ft agl. Mini and Pistol flares reach a height of approximately 100 ft agl. Non-parachute flares only burn for a few seconds.

ENR 5.3 OTHER ACTIVITIES OF A DANGEROUS NATURE (continued)

2 Other potential hazards

Name Lateral Limits	Vertical Limits	Advisory Measures	Authority responsible for information	Remarks Activity times
1	2	3	4	5
ABERPORTH 520824N 0043413W	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon will be either off-white to brown, or red (100 gm) normally carrying a 390 gm radiosonde or radar reflective calibration sphere, of similar weight and parachute. Launched 0500 UTC Mon-Fri, occasionally at other times usually 0800-1700 UTC and Sat/Sun.
ABERYSTWYTH UNIVERSITY 522458N 0040352W	Upper limit: UNL	80000 ft and beyond		Launched Mon-Fri various times.
ALBEMARLE BARRACKS 550106N 0015200W	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon off-white to brown/ carrying 390 gm radiosonde and parachute. Launched at 2325 UTC and occasionally at 1115 UTC or other times of the day.
CAMBORNE 501312N 0051933W	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon off-white to brown/ carrying 390 gm radiosonde and parachute. Launched 1115, 2315 and occasionally at other times of the day (which may include multi-sonde launches).
CARDINGTON 520621N 0002521W	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon will be either off-white to brown, or red (100 gm) normally carrying a 390 gm radiosonde or radar reflective calibration sphere, of similar weight and parachute. Launched as required.
CASTOR BAY 540003N 0062021W	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon off-white to brown/ carrying 390 gm radiosonde and parachute. Launched at 2325 UTC and occasionally at 1115 UTC or other times of the day.
CHILBOLTON 510853N 0012551W	Upper limit: UNL	80000 ft and beyond	CCLRC Observatory	Launched Mon-Fri various times.
CULDROSE 500507N 0051515W	Upper limit: UNL	80000 ft and beyond	Royal Naval Air Squadron	Launched Mon-Fri various times.
ESKMEALS 541921N 0032452W	Upper limit: UNL	80000 ft and beyond	QinetiQ	Hydrogen or helium-filled balloon will be either off-white to brown, or red (100 gm) normally carrying a 390 gm radiosonde or radar reflective calibration sphere, of similar weight and parachute. Launched as required.
HERSTMONCEUX 505328N 0001901E	Upper limit: UNL	80000 ft and beyond	Met Office	Helium-filled balloon off-white to brown/ carrying 390 gm radiosonde and parachute.

EGAA AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
07	439 m Light intensity high.	HI Green with HI green wingbars	PAPI Left/3° 74 ft		HI colour coded 15 m spacing LED	HI elevated bi-directional with LI omni-directional component.	Runway end: Red. Wing bars: Green.		**Approach lighting:** Centre-line with one cross-bar **PAPI Distance from THR:** 425 m Turning areas are marked with blue edge lights.
25	882 m Light intensity high.	HI Green with HI green wingbars	PAPI Left/3° 57 ft	900 m LED	HI colour coded 15 m spacing LED	HI elevated bi-directional with LI omni-directional component.	Runway end: Red. Wing bars: Green.		**Approach lighting:** Coded centre-line with five crossbars Supplementary lighting in-ner 288 m **PAPI Distance from THR:** 430 m
17	910 m Light intensity high.	HI Green with HI green wingbars	PAPI Left/3° 55 ft			HI elevated bi-directional with LI omni-directional component 60 m spacing. White, with last 10 each side Yellow caution zone.	Runway end: Red. Wing bars: Green.		**Approach lighting:** Coded centre-line with five crossbars **PAPI Distance from THR:** 293 m
35	522 m Light intensity high.	HI Green with HI green wingbars	PAPI Left/3° 47 ft			HI elevated bi-directional with LI omni-directional component 60 m spacing. White, with last 10 each side Yellow caution zone. 1 Red each side before displaced threshold.	Runway end: Red. Wing bars: Green.		**Approach lighting:** Centre-line with one cross-bar **PAPI Distance from THR:** 357m from displaced threshold Last approach light 92 m from displaced threshold. Turning areas are marked with blue edge lights.

EGAA AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 543918.05N 0061345.57W Lit red; 543936.67N 0061202.91W Lit red; 543909.66N 0061323.32W Not lit.
3	TWY edge and centre line lighting	Taxiway: . Green centre-line lighting on Taxiways A, B, C, D, J and L. Blue edge lights on B, F and L (south side). Runway guard lights at runway holding positions.
4	Secondary power supply/switch-over time	Yes. Using local sub-station / 1 second.
5	Remarks	Obstacle lighting.

EGAA AD 2.16 HELICOPTER LANDING AREA

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EGAA AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
BELFAST CTR A circle, 9 nm radius centred at 543927N 0061257W	Upper limit: FL105 Lower limit: SFC	D	ALDERGROVE AP-PROACH English	6000 ft	
BELFAST ALDERGROVE ATZ A circle, 2.5 nm radius centred at 543927N 0061257W on longest notified runway (07/25)	Upper limit: 2000 ft Lower limit: SFC	D	ALDERGROVE AP-PROACH English	6000 ft	

EGAA AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	ALDERGROVE AP-PROACH	128.500 MHz DOC 60 nm/24,500 ft.		ATZ hours coincident with Approach hours.
		121.500 MHz Emergency frequency.	Winter: O/R Summer: O/R	
TWR	ALDERGROVE TOWER	118.300 MHz DOC 25 nm/4,000 ft.	H24	When notified by ATIS, Radar and Tower will be provided as a combined function on frequency 128.500 MHz, Callsign 'Aldergrove'.
		121.500 MHz Emergency frequency.	Winter: O/R Summer: O/R	
	ALDERGROVE GROUND	121.750 MHz DOC 2 nm/GND	As directed by ATC	
RAD	ALDERGROVE DIRECTOR	120.900 MHz DOC 40 nm/19,500 ft.	Winter: 0700-2200 Summer: 0600-2100	
ATIS	ALDERGROVE INFORMATION	128.200 MHz DOC 60 nm/20,000 ft.	H24	
Other	BELFAST FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGAA AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS III 3.32°W (2017)	IAG	109.900 MHz	HO	543902.56N 0061427.49W		(RWY 25)
ILS/GP	IAG	333.800 MHz	HO	543937.54N 0061201.33W		3° ILS Ref Datum Hgt 52 ft. Caution due to small fluctuations apparent between 8 nm and 5 nm.
DME	IAG	36X 109.900 MHz	HO	543937.54N 0061201.33W	294 ft	(RWY 25) DME freq paired with ILS I AG. Zero range is indicated at THR of RWY 25. For use with ILS approaches only.
ILS I 3.32°W (2017)	IFT	110.900 MHz	HO	543828.03N 0061309.05W		(RWY 17)
ILS/GP	IFT	330.800 MHz	HO	543918.80N 0061344.61W		3 ILS Ref Datum Hgt 50 ft. Aircraft may experience glidepath fluctuations outside of 8 nm.

EGAC AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	LDI: 04: Right of 04 threshold, Lit 22: Near GP aerial, Lit. Anemometer: 04: Right of 04 threshold, Lit 22: On GP aerial, Lit.
3	TWY edge and centre line lighting	Taxiway: . Centre line. Green centre-line lighting on taxiway Alpha. Green/Amber colour coded lead on/off lighting at A1, A2 and A3 entry/exit points, spaced at 15 m on taxiway.
4	Secondary power supply/switch-over time	Yes/1 second
5	Remarks	Apron floodlighting.

EGAC AD 2.16 HELICOPTER LANDING AREA

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EGAC AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
BELFAST/CITY CTR 543121N 0060219W - 544431N 0054635W - 544048N 0053721W - 542739N 0055306W - 543121N 0060219W	Upper limit: 2000 ft ALT Lower limit: SFC	D	BELFAST APPROACH English	6000 ft	
BELFAST/CITY CTA 1 542802N 0060613W - 543121N 0060219W - 542739N 0055306W - 542422N 0055701W - 542802N 0060613W	Upper limit: 2000 ft ALT Lower limit: 1500 ft ALT	D	BELFAST APPROACH English	6000 ft	
BELFAST/CITY CTA 2 544431N 0054635W - 545014N 0053939W - 544632N 0053024W - 544048N 0053721W - 544431N 0054635W	Upper limit: 2000 ft ALT Lower limit: 1500 ft ALT	D	BELFAST APPROACH English	6000 ft	
BELFAST/CITY CTA 3 542422N 0055701W - 544632N 0053024W - 544449N 0052608W - 542016N 0054647W - 542422N 0055701W	Upper limit: 3500 ft ALT Lower limit: 2000 ft ALT	D	BELFAST APPROACH English	6000 ft	
BELFAST/CITY ATZ A circle, 2 nm radius centred at 543705N 0055221W on longest notified runway (04/22)	Upper limit: 2000 ft Lower limit: SFC		BELFAST APPROACH English	6000 ft	**Airspace Classification:** D/G

EGAC AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	BELFAST APPROACH	130.850 MHz	Winter: 0630-2130 Summer: 0530-2030	ATZ hours coincident with Approach hours.
TWR	BELFAST TOWER	122.825 MHz	Winter: 0630-2130 Summer: 0530-2030	
RAD	BELFAST RADAR	134.800 MHz	Winter: 0630-2130 Summer: 0530-2030	
ATIS	BELFAST INFORMATION	136.625 MHz	Winter: 0630-2130 Summer: 0530-2030	Arrivals ATIS
Other	BELFAST EMERGENCY	121.500 MHz Emergency frequency.	O/R	
Other	BELFAST FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGAC AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/DME I 3.17°W (2017)	IHBD	108.100 MHz	HO	543736.19N 0055143.94W		(RWY 04)
ILS/DME/GP	IHBD	334.700 MHz	HO	543654.04N 0055244.44W		
ILS/DME I 3.17°W (2017)	IBFH	108.100 MHz	HO	543638.46N 0055252.98W		(RWY 22) Caution due to terrain effect on LOC RWY 22, pilots may not receive full scale fly right indications.
ILS/DME/GP	IBFH	334.700 MHz	HO	543723.95N 0055206.73W		3° ILS Ref Datum Hgt 50 ft.
DME	IHBD	18X 108.100 MHz	HO	543710.29N 0055229.94W	30 ft	(RWY 04) On AD. DME freq paired with ILS I HBD. Zero Range is indicated at THR. DME unlocks and range errors of up to 0.5 nm may be experienced outside 10 degrees left of centre-line.
DME	IBFH	18X 108.100 MHz	HO	543710.29N 0055229.94W	30 ft	(RWY 22) On AD. DME freq paired with ILS I BFH. Zero Range is indicated at THR. DME range errors up to 0.3 nm may be experienced outside 20 degrees right of the centre-line.
NDB (L)	HB	420.000 kHz	Winter: Mon-Fri 0630-2130 Sat 0630-2115 Sun 0630-2130 and by arrangement Summer: Mon-Fri 0530-2030 Sat 0530-2015 Sun 0530-2030 and by arrangement	543716.09N 0055218.87W		On AD. Range 15 nm. Excessive needle swings may occur during the approach to Runway 04 between 1.5 nm and 1.0 nm from threshold.

EGBB — BIRMINGHAM

EGBB AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGBB — BIRMINGHAM

EGBB AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 522713.88N Long: 0014452.90W Centre point of Runway intersection with Taxiways Lima/Tango.
2	Direction and distance from city	5.5 nm ESE of Birmingham.
3	Elevation / Reference temperature	339 ft / 18 C
4	Geoid undulation at AD ELEV PSN	162 FT
5	Magnetic Variation/ Annual Change	1.2°W (2017) / 0.15°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	BIRMINGHAM AIRPORT. Post: Birmingham Airport, Birmingham B26 3QJ. Phone: 0871-222 0072 (Airport) Phone: 0121-767 1235 (ATC) Phone: 0121-767 7139 (Airfield Duty Manager) Phone: 0121-767 1260 (ATC ATIS) Phone: 0121-767 1210 (ATC Watch Manager) Fax: 0121-782 8802 (Airport) Fax: 0121-767 1239 (ATC) Email: ADM@birminghamairport.co.uk (Airfield Duty Manager) Telex: 337537 EGBB (CAA) AFS: EGBBYDYX
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	All calls to ATC will be recorded.

EGBB AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	H24
2	Customs and Immigration	H24
3	Health and sanitation	H24
4	AIS Briefing Office	H24 (Automated self-briefing, Main Terminal).
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	H24 (Automated self-briefing, Main Terminal).
7	Air Traffic Service	H24 See also AD 2.18.
8	Fuelling	ESSO, H24. Shell, 0500-0200 (local). Blue City Aviation and Signature by arrangement (Elmdon Apron).
9	Handling	H24 (Blue City, Marshalls, Swissport). 0600-2359 (Signature) - H24 by arrangement.
10	Security	H24
11	De-icing	H24
12	Remarks	

EGBB AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	Pallet and container handling. Nearest siding Stechford, 3 nm.
2	Fuel and oil types	AVTUR JET A-1 W80, W100, 100
3	Fuelling facilities/capacity	Bowser facility.
4	De-icing facilities	Available. Check with handling agents.
5	Hangar space for visiting aircraft	Limited. By arrangement with local companies.
6	Repair facilities for visiting aircraft	Minor only.

EGBB AD 2.4 HANDLING SERVICES AND FACILITIES (continued)

7	Remarks	Mandatory handling for all visiting Business and General Aviation aircraft. Handling agencies are: Blue City: Tel: 0121-782 9300; Fax: 0121-782 9301; email: handling@bluecityaviation.co.uk. DNATA: Tel: 0121-767 9900; Fax: 0121-782 6937. Marshall: Tel: 0121-663 1450; Fax: 0121-767 5465; email: bhx.handling@marshallas.com. Signature: Tel: 0121-782 1999; Fax: 0121-782 1899; email: bhx@signatureflight.co.uk. Swissport: Tel: 0121-767 7736 Fax: 0121-780 4311

EGBB AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in vicinity.
2	Restaurants	Available on site.
3	Transportation	Buses, taxis, trains and hire cars. Nearest railway station, Birmingham International.
4	Medical facilities	Limited first aid treatment.
5	Bank and Post Office	Bureau de Change.
6	Tourist Office	
7	Remarks	

EGBB AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A9
2	Rescue equipment	Details available on request from aerodrome.
3	Capability for removal of disabled aircraft	MTWA 10000 kg (equipment for heavier aircraft could be made available. Tel: 0121-782 0707 (Airport Fire Station).
4	Remarks	**RFF Category 10** aircraft accepted under remission.

EGBB AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical - Chemical de-icing.
2	Clearance priorities	Standard. See AD 1.2.2.
3	Remarks	ATC snow state and clearance programme 0121-767 1235. Snow Control 0121-767 7152.

EGBB AD 2.10 AERODROME OBSTACLES (continued)

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
	Pylon	522847.36N 0014308.45W	481 ft		No	
	Church Spire	522828.32N 0014810.28W	555 ft		No	
	Pylon	522811.19N 0014240.74W	468 ft		Yes	
	Pylon	522755.86N 0014229.56W	480 ft		No	
	Aerial on Block of Flats	522754.79N 0014831.77W	482 ft		No	
	Office Block with aerial	522744.37N 0014859.78W	577 ft		No	
	Pylon	522723.38N 0014234.95W	471 ft		No	
	Mast	522718.99N 0013719.56W	785 ft		No	
	Building	522656.64N 0014450.25W	378 ft		Yes	
	Pylon	522648.36N 0014240.78W	483 ft		No	
	Aerial on Block of Flats	522646.54N 0014851.9W	508 ft		No	
	Floodlight	522646.15N 0014405.70W	373 ft		Yes	
	Floodlight	522640.94N 0014351.15W	436 ft		Yes	
	Pylon	522622.01N 0014246.6W	488 ft		No	
	Spire	522621.50N 0014328.72W	487 ft		Yes	Obstacle lighted and flashing.
	Aerial	522608.1N 0014632.53W	504 ft		No	
	Transmitter	522533.51N 0014624.70W	580 ft		Yes	
	Pylon	522518.41N 0014341.27W	483 ft		No	
	Chimney	522459.38N 0014626.68W	545 ft		No	
	Pylon	522456.69N 0014304.09W	486 ft		No	
	Spire	522440.99N 0014633.29W	619 ft		No	
	Pylon	522434.58N 0014308.37W	534 ft		No	

EGBB AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 24 Hours.
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self briefing/Telephone.

EGBB AD 2.11 METEOROLOGICAL INFORMATION PROVIDED (continued)

6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs and METARs. English
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	BIRMINGHAM ATC.
10	Additional information (limitation of service, etc.)	

EGBB AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
15	145.81°	3052 x 45 m	RWY surface: Asphalt, grooved. PCN 65/F/B/W/T	522748.52N 0014531.43W 162 ft	THR 303 ft
33	325.82°	3052 x 45 m	RWY surface: Asphalt, grooved. PCN 65/F/B/W/T	522646.58N 0014422.56W 162 ft	THR 328 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					RWY 15 Runway 15/33 has shoulders 7.5 m each side of the runway giving a total paved width of 60 m..
					RWY 33 Runway 15/33 has shoulders 7.5 m each side of the runway giving a total paved width of 60 m.

EGBB AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
15	3003 m	3063 m	3003 m	2580 m	
33	3003 m	3196 m	3003 m	2449 m	
15	1440 m	1500 m	1440 m		Take-off from intersection with Taxiways L and T.
15	1220 m	1280 m	1220 m		Take-off from intersection with Taxiway G.
15	2448 m	2508 m	2448 m		Take-off from intersection with Taxiway B.
33	1559 m	1752 m	1559 m		Take-off from intersection with Taxiways L and T.
33	1768 m	1961 m	1768 m		Take-off from intersection with Taxiway G.
33	2093 m	2286 m	2093 m		Take-off from intersection with Taxiway F.
33	2180 m	2373 m	2180 m		Take-off from intersection with Taxiway C.
33	2551 m	2743 m	2551 m		Take-off from intersection with Taxiway E.

EGSC — CAMBRIDGE

EGSC AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGSC — CAMBRIDGE

EGSC AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 521218N Long: 0001030E Centre of Runway 05/23 Asphalt.
2	Direction and distance from city	1.5 nm E of Cambridge.
3	Elevation / Reference temperature	47 ft / 19 C
4	Geoid undulation at AD ELEV PSN	151 FT
5	Magnetic Variation/ Annual Change	0.48°W (2017) / 0.15°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	CAMBRIDGE INTERNATIONAL AIRPORT Post: The Airport, Cambridge CB5 8RX. Phone: 01223-373213 (ATC) Phone: 01223-373717 (GA) Phone: 01223-295631 (ATIS) Phone: 01223-373535 (Airport Operations) Phone: 01223-373214 (Business Aviation/FBO) Fax: 01223-373502 (ATC) Fax: 01223-373259 (Airport Operations) Email: airport.dutymanager@cambridgeairport.com URL: www.cambridgeairport.com
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	

EGSC AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: 0800-1800. Summer: 0700-1700.
2	Customs and Immigration	As AD hours. 24 hours prior notice required. See item 12.
3	Health and sanitation	
4	AIS Briefing Office	As AD hours.
5	ATS Reporting Office (ARO)	As AD hours.
6	MET Briefing Office	
7	Air Traffic Service	As AD hours, and by arrangement. See also AD 2.18.
8	Fuelling	As AD hours.
9	Handling	As AD hours. Cambridge Aeroclub: Winter: 0830-1800. Summer: 0730-1700.
10	Security	By arrangement.
11	De-icing	As AD hours.
12	Remarks	Cambridge is not an approved port of entry under the Immigration Act 1971, but clearance for flights originating outside the Common Travel Area can usually be arranged, subject to prior notification. A completed General Aviation Report form must be submitted to Cambridge Airport Operations at the earliest opportunity and, in all cases, at least 24 hours before arrival. Aerodrome is strictly PPR; visiting aircraft 24 hour prior notification required. Contact Air Traffic Control either by submitting a PPR form: http://www.cambridgeairport.com/airfield-information/ or phone: 01223-373213.

EGSC AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	2 x 3 ton forklifts, 1 x 6 ton crane subject to 24 hours notice. Nearest railway siding; Cambridge 3 miles.
2	Fuel and oil types	JET AL48 (with anti-ice additive). AVGAS 100LL. AVOIL Aeroshell 80, W80, 100, W100. Other oils and fluids available by arrangement.
3	Fuelling facilities/capacity	AVTUR and AVGAS Bowser service.
4	De-icing facilities	Hot surface de-icer, portable de-icer.
5	Hangar space for visiting aircraft	By arrangement.
6	Repair facilities for visiting aircraft	By arrangement.
7	Remarks	Mandatory handling for all aircraft except leisure flights under 2.7 tonnes MTOW. Executive handling services available from ExecuJet, Tel: 01223-373214, e-mail: fbo.egsc@execujet.eu Handling for visiting light General Aviation aircraft under 2.7 tonnes is only mandatory outside of the Cambridge Aeroclub opening hours. All training flights contact Cambridge ATC, Tel: 01223-373213, e-mail: atc.admin@cambridgeairport.com All military flights contact Cambridge Airport Operations: 01223-373535, e-mail: airport.operations@cambridgeairport.com All landing/handling/parking fees charged according to aircraft MTOW (tonnes). Other charges according to services provided. GPU, toilet service, aircraft de-icing and liquid oxygen are all available. Outside of 0830-1700 (local) Monday - Friday prior request required.

EGSC AD 2.5 PASSENGER FACILITIES

1	Hotels	In Cambridge, 3 miles.
2	Restaurants	
3	Transportation	Regular bus to City centre, taxis on request. Nearest railway station; Cambridge 3 miles.
4	Medical facilities	Yes. Company first aid. Hospital 3 miles.
5	Bank and Post Office	Banks in Cambridge.
6	Tourist Office	Cambridge 3 miles.
7	Remarks	

EGSC AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A5
2	Rescue equipment	Cutting equipment. Air lifting bags.
3	Capability for removal of disabled aircraft	In the event of an incident, light aircraft may be removed using airport resources. Large aircraft may be removed using external resources in conjunction with aircraft operator.
4	Remarks	Higher Category (up to Category 8) may be available with 24 hours prior notification.

EGSC AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Snow blowers, rotary brushes, ploughs, sweepers
2	Clearance priorities	Runway, taxiways, apron.
3	Remarks	Latest information from: Tel: Operations 01223-373535.

EGSC AD 2.16 HELICOPTER LANDING AREA (continued)

7	Remarks	FATO for daylight use only. FATO arrival and departure from and to the south only. Dedicated helicopter landing areas (H, H1 and H2). 'HA' between main runway and General Aviation parking area.

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF : 521235.13N 0001043.64E
2	TLOF and/ or FATO elevation	TLOF : 45 ft
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	FATO for daylight use only. FATO arrival and departure from and to the south only. Dedicated helicopter landing areas (H, H1 and H2). 'HA' between main runway and General Aviation parking area.

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF HTA: 521158.37N 0001021.96E
2	TLOF and/ or FATO elevation	TLOF HTA: 37 ft
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF HTA:
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	FATO for daylight use only. FATO arrival and departure from and to the south only. Dedicated helicopter landing areas (H, H1 and H2). 'HA' between main runway and General Aviation parking area.

EGSC AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	**2**	**3**	**4**	**5**	**6**
CAMBRIDGE ATZ A circle, 2.5 nm radius centred at 521218N 0001030E on longest notified runway (05/23)	Upper limit: 2000 ft Lower limit: SFC	G	CAMBRIDGE APPROACH English	6000 ft	

EGSC AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	CAMBRIDGE APPROACH	123.600 MHz DOC 25 nm/10,000 ft.	Winter: 0800-1800. Summer: 0700-1700.	ATZ hours coincident with Approach hours. **VDF** **521214.53N 0001054.58E** On AD.
TWR	CAMBRIDGE TOWER	125.900 MHz DOC 10 nm/10,000 ft.	Winter: 0800-1800. Summer: 0700-1700.	
RAD	CAMBRIDGE DIRECTOR CAMBRIDGE RADAR	124.975 MHz DOC 40 nm/15,000 ft. Not continuously monitored.	CAMBRIDGE DIRECTOR: May be available by arrangement. CAMBRIDGE RADAR: Available intermittently during normal working hours.	**VDF** **521214.53N 0001054.58E** On AD.
ATIS	CAMBRIDGE INFORMATION	134.600 MHz DOC 40 nm/20,000 ft.	Winter: 0800-1800. Summer: 0700-1700.	
Other	CAMBRIDGE FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	
Other		121.500 MHz Emergency frequency.	O/R	

EGSC AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/DME I 0.48°W (2017)	ICMG	111.300 MHz	Winter: 0800-1800. Summer: 0700-1700.	521156.00N 0000947.42E		(RWY 23)
ILS/DME/GP	ICMG	332.300 MHz	Winter: 0800-1800. Summer: 0700-1700.	521226.25N 0001054.59E		3° ILS Ref Datum Hgt 40 ft.
DME	ICMG	50X 111.300 MHz	Winter: 0800-1800. Summer: 0700-1700.	521226.21N 0001054.37E	60 ft	(RWY 23) On AD. Freq paired with ILS I CMG. DOC 25 nm/10,000 ft.
NDB (L)	CAM	332.500 kHz	Winter: 0800-1800. Summer: 0700-1700.	521239.06N 0001058.05E		On AD. Range 15 nm

EGFF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	TERMINAL AREA Surface: Concrete. PCN 50/R/A/W/T SOUTH MAINTENANCE AREA Surface: Asphalt. PCN 15/F/A/W/T
2	Taxiway width, surface and strength	Taxiway ALPHA: 23 m. Surface: Asphalt. PCN 50/F/A/W/T Taxiway BRAVO: 23 m. Surface: Asphalt. PCN 50/F/A/W/T Taxiway CHARLIE: 23 m. Surface: Asphalt. PCN 42/F/A/W/T Taxiway DELTA: 23 m. Surface: Asphalt. PCN 42/F/A/W/T Taxiway ECHO: 23 m. Surface: Asphalt. PCN 42/F/A/W/T Taxiway GOLF: 23 m. Surface: Asphalt. PCN 15/F/A/Y/T Taxiway HOTEL: 18 m. Surface: Asphalt.
3	Altimeter checkpoint location and elevation	Stands 1-10: 207-211 ft; Stands 11-17: 212-215 ft amsl
4	VOR checkpoints	
5	INS checkpoints	INS Checkpoints: See Aircraft Parking/Docking Chart.
6	Remarks	

EGFF AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Stands 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, and 17 parking with marshaller guidance. Additionally stands 7 and 10 are equipped with nose loader type air bridges. Both are fitted with safedock 2-18 systems. Aircraft using the air bridge will park using the stand guidance. Aircraft stopping short of the air bridge will be marshalled.
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** : Runway designation, runway threshold. Runway centre-line, fixed distance marking. Touchdown zone markings Runway 30. Runway guard lights are positioned at Holding Points A1, C, D, E1, B1, G and H. These are illuminated when necessary by ATC.
3	Stop bars	Red stop bars in use H24. Red stop bars and signs showing holding point numbers at all holding points except at Holding Points A1 and B1. Holding points A1 and B1 should not be used.
4	Remarks	Minimum power to achieve forward movement should be applied to move off all stands. All holding position signs are black on yellow positioned to the left hand side of the taxiway. There are 2 illuminated windsocks to the south of Runway 12/30, adjacent to the runway threshold markings. Aircraft and vehicles must not cross an illuminated red stop bar, even if receipt of a clearance from ATC. Red stop bars will only be deselected by ATC upon receipt of a correct clearance readback from the pilot or driver.

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EGFF AD 2.10 AERODROME OBSTACLES

INTENTIONALLY BLANK

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGFF1500)	Wenvoe TV Mast	512733.54N 0031653.72W	1297 ft		Yes	
(EGFF1552)	St Hilary Mast	512726.78N 0032410.63W	1161 ft		Yes	
(EGFF1020)	Chimney	512351.88N 0032340.38W	378 ft		Yes	
(EGFF1018)	Chimney	512314.22N 0032416.92W	529 ft		Yes	

EGFF AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 24 Hours
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self briefing/Telephone.
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs/METARs. English.
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	CARDIFF.
10	Additional information (limitation of service, etc.)	

EGFF AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	**True bearing**	**Dimensions of RWY**	**Surface of RWY/ SWY/ Strength (PCN)**	**THR co-ordinates/ THR Geoid undulation**	**THR elevation/ Highest elevation of TDZ of precision APP RWY**
1	**2**	**3**	**4**	**5**	**6**
12	116.76°	2354 x 45 m	RWY surface: Asphalt, grooved. PCN 50/F/A/W/T	512401.72N 0032120.17W 169 ft	THR 205 ft
30	296.78°	2354 x 45 m	RWY surface: Asphalt, grooved. PCN 50/F/A/W/T	512332.83N 0031948.64W 169 ft	THR 213 ft

Slope of RWY/ SWY	**SWY dimensions**	**Clearway dimensions**	**Strip Dimensions**	**OFZ**	**Remarks**
7	**8**	**9**	**10**	**11**	**12**
					RWY 12 Threshold displaced by 220 m. Shoulders 7 m wide either side of the runway.
					RWY 30 Threshold displaced by 152 m. Shoulders 7 m wide either side of the runway.

EGNC AD 2.19 RADIO NAVIGATION AND LANDING AIDS (continued)

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						arrival procedure at Carlisle. DOC 25 nm/10,000 ft
NDB (L)	CL	328.000 kHz	Winter 0900-1800 and by arrangement Summer 0800-1700 and by arrangement	545625.04N 0024819.67W		On AD. Range 20 nm. During adverse weather conditions NDB(L) CL is subject to failure and should be used with caution.

EGNC AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Airport is only available to aircraft able to communicate with ATC by radio.

(b) High visibility clothing must be worn on the apron at all times.

(c) Aircraft using Carlisle Airport are to carry third party insurance cover of not less than £1,000,000.

(d) Aircraft using Carlisle Airport do so in accordance with Carlisle Airport Terms and Conditions, a copy of which is available on application to Aircraft Operations Tel 01228-573641.

2 Ground Movement

(a) The only usable taxiways are those from the apron to Runway 19 and that part of the disused Runway 13/31 that links 01/19 with 07/25.

(b) Light aircraft pre-flight checks are conducted on the run-up area, northwest of Holding Point 'E'.

3 CAT II/III Operations

Not applicable.

4 Warnings

(a) Pilots are reminded of the proximity of EG D510, 5 nm northeast.

(b) Caution Runway incursion prevention. Taxiway Charlie and Delta intersect the midpoint of runway 07/25. Pilots are to adhere to ATC instructions/information and relevant ground markings at all times. See Aerodrome chart for hotspot locations

(c) High ground to the southeast of the aerodrome between 7 and 10 nm rising to 1847 ft aal, 2037 ft amsl.

5 Helicopter Operations

(a) Light helicopters may make approaches direct to HLS. Small helicopters are to land on RWY 19 THR area and ground taxi where possible.

(b) Grass hover training area located between Runway 19 and disused Runway 13 with circuits north of Runway 07/25.

(c) Confined space training area in wooded area. →

6 Use of Runways →

(a) Runway 25 longitudinal profile, down slope gradient.

(b) Runway 07 down slope gradient on initial take-off section.

(c) Caution, Runway 25 threshold is not visible from 07 threshold and Holding Point 'C'.

7 Training

Not applicable.

EGNC AD 2.21 NOISE ABATEMENT PROCEDURES

(a) Ground running of engines should be conducted on the run-up area northwest of Holding Point 'E'.

(b) At night the circuit direction will be varied to reduce noise nuisance to residents.

EGNC AD 2.22 FLIGHT PROCEDURES

1 Instrument Approaches

(a) Instrument Approach Procedures (IAP) for this aerodrome are establisted outside controlled airspace. See ENR 1.5.

2 Procedures for Inbound Aircraft

Approach from	Runway	Via	Route
S	07/25	N601, N57	POL – ABEVI – direct arrival from South DME/NDB procedure.
W	07	N57	DCS – direct arrival from Southwest DME/NDB procedure.
	25		DCS – CL
N	07	N57	TLA – direct arrival from Northwest DME/NDB procedure.
(See Note)	25		TLA – CL
E	07		NATEB – CL
	25		NATEB – direct arrival from East DME/NDB procedure.

Note: *Pilots routing TLA - CL should note the proximity of Danger Area EG D510.*

3 Procedures for Outbound Aircraft

(a) The standard routes for aircraft joining the Airways System are shown in the table below:

Departure to	Via	Route
S	N57, L612, N864	DCS
SE	Y70	NATEB
	UL602, P15, P18	NATEB
N	N57, N601	TLA
(See Note)		
NW	L612	TLA
E		NATEB

Note: *Pilots routing TLA - CL should note the proximity of Danger Area EG D510.*

(b) All departures are outside Controlled Airspace. Radar service may be provided by Scottish Control or Newcastle radar, FL 50 or above.

(c) Routing direct to LAKEY, SHAPP, GASKO, ABEVI and POL are not permitted.

4 Transitting Aircraft

(a) Aircraft transitting either NDB(L) CL or in the vicinity of Carlisle aerodrome outside published aerodrome hours should listen out 123.600 MHz.

5 Circuit Height

(a) 1000 ft, normally LH.

6 Radio Communications Failure Procedure

(a) In the event of a complete radio communication failure in the aircraft the pilot will adopt the appropriate procedure described in ENR 1.1 Sub section 4.

EGTC — CRANFIELD

EGTC AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGTC — CRANFIELD

EGTC AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 520420N Long: 0003700W Mid point of Runway 03/21.
2	Direction and distance from city	7 nm SW of Bedford.
3	Elevation / Reference temperature	358 ft / 18 C
4	Geoid undulation at AD ELEV PSN	154 FT
5	Magnetic Variation/ Annual Change	0.75°W (2017) / 0.15°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	CRANFIELD UNIVERSITY Post: Cranfield Airport, Cranfield University, Cranfield, Bedfordshire, MK43 0AL. Phone: 01234-758150 (Airport Administration) Phone: 01234-750005 (ATC) Phone: 01234-758114 (Aircraft Handling) Phone: 01234-757703 (Airport Operations) Fax: 01234-751805 (Airport Administration) Fax: 01234-754785 (Airport Operations) Email: airport@cranfield.ac.uk URL: www.cranfieldairport.com
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	

EGTC AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: Mon-Fri 0800-1830; Sat, Sun & PH 0900-1800. Summer: Mon-Fri 0700-1730; Sat, Sun & PH 0800-1700.
2	Customs and Immigration	By arrangement. 24 hours notice required to ATC.
3	Health and sanitation	
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	
7	Air Traffic Service	As AD hours. See also AD 2.18.
8	Fuelling	As AD hours.
9	Handling	
10	Security	
11	De-icing	
12	Remarks	This AD is strictly **PPR**. Telephone ATC 01234-750005 for PPR. Licensed departures will not be accepted beyond 1815 Mon-Fri and 1745 Sat, Sun and PH (1 hour earlier in summer) unless an extension to hours has been confirmed.

EGTC AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	
2	Fuel and oil types	AVGAS 100LL AVTUR JET A-1 W80, W100 DTD 585, Aeroshell Compound 06
3	Fuelling facilities/capacity	
4	De-icing facilities	
5	Hangar space for visiting aircraft	
6	Repair facilities for visiting aircraft	
7	Remarks	Handling mandatory for aircraft above 2700 kg.

EGTC AD 2.5 PASSENGER FACILITIES

1	Hotels	On Aerodrome.
2	Restaurants	Cafe on site.
3	Transportation	Taxi, hire car, chauffeur services on request.
4	Medical facilities	
5	Bank and Post Office	On Aerodrome.
6	Tourist Office	
7	Remarks	Executive and pilot lounges available for handled aircraft.

EGTC AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A2
2	Rescue equipment	Appropriate up to RFF Category 6.
3	Capability for removal of disabled aircraft	In the event of an incident, light aircraft can be removed using airport resources. Large aircraft can be removed using an external contractor in conjunction with aircraft operator.
4	Remarks	**RFF Category 3 to 6**, available on request, subject to availability by prior arrangement with Airport Administration.

EGTC AD 2.7 SEASONAL AVAILABILITY - CLEARING

EGTC AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	
2	Taxiway width, surface and strength	Taxiway A: 15 m. Taxiway B: 15 m. Taxiway C: 15 m. Taxiway D: 45 m. Taxiway E: 45 m. Taxiway F: 15 m.
3	Altimeter checkpoint location and elevation	
4	VOR checkpoints	
5	INS checkpoints	
6	Remarks	

EGTC AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	
2	Runway and taxiway markings and lighting	
3	Stop bars	
4	Remarks	

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EGTC AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGTC3723) 03/APPROACH 21/TAKE-OFF	Hedge	520352.24N 0003723.05W	371 ft		No	
(EGTC1173) 03/APPROACH 21/TAKE-OFF	Road	520352.07N 0003723.04W	379 ft		No	
(EGTC1198) 21/APPROACH 03/TAKE-OFF	Approach Light	520451.88N 0003627.69W	368 ft		No	
(EGTC3794) 21/APPROACH 03/TAKE-OFF	Mast	520449.47N 0003617.95W	407 ft		No	
(EGTC1121) 21/APPROACH 03/TAKE-OFF	Floodlight	520449.08N 0003617.82W	409 ft		No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
	Frangible Fence	520447.02N 0003632.53W	356 ft		No	
(EGTC1113)	VDF antenna	520445.27N 0003645.84W	379 ft		Yes	
(EGTC1114)	Building	520444.61N 0003645.05W	368 ft		No	
(EGTC3814)	Windsleeve	520439.56N 0003650.51W	376 ft		Yes	
(EGTC1142)	GP antenna	520432.10N 0003639.96W	383 ft		Yes	

EGTC AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 9 Hours
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self-briefing/telephone
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs and METARs. English
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	CRANFIELD.
10	Additional information (limitation of service, etc.)	

EGTC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
03	031.73°	1799 x 46 m	RWY surface: Asphalt. PCN 30/F/B/X/U	520400.47N 0003719.28W 154 ft	THR 358 ft
21	211.74°	1799 x 46 m	RWY surface: Asphalt. PCN 30/F/B/X/U	520444.32N 0003635.27W 154 ft	THR 358 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					RWY 03 Runway 03 threshold displaced by 206 m.
					RWY 21

EGTC AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
03	1799 m	1799 m	1799 m	1594 m	
21	1672 m	1799 m	1672 m	1672 m	

EGTC AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
03	405.5 m Light intensity high.	HI inset Green with green elevated wingbars	PAPI Right/3° 42 ft			HI elevated coded omni directional	Red.		**Approach Lighting:** Centre-line with two cross-bars **PAPI dist from THR:** 288 m
21	450 m Light intensity high.	HI elevated Green with green wingbars	PAPI Left/3° 53 ft			HI elevated coded omni-directional	Red.		**Approach Lighting:** Centre-line with two cross-bars **PAPI dist from THR:** 373 m **Edge Lighting:** Colour coded commencing 625 m before runway end.

EGTC AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	
3	TWY edge and centre line lighting	Taxiway: . Centre line. Bi-directional green reflectors on taxiway centre-line.
4	Secondary power supply/switch-over time	Secondary power supply available with a 15 second changeover time.
5	Remarks	Taxiway lighting is unavailable.

EGTC AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	FATO 03: 520408.77N 0003726.83W 154 ft FATO 21: 520417.07N 0003718.50W 154 ft
2	TLOF and/ or FATO elevation	FATO 03: 351 ft FATO 21: 343 ft
3	TLOF and FATO area dimensions, surface, strength, marking	FATO 03/21: 300 x 23 m Surface: Grass.
4	True bearing of FATO	03: 031.74° 21: 211.74°
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	FATOs are unmarked. Helicopters are to land on the threshold of the appropriate FATO unless otherwise advised. FATOs are licensed for daylight use only.

1	Coordinates TLOF or THR of FATO Geoid undulation	FATO 18: 520420.67N 0003721.54W 154 ft FATO 36: 520410.97N 0003720.19W 154 ft
2	TLOF and/ or FATO elevation	FATO 18: 340 ft FATO 36: 347 ft
3	TLOF and FATO area dimensions, surface, strength, marking	FATO 18/36: 300 x 23 m Surface: Grass.
4	True bearing of FATO	18: 175.10° 36: 355.10°
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	FATOs are unmarked. Helicopters are to land on the threshold of the appropriate FATO unless otherwise advised. FATOs are licensed for daylight use only.

EGTC AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	**2**	**3**	**4**	**5**	**6**
CRANFIELD ATZ A circle, 2 nm radius centred at 520420N 0003700W on longest notified runway (03/21)	Upper limit: 2000 ft Lower limit: SFC	G	CRANFIELD APPROACH English	6000 ft	

EGTC AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	**2**	**3**	**4**	**5**
APP	CRANFIELD AP-PROACH	122.850 MHz DOC 25 nm/6,000 ft.	Winter: Mon-Fri 0800-1830; Sat, Sun & PH 0900-1800. Summer: Mon-Fri 0700-1730; Sat, Sun & PH 0800-1700.	ATZ hours coincident with Ap-proach hours. **VDF** **520445.28N 0003645.84W** On AD.
TWR	CRANFIELD TOWER	134.925 MHz DOC 30 nm/4,000 ft.	Winter: Mon-Fri 0800-1830; Sat, Sun & PH 0900-1800. Summer: Mon-Fri 0700-1730; Sat, Sun & PH 0800-1700.	**VDF** **520445.28N 0003645.84W** On AD.
		122.850 MHz	When directed by ATC	
ATIS	CRANFIELD DEPAR-TURE INFORMATION	121.875 MHz DOC 2 nm/GND.	Winter: Mon-Fri 0800-1830; Sat, Sun & PH 0900-1800. Summer: Mon-Fri 0700-1730; Sat, Sun & PH 0800-1700.	

EGTC AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES (continued)

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
Other	CRANFIELD FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGTC AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DME	ICR	26X 108.900 MHz	Winter: Mon-Fri 0830-1900 Sat, Sun, PH 0900-1800 Summer: Mon-Fri 0730-1800 Sat, Sun, PH 0800-1700	520424.52N 0003702.86W	366 ft	On AD. DME freq paired with ILS I CR. Zero range is indicated at THR of Runway 21.
NDB (L)	CIT	850.000 kHz	Winter: Mon-Fri 0830-1900 Sat, Sun, PH 0900-1800 Summer: Mon-Fri 0730-1800 Sat, Sun, PH 0800-1700	520748.56N 0003324.77W		Range 15 nm.
ILS/DME I 0.75°W (2017)	ICR	108.900 MHz	Winter: Mon-Fri 0830-1900 Sat, Sun, PH 0900-1800 Summer: Mon-Fri 0730-1800 Sat, Sun, PH 0800-1700	520346.01N 0003733.78W		ILS not to be used for practice auto-coupled landings. LOC may show fluctuations due to road traffic.
ILS/DME/GP	ICR	329.300 MHz	Winter: Mon-Fri 0830-1900 Sat, Sun, PH 0900-1800 Summer: Mon-Fri 0730-1800 Sat, Sun, PH 0800-1700	520432.13N 0003639.93W		3 ILS Ref Datum Hgt 54 ft.

EGTC AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Use of this airport is subject to the published schedule of fees, charges and conditions, copies of which are available from Airport Administration.

(b) PPR from ATC is required for all operators, visitors, instrument training and circuit training. Slot times are allocated and must be adhered to.

(c) Permission to use the airport, either to land or depart, may be withdrawn without notice. Withdrawal of permission may occur due to prevailing weather conditions, if it is considered that the requirements of the airport's Safety Management System cannot be met.

(d) The carriage of Dangerous Goods, as specified by The Air Navigation (Dangerous Goods) Regulations 2002, is prohibited unless written approval has been issued by the Airport Director.

(e) All helicopters must request start up clearance.

(f) Use of the airport by non-radio equipped aircraft **is not** permitted.

(g) Use of the airport by training flights is subject to compliance with the requirements set out below.

(h) While airside, each aircraft commander is responsible for the safety of his passengers and other crew members. Passengers are at all times to be escorted by the aircraft commander or a crew member who is known to be competent to ensure both his/her and the passengers safety. The wearing of high visibility clothing is required.

(i) Aircraft commanders or crew members, as applicable, are responsible for ensuring that a total ban on smoking while airside is observed.

2 Ground Movement

(a) Extreme caution is necessary on paved and unpaved apron areas where surface markings may not always be available to ensure obstacle clearance from parked aircraft.

EGTC AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(b) Due to limited parking space, aircraft may infringe taxiway strips. ATC will advise aircraft of appropriate taxiing routes.

(c) Operators wishing to drive vehicles on the airport will be required to provide evidence of £10m airside driving liability insurance.

3 CAT II/III Operations

Not applicable.

4 Warnings

(a) Intensive instrument flying training in all weather conditions takes place within 10 nm radius up to the lower limit of controlled airspace.

(b) Helicopter operations take place on the grass area to the northwest of the main runway intersection.

(c) Due to drainage ditches, all fixed-wing aircraft entering/exiting the grass via Taxiway Alpha are to use the concrete entry/exit points.

(d) In the event of aerodrome electrical supply failure, aerodrome ground lighting **will not** be available for up to 15 seconds.

(e) Pilots are advised to exercise caution as this aerodrome has a deer hazard, particularly during the periods of dawn and dusk/official night, although patrols are mounted whenever the presence of deer is known or anticipated. Pilots are requested to report the location of any animals on the aerodrome to ATC.

5 Helicopter Operations

(a) Helicopters, both arriving and departing, will be expected to use one of the two FATOs parallel to the runway-in-use, unless otherwise advised.

(b) Helicopters may operate for quick stop/hover practice on the grass light aircraft landing area, remaining clear of the FATOs, with permission of ATC

6 Use of Runways

Not applicable

7 Training

(a) PPR is required for all operators, visitors, instrument training and circuit training. Slot times are allocated and must be adhered to. →

(b) Issue of training/test approvals is conditional upon such flights not causing delays to other aircraft. In exceptional circumstances training/test approvals may be withdrawn without prior notice by ATC.

(c) **Opposite Direction Runway Operations - Lack of Positive Clearance** - Training aircraft carrying out instrument approaches to Runway 21 whilst Runway 03 is in use should go around and fly directly over Runway 21/03 not below 1000 ft agl (1400 ft alt) if no positive clearance is received.

EGTC AD 2.21 NOISE ABATEMENT PROCEDURES

(a) In order that least possible noise disturbance is caused in areas surrounding the airport, aircraft operators should ensure that at all times their aircraft conform to the noise abatement techniques laid down for that type of aircraft.

EGTC AD 2.22 FLIGHT PROCEDURES

1 Instrument Approach Procedures

(a) Instrument Approach Procedures (IAP) for this aerodrome are established outside controlled airspace. See ENR 1.5.

(b) Glider and other airspace activity which is not known to Cranfield ATC takes place beneath the London TMA in VMC and IMC.

2 Circuit Heights

(a) Day - Fixed-wing 1000 ft QFE. Night - 1200 ft QFE.

Note: *No dead-side available due to helicopter circuits on all runways.*

3 Runway Visual Range

(a) Minimum RVR for departing aircraft 800 m unless the Commanders take-off Minima equal to or less than reported visibility, due to secondary power switchover time.

EGTC AD 2.22 FLIGHT PROCEDURES (continued)

4 IFR Departures

(a) IFR Departures intending to enter Controlled Airspace should flight plan to join at DTY, WCO or BPK as appropriate.

5 Visual Reference Points (VRP)

(a) Visual Reference Points are established for use by aerodrome and en-route traffic as follows:

VRP	Co-ordinates
Olney Town	520912N 0004206W
Stewartby Brickworks	520424N 0003103W
Woburn Town	515924N 0003709W

EGTC AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGTC AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGTC-2-1

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 03 (ACFT CAT A,B,C) - ICAO

AD 2-EGTC-8-1

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 03 (ACFT CAT A,B,C) - ICAO

AD 2-EGTC-8-2

Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 21 (ACFT CAT A,B,C) - ICAO

AD 2-EGTC-8-3

Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 21 (ACFT CAT A,B,C) - ICAO

AD 2-EGTC-8-4

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 21 (ACFT CAT A,B,C) - ICAO

AD 2-EGTC-8-5

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 21 (ACFT CAT A, B, C) - ICAO

AD 2-EGTC-8-6

Figure: INSTRUMENT APPROACH CHART VDF 208° to Aerodrome (ACFT CAT A, B) - ICAO

AD 2-EGTC-8-7

Figure: Instrument Approach Procedure Coding Tables RNAV(GNSS) RWY 03C, 03L

AD 2-EGTC-8-9

Figure: Instrument Approach Procedure Coding Tables RNAV(GNSS) RWY 21C, 21L, 21R

AD 2-EGTC-8-10

EGCN — DONCASTER SHEFFIELD

EGCN AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGCN — DONCASTER SHEFFIELD

EGCN AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 532831.02N Long: 0010014.89W Mid point of Runway 02/20.
2	Direction and distance from city	3 nm SE from Doncaster.
3	Elevation / Reference temperature	55 ft / 18 C
4	Geoid undulation at AD ELEV PSN	156.56 FT
5	Magnetic Variation/ Annual Change	1.07°W (2017) / 0.16°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	ROBIN HOOD AIRPORT DONCASTER SHEFFIELD. Post: Heyford House, First Avenue, Doncaster, DN9 3RH. Phone: 01302-625021 (Airfield Operations) Phone: 01302-625022 (Airfield Operations) Phone: 01302-625642 (ATC) Phone: 0871-220 2210 (Terminal Services) Fax: 01302-625023 (Airfield Operations) Fax: 01302-625641 (ATC) Fax: 01302-625006 (Terminal Services)
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	All telephone calls to ATC will be recorded.

EGCN AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	H24
2	Customs and Immigration	Hours aligned with Airline Operations.
3	Health and sanitation	Port Health Authority on request from Handling Agent.
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	
7	Air Traffic Service	As AD hours. See also AD 2.18.
8	Fuelling	Winter: 0500-2359. Summer: 0400-2259.
9	Handling	H24
10	Security	Hours aligned with Airline Operations.
11	De-icing	H24
12	Remarks	

EGCN AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	By arrangement with Anglo World Cargo. Tel: 01302-623063. Fax: 01302-623062.
2	Fuel and oil types	AVTUR JET A-1L; AVGAS 100LL.
3	Fuelling facilities/capacity	Bowser Facility - Pressure and Overwing.
4	De-icing facilities	Mechanical. Chemical de-icing.
5	Hangar space for visiting aircraft	Limited.
6	Repair facilities for visiting aircraft	Cessna Citation Service Centre, Tel: 01302-511047, Fax: 01302-511048.
7	Remarks	All visiting aircraft are subject to mandatory handling and **PPR**. Operators are requested to contact one of the handling agents in advance. Full handling services are available from: Swissport: Tel: 01302-625103; Fax: 01302-625112; Frequency: 130.600 MHz.

EGCN AD 2.4 HANDLING SERVICES AND FACILITIES (continued)

		Weston Aviation: Tel: 01302-624844; Fax: 01302-624846; (GA and Executive Aviation) Frequency: 131.600 MHz; E-mail: doncaster@westonaviation.com AVGAS 100LL: AVGAS service for visiting operators. Fuel available via Weston Aviation.

EGCN AD 2.5 PASSENGER FACILITIES

1	Hotels	On aerodrome.
2	Restaurants	Restaurant and Bar.
3	Transportation	Taxis, Buses and Car Hire. Nearest railway - Doncaster.
4	Medical facilities	First Aid.
5	Bank and Post Office	Bureau de Change.
6	Tourist Office	Limited tourist information from airport information desk in Terminal.
7	Remarks	

EGCN AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A7
2	Rescue equipment	2 x Carmichael Cobra 2 fire tenders (10,000 lt water/1,200 lt foam each) and 1 x Simon Protector fire tender.
3	Capability for removal of disabled aircraft	Not available.
4	Remarks	**RFF Categories 8 and 9 available**on request and by prior arrangement. During periods of reduced activity at the aerodrome RFF category may be downgraded (Scheduled traffic will not be affected). Please check NOTAM and ATIS for the most up to date information. Hydrant Systems and the Booster pump with 270,000 lts at 8-9 bar pressure. 27 booster fed hydrants on the aerodrome, 23 of which are located along the western edge of the runway 150 m apart, 4 on the eastern edge of the apron; hydrants are located 10 m from the edge of the runway 150 m apart.

EGCN AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical. Chemical de-icing
2	Clearance priorities	See AD 1.2.2.
3	Remarks	Braking action assessment by Mu-Meter. Latest Information from ATC Tel: 01302-625642.

EGCN AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	TERMINAL STANDS Surface: Concrete. PCN 71/R/C/W/T HANGAR STANDS Surface: Concrete. PCN 42/R/C/W/T GA APRON Surface: Asphalt. PCN 20/F/D/Z/T
2	Taxiway width, surface and strength	Taxiway ALPHA: 18 m. Surface: Asphalt. PCN 33/F/B/W/T Taxiway BRAVO: 23 m. Surface: Asphalt. PCN 49/F/B/W/T Taxiway CHARLIE: 23 m. Surface: Concrete. PCN 71/R/C/W/T Taxiway DELTA: 18 m. Surface: Asphalt.

EGCN AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA (continued)

		PCN 52/F/A/W/T Taxiway ECHO: 23 m. Surface: Concrete and asphalt. PCN 14/F/A/W/T
3	Altimeter checkpoint location and elevation	
4	VOR checkpoints	
5	INS checkpoints	See Aircraft Parking/Docking Chart.
6	Remarks	GA Apron restricted to aircraft with a wing span no greater than 20 m, inclusive.

EGCN AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	MARS Stands 1, 2, 4 and 5 including all L and R stands are nose-in/push-back. Stand 2A self docking/parking for aircraft with a wing span no greater than 18.5 m. Stand 3 is a single code D stand for aircraft no greater than B757-200. Marshall guidance is provided for all aircraft movements. Stand 1A available for use for aircraft up to and including An-124 without restrictions, capable of An-225 with restrictions. Freight Stands docking/parking guidance system of aircraft Stands 11-14, MARS Stands 16 and 17, including all L and R stands are nose-in/push back. Stand 17A is self-manoeuvring except when Stand 16 is occupied then withdrawn from use. Stands 16 and 17 gradients exceed 1%.
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** : Designation, permanently displaced thresholds, edge, centre-line, aiming point and touch down zone. Turning circles lit left hand side with green uni-directional lighting.**Taxiway light(s):** : Green centre-line lighting to Taxiways A, C and D, blue edge lighting elsewhere. Runway guard lights on access to runway at holding points A1, A2, A6, A7, B, C1 and C2.
3	Stop bars	At holding points A1, A2, A4, A5, A6, B, C1 and C2. All HI uni-directional switchable red.
4	Remarks	2 illuminated wind direction indicators. Some obstacle lighting. Taxiway Alpha movements restricted when IRVR at 350 m or below, follow me required.

EGCN AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGCN1397) 02/APPROACH	Building	532741.56N 0010058.51W	123 ft	28 ft	No	
(EGCN1395) 02/APPROACH	Chimney	532740.36N 0010058.87W	128.49 ft	8.5 ft	No	
(EGCN1998) 02/APPROACH	Tree	532719.88N 0010108.34W	152.5 ft	70 ft	No	
(EGCN1092) 02/APPROACH 20/TAKE-OFF	Fence	532741.73N 0010044.14W	72.51 ft	7 ft	No	
(EGCN2227) 02/APPROACH 20/TAKE-OFF	Tree	532739.68N 0010040.51W	79.27 ft	15.2 ft	No	
(EGCN2231) 02/APPROACH 20/TAKE-OFF	Tree	532739.17N 0010038.81W	81.64 ft	17 ft	No	
(EGCN2011) 02/APPROACH 20/TAKE-OFF	Tree	532738.61N 0010047.54W	87.21 ft	60 ft	No	
(EGCN2235) 02/APPROACH 20/TAKE-OFF	Tree	532737.49N 0010032.68W	85.57 ft	12.1 ft	No	
(EGCN1882) 02/APPROACH 20/TAKE-OFF	Tree	532736.94N 0010032.15W	90.2 ft	22 ft	No	

EGCN AD 2.10 AERODROME OBSTACLES (continued)

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGCN2119) 02/APPROACH 20/TAKE-OFF	Tree	532735.18N 0010043.02W	92.6 ft	27 ft	No	
(EGCN2221) 02/APPROACH 20/TAKE-OFF	Tree	532734.10N 0010100.56W	113.69 ft	8.1 ft	No	
(EGCN2015) 02/APPROACH 20/TAKE-OFF	Tree	532726.32N 0010041.52W	108.85 ft	24 ft	No	
(EGCN2233) 02/APPROACH 20/TAKE-OFF	Tree	532725.44N 0010036.55W	108.60 ft	10.4 ft	No	
(EGCN2219) 02/APPROACH 20/TAKE-OFF	Tree	532721.04N 0010103.87W	134.13 ft	17.4 ft	No	
(EGCN2225) 02/APPROACH 20/TAKE-OFF	Tree	532720.21N 0010052.46W	116.71 ft	11 ft	No	
(EGCN2018) 20/TAKE-OFF	Tree	532739.39N 0010039.73W	78.8 ft	14.3 ft	No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGCN2225) 02/APPROACH 20/TAKE-OFF	Tree	532720.21N 0010052.46W	116.71 ft	11 ft	No	
(EGCN2101)	Wind Tur-bines	533634.39N 0005520.03W	408.92 ft		No	
(EGCN2213)	Chimney	533313.80N 0010515.06W	236 ft		Yes	
(EGCN1044)	Pylon	533025.63N 0010257.63W	192.3 ft	7 ft	No	
(EGCN1047)	Pylon	532948.86N 0010248.37W	190.70 ft	158 ft	No	
(EGCN2276)	Water Tower	532920.07N 0005119.12W	227.53 ft		No	
(EGCN1040)	Pylon	532918.68N 0010322.87W	188.33 ft	15 ft	No	
(EGCN1034)	Pylon	532909.73N 0010354.17W	218.85 ft	10 ft	No	
(EGCN2215)	Tree	532754.08N 0010129.87W	151.56 ft		No	
(EGCN2212)	Aerial	532726.98N 0011309.27W	572.14 ft	54.06 ft	No	
(EGCN1109)	Chimney	532635.20N 0010042.26W	146 ft		No	
(EGCN1006)	Mast	532624.43N 0011253.62W	586 ft	160 ft	No	
(EGCN1328)	Trees	532510.37N 0005841.80W	206 ft	75 ft	No	
(EGCN1038)	Building	532450.23N 0010338.61W	361.26 ft	262 ft	No	
(EGCN1033)	Slag Heap	532423.00N 0010424.10W	273 ft		No	

EGCN AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 9 hours
4	Trend forecast Interval of issuance	

EGCN AD 2.11 METEOROLOGICAL INFORMATION PROVIDED (continued)

5	Briefing/consultation provided	Self briefing/telephone.
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs/METARs. English
7	Charts and other information available for briefing or consultation	AIRMETS. METFORMS: 214, 215, 414, 415.
8	Supplementary equipment available for providing information	Fax and internet access available via airfield operations.
9	ATS units provided with information	DONCASTER SHEFFIELD.
10	Additional information (limitation of service, etc.)	

EGCN AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
02	017.65°	2893 x 60 m	RWY surface: Asphalt. PCN 63/F/B/W/T	532751.11N 0010036.17W 156.56 ft	THR 52.4 ft
20	197.66°	2893 x 60 m	RWY surface: Asphalt. PCN 63/F/B/W/T	532910.93N 0005953.58W 156.56 ft	THR 25.93 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
RWY 02 -1:325 RWY 20 1:325		91 x m			RWY 02 THR displaced by 153 m
RWY 02 -1:325 RWY 20 1:325		300 x m			RWY 20 THR displaced by 153 m

EGCN AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
02	2893 m	2984 m	2893 m	2743 m	
20	2893 m	3056 m	2893 m	2606 m	TORA requires back track and line up of 150 m from A6/A7.
02	1813 m	1904 m	1813 m		Take-off from intersection with Hold Bravo.
02	970 m	1060 m	970 m		Take-off from intersection with Hold Charlie
20	1923 m	2086 m	1923 m		Take-off from intersection with Hold Charlie.
20	2702 m	2864 m	2702 m		Take-off from intersection with Hold Alpha 7.

EGCN AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
02	420 m Light intensity high.	HI uni-directional Green elevated wingbars	PAPI Left/3.1° 60 ft		Bi-directional colour coded 15 m spacing HI	Bi-directional 60 m spacing White HI with LI Omni directional component	Red.		**Approach Lighting:** Coded centre-line with two crossbars **PAPI dist from THR:** 363 m From displaced threshold
20	900 m Light intensity high.	HI uni-directional Green elevated wingbars	PAPI Left/3° 50 ft	900 HI	Bi-directional colour coded 15 m spacing HI	Bi-directional 60 m spacing White HI with LI Omni directional component	Red.		**Approach Lighting:** Coded centre-line withfive crossbars **Supplementry Lighting:** inner 300 m **PAPI dist from THR:** 320 m

EGCN AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 532801.06N 0010024.08W
3	TWY edge and centre line lighting	Taxiway: . Centre line. HI flush fitting green bi-directional centre-line lights to Taxiways Alpha, Charlie, Delta and Terminal apron. The spacing of centre-line lights to Taxiway A and Delta is 23 m. Lead on/off, alternating green/yellow centre-line lights are provided to Taxiway Alpha from holding points Alpha 2 and Alpha 6 and to Taxiway Charlie from holding point Charlie 1. Taxiway: . Edge. HI omni-directional blue edge lights to Taxiways Bravo, Charlie, Echo and aprons.
4	Secondary power supply/switch-over time	UPS Standby diesel. Maximum 1 sec change-over.
5	Remarks	Obstacle lighting. Floodlight to both aprons. 24 hr Stop Bars in use at all Cat 1 Holds A1, C1 and A7.

EGCN AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	FATO :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	Part of the manoeuvring area can be used for take-off and landings as instructed by ATC. Thresholds of the operational runways are designated as aiming points

EGCN AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	DONCASTER AP-PROACH	126.225 MHz DOC 40 nm/20,000 ft.	H24	ATZ hours coincident with Ap-proach hours.
		121.500 MHz Emergency frequency.	O/R	
TWR	DONCASTER TOWER	128.775 MHz DOC 25 nm/4,000 ft.	H24	
		121.500 MHz Emergency frequency.	O/R	
RAD	DONCASTER RADAR	126.225 MHz DOC 40 nm/20,000 ft.	H24	
		283.425 MHz DOC 45 nm/25,000 ft.	H24	
		129.050 MHz Available as directed by ATC. DOC 25 nm/4,000 ft.	When Instructed by ATC	
ATIS	DONCASTER INFOR-MATION	134.950 MHz DOC 55 nm/25,000 ft.	H24	ATIS information available via telephone, externally 0871-220 2210, Ext 5645, internally Ext 5645.
Other	DONCASTER FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle at-tending aircraft on the ground in an emergency.	

EGCN AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS I 1.07°W (2017)	IFIN	110.950 MHz	H24	532924.99N 0005946.05W		(RWY 02)
ILS/GP	IFIN	330.650 MHz	H24	532800.62N 0010023.69W		3.1° ILS Ref Datum Hgt 53 ft.
ILS III 1.07°W (2017)	IFNL	110.950 MHz	H24	532741.22N 0010041.43W		(RWY 20)
ILS/GP	IFNL	330.650 MHz	H24	532900.10N 0005952.23W		3° ILS Ref Datum Hgt 52 ft.
DME	IFIN	46Y 110.950 MHz	H24	532829.54N 0010007.14W	48.58 ft	(RWY 02) On AD. Zero range to threshold of Run-ways 02 and 20. DME frequency paired with ILS I FNL and I FIN.
NDB	FNY	338.000 kHz	H24	532829.36N 0010006.22W		Range 20 nm.
DME	IFNL	46Y 110.950 MHz	H24	532829.54N 0010007.14W	48.58 ft	(RWY 20) On AD. Zero range to threshold of Run-ways 02 and 20. DME frequency paired with ILS I FNL and I FIN.

EGCN AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Pilots are to 'book out' by telephone details to ATC. 'Booking out' by radio is not accepted.

(b) The wearing of high visibility clothing is mandatory for all personnel employed on each of the apron areas and for flight crews, except when transferred directly by bus to/from the aircraft steps and terminal.

(c) Prior permission for departures and arrivals is required from ATC for aircraft unable to communicate with ATC by radio.

(d) Aircraft Captains, through their staff and/or handling agents, are responsible for the safety of persons and/or vehicles on the apron during engine start.

2 Ground Movement

(a) Pilots of Code E aircraft such as B777 and B747 and pilots of An-124 aircraft vacating the runway at Alpha 7 will be required to use painted oversteer line between Alpha 7 and Alpha 6 and follow-me vehicle will be provided. This also applies to Code E aircraft and An-124s entering the runway from Taxiway Alpha via Alpha 6 and Alpha 7.

(b) Pilots of Code E aircraft such as B777 and B747 should exercise caution when using straight portion of Taxiway Alpha between intersections with Taxiway Delta and Taxiway Echo (after vacating runway at Alpha 7, or exiting Taxiway Echo) as main-gear to pavement edge may reduce to 2.6 m on the straight section. A follow-me will be provided at all times and the taxiway is illuminated with taxiway centre-line lighting at night.

(c) Due to reduced wingtip obstacle clearance An-124 aircraft using Taxiway Echo will be provided with follow-me and wing-tip guidance control passing E3.

(d) Operators should note that Doncaster Sheffield Airport is unable to accept A340-600 aircraft due to limitation on taxiway curves.

(e) Aircraft repositioning on the apron must do so under marshaller's guidance.

(f) Aircraft higher than Code F Operations are permitted under follow-me guidance for Main Apron and Cargo Apron. See EGCN AD 2-3.

3 CAT II/III Operations

(a) Runway 20, subject to serviceability of the facility, is suitable for Category II/IIIb operations by operators whose minima have been accepted by the Civil Aviation Authority.

(b) During Cat II/IIIb operations, special ATC procedures (Low Visibility Procedures) will be applied. Pilots will be informed by ATIS broadcast or by RTF when these procedures are in operation.

(c) Taxiway Bravo is closed when Low Visibility Procedures are in force.

(d) Runway Holding Points in use for Cat II/III ops - Alpha 2, Alpha 7 and Charlie 2.

4 Warnings

(a) Pilots should positively identify the runway in use before committing the aircraft to a landing.

(b) Pilots are reminded that throughout the year, bird concentrations may be present on all areas under agricultural use on the approaches to Runway 02/20. Deterrent/Dispersal within the aerodromes boundaries is carried out by the bird control unit and pilots may be requested by ATC to delay a departure or arrival if dispersal proves difficult.

(c) Multiple general aviation and military operations take place in airspace immediately adjacent to or beneath the Doncaster Sheffield CTRs/CTAs.

(d) See EGNE AD 2.22, paragraph 5 for details of Gamston Local Flying Area.

(e) Parachuting takes place at Hibaldstow Parachuting Site (17.5 nm E of the aerodrome), active up to FL150 (See ENR 5.5). Activity information is available from Humberside Approach 119.125 MHz.

(f) Pilots are reminded of the proximity of Scampton (19.5 nm SE of the aerodrome) and Restricted Area R313 (Scampton), which is active up to 9500 ft ALT with formations of fast jet aircraft. Activity information is available from Waddington Approach 119.500 MHz.

(g) Gliding activity takes place at Kirton-in-Lindsey Gliding Site, which lies 18 nm east of Doncaster aerodrome. Gliding takes place up to the base of controlled airspace.

(h) Gliding activity takes place at Burn Gliding Site, which lies 18 nm to the north of Doncaster aerodrome. Gliding activity takes place up to the base of controlled airspace.

(i) Flocks of racing pigeons may be encountered flying across the aerodrome below 100 ft during the racing season, April to September.

EGPN AD 2.22 FLIGHT PROCEDURES (continued)

3 Arrivals

(a) Unless otherwise directed by ATC, IFR flights conducting a visual approach to either runway should expect to descend not below 2000 ft until directed by ATC and anticipate establishing on final approach no closer than 4 miles from touch-down.

4 Missed Approach Procedure

(a) EG D604 is 7 nm east of Dundee ARP. If it appears likely that during the standard missed approach, low performance aircraft will infringe EG D604 then such aircraft should turn right at I-DDE DME 4 onto track 138°M and climb to 2000 (1983) ft before turning right to return to NDB(L) DND at 3000 ft. Pilots should advise ATC on turning onto 138°M and expect to change to Leuchars Approach when instructed for radar assistance.

5 Instrument Approach Procedures

(a) Instrument Approach Procedures (IAP) for this aerodrome are established outside controlled airspace. See ENR 1.5

(b) NDB(L) and DME I-DDE are not co-located.

(c) The Category C instrument approach procedure to Dundee Airport infringes the Perth ATZ (when active) at 1800 ft above Perth aerodrome elevation. To allow Dundee ATC to liaise with Perth AGCS aircraft requiring to make a Category C instrument approach must advise Dundee ATC on first contact or by means of the Remarks field of the inbound Flight Plan.

6 Visual Reference Points (VRP)

(a) A Visual Reference Point is established for use by aerodrome and en-route traffic as follows:

VRP	Co-ordinates
Broughty Castle	562745N 0025211W.

EGPN AD 2.23 ADDITIONAL INFORMATION

Not applicable.

EGPN AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGPN-2-1

Figure: VFR ARRIVAL AND DEPARTURE ROUTES

AD 2-EGPN-4-1

Figure: INSTRUMENT APPROACH CHART ILS/DME RWY 09 (ACFT CAT A, B, C) - ICAO

AD 2-EGPN-8-1

Figure: INSTRUMENT APPROACH CHART LOC/DME RWY 09 (ACFT CAT A, B, C) - ICAO

AD 2-EGPN-8-2

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 09 (ACFT CAT A, B, C) - ICAO →

AD 2-EGPN-8-3

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 09 (ACFT CAT A, B, C) - ICAO

AD 2-EGPN-8-4

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 27 (ACFT CAT A, B, C) - ICAO

AD 2-EGPN-8-5

Figure: INSTRUMENT APPROACH PROCEDURE CODING TABLES RNAV (GNSS) RWY 09

AD 2-EGPN-8-6

Figure: INSTRUMENT APPROACH PROCEDURE CODING TABLES RNAV (GNSS) RWY 27

AD 2-EGPN-8-7

Figure: SBAS FAS DATA BLOCK CODING DATA RNAV (GNSS) RWY 09

AD 2-EGPN-8-8

EGPN AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: SBAS FAS DATA BLOCK CODING DATA RNAV (GNSS) RWY 27

AD 2-EGPN-8-9

EGNV AD 2.22 FLIGHT PROCEDURES

1 Procedures for Inbound Aircraft

(a) The standard routes for aircraft inbound from the Airways System are as follows:

Approach from	Via	Route
South and Southwest	Y250 P18	Leave airways via GASKO to TD NDB
North and Northwest	P18	Leave airways via TILNI to TD NDB

(b) Aircraft inbound to Durham Tees Valley outside controlled airspace from the southeast (via OTR VOR) are recommended to route via FAMBO (543000N 0002752W) to TD NDB and request air traffic services from London (Mil) or Durham Approach as appropriate. Clearance to enter the Durham Tees Valley CTR/CTA should be requested at least 10 minutes before reaching the CTR/CTA boundary.

(c) A portion of the transit is through an area of Class G airspace where pilots may encounter conflicting VFR traffic

2 Procedures for Outbound Aircraft

(a) Aircraft intending to join the airways system should flight plan via the following routes:

Outbound to	Via	Route
South and Southwest	P18	GASKO – POL (below FL 190)
	P16	GASKO – RIBEL (FL 190 and above)
Southeast	Y250 for L26 and UL603	GASKO – M150 – MAMUL
	OTR VOR	FAMBO – OTR (for L90)
		FAMBO – OTBED (for Y70)
North and Northwest	P18	TILNI – P18

(b) A portion of the transit is through an area of Class G airspace where pilots may encounter conflicting VFR traffic.

3 Transit Aircraft

(a) Aircraft wishing to transit controlled airspace should request a crossing clearance at least 10 minutes flying time or 20 nm, whichever is earlier, before reaching the CTR/CTA boundary.

4 Visual Reference Points (VRP)

(a) For the benefit of pilots on VFR flights who prefer to determine their position by reference to radio navigation aids, rather than by visual pinpoints, suitably defined VRPs for Durham Tees Valley are given below:

VRP	Co-ordinates
Hartlepool	544100N 0011250W
Motorway Junction A1(M)/A66(M)	543000N 0013736W
Northallerton	542020N 0012555W
Redcar Race-course	543626N 0010351W
Sedgefield Racecourse	543845N 0012806W
Stokesley	542811N 0011141W

EGNV AD 2.23 ADDITIONAL INFORMATION

Not applicable.

EGNV AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO
AD 2-EGNV-2-1
Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO
AD 2-EGNV-2-2
Figure: CONTROL ZONE AND CONTROL AREA CHART
AD 2-EGNV-4-1
Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO
AD 2-EGNV-5-1
Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 05 - ICAO
AD 2-EGNV-8-1
Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 05 - ICAO
AD 2-EGNV-8-2
Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 05 - ICAO
AD 2-EGNV-8-3
Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 05 - ICAO
AD 2-EGNV-8-4
Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 23 - ICAO
AD 2-EGNV-8-5
Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 23 - ICAO
AD 2-EGNV-8-6
Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 23 - ICAO
AD 2-EGNV-8-7
Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 23 - ICAO
AD 2-EGNV-8-8
Figure: INSTRUMENT APPROACH CHART NDB(L) RWY 23 - ICAO
AD 2-EGNV-8-9

EGPH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 555652.26N 0032256.90W - 555715.15N 0032149.45W
3	TWY edge and centre line lighting	Taxiway: . Centre line. All taxiways are equipped with green centre-line lighting. All aircraft stand taxiways, with the exception of Taxiway Uniform which has blue edge lighting supplemented with reflective green centre-line studs, are equipped with green centre-line lighting.
4	Secondary power supply/switch-over time	Yes.
5	Remarks	Apron floodlighting for all apron areas. Obstacle lighting.

EGPH AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF HELIPAD 1: 555656.84N 0032042.79W
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF HELIPAD 1:
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	A helicopter aiming point is marked on Runway 12/30 at the intersection with Taxiway Uniform. Runway thresholds (06 and 24 only) may also be used, at the discretion of ATC, as aiming points. 3 helicopter pads are located on Block 46. 2 pads can accommodate helicopter up to and including EC.225 type and 1 pad can accommodate up to and including S.92 type. Helicopter operators are reminded that **PPR** is required for all operations (AD 2.20 refers). Hover taxi required between helicopter aiming point and helicopter pad parking.

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF HELIPAD 2: 555657.10N 0032041.49W
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF HELIPAD 2:
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	A helicopter aiming point is marked on Runway 12/30 at the intersection with Taxiway Uniform. Runway thresholds (06 and 24 only) may also be used, at the discretion of ATC, as aiming points. 3 helicopter pads are located on Block 46. 2 pads can accommodate helicopter up to and including EC.225 type and 1 pad can accommodate up to and including S.92 type. Helicopter operators are reminded that **PPR** is required for all operations (AD 2.20 refers). Hover taxi required between helicopter aiming point and helicopter pad parking.

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF HELIPAD 3: 555657.35N 0032039.79W
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF HELIPAD 3:
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	A helicopter aiming point is marked on Runway 12/30 at the intersection with Taxiway Uniform. Runway thresholds (06 and 24 only) may also be used, at the discretion of ATC, as aiming points. 3 helicopter pads are located on Block 46. 2

EGPH AD 2.16 HELICOPTER LANDING AREA (continued)

		pads can accommodate helicopter up to and including EC.225 type and 1 pad can accommodate up to and including S.92 type. Helicopter operators are reminded that **PPR** is required for all operations (AD 2.20 refers). Hover taxi required between helicopter aiming point and helicopter pad parking.

EGPH AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
EDINBURGH CTR A circle, 10 nm radius centred at 555700N 0032221W	Upper limit: 6000 ft ALT Lower limit: SFC	D	EDINBURGH APPROACH English	6000 ft	
EDINBURGH CTA 1 555916N 0033941W - thence anti-clockwise by the arc of a circle radius 10 nm centered on 555700N 0032221W to 554851N 0033235W - 554349N 0034715W - 554806N 0035411W - 555417N 0035413W - 555916N 0033941W	Upper limit: 6000 ft ALT Lower limit: 2500 ft ALT	D	EDINBURGH APPROACH English	6000 ft	
EDINBURGH CTA 2 560700N 0032221W - 560700N 0025608W - 560008N 0024849W - 555442N 0030503W - thence anti-clockwise by the arc of a circle radius 10 nm centered on 555700N 0032221W to 560700N 0032221W	Upper limit: 6000 ft ALT Lower limit: 2500 ft ALT	D	EDINBURGH APPROACH English	6000 ft	
EDINBURGH CTA 3 560700N 0034855W - 560700N 0032221W - thence anti-clockwise by the arc of a circle radius 10 nm centered on 555700N 0032221W to 555916N 0033941W - 555417N 0035413W - 555724N 0035417W - 560700N 0034855W	Upper limit: 6000 ft ALT Lower limit: 3500 ft ALT	D	EDINBURGH APPROACH English	6000 ft	
EDINBURGH CTA 4 560008N 0024849W - 554125N 0025510W - 554125N 0034324W - 554349N 0034715W - 554851N 0033235W - thence anti-clockwise by the arc of a circle radius 10 nm centered on 555700N 0032221W to 555442N 0030503W - 560008N 0024849W	Upper limit: 6000 ft ALT Lower limit: 3500 ft ALT	D	EDINBURGH APPROACH English	6000 ft	
EDINBURGH ATZ A circle, 2.5 nm radius centred at 555700N 0032221W on longest notified runway (06/24)	Upper limit: 2000 ft Lower limit: SFC	D	EDINBURGH APPROACH English	6000 ft	

EGPH AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	EDINBURGH APPROACH	121.200 MHz Also a CTR Channel. DOC 40 nm/10,000 ft.	H24	ATZ hours coincident with Approach hours. **VDF** **555639.82N 0032252.81W** VDF can be changed to 118.700 or 121.500 MHz O/R.
TWR	EDINBURGH TOWER	118.700 MHz DOC 25 nm/10,000 ft.	H24	**VDF** **555639.82N 0032252.81W** VDF can be changed to 118.700 or 121.500 MHz O/R.
	EDINBURGH TOWER	121.500 MHz	O/R	
	EDINBURGH GROUND	121.750 MHz	Winter: Mon-Fri 0600-2200; Sat, Sun 0630-2200. Summer: Mon-Fri 0500-2100; Sat, Sun 0530-2100.	
RAD	EDINBURGH RADAR	121.200 MHz DOC 40 nm/10,000 ft.	H24 Subject to NOTAM	**VDF** **555639.82N 0032252.81W** VDF can be changed to 118.700 or 121.500 MHz O/R.
	EDINBURGH RADAR	128.975 MHz DOC 40 nm/10,000 ft. As directed by ATC.	H24 Subject to NOTAM	
ATIS	EDINBURGH INFORMATION	131.350 MHz DOC 60 nm/20,000 ft.	H24	Also available by telephone: 0131-333 6216.
Other	EDINBURGH FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGPH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS III 2.38°W (2017)	IVG	108.900 MHz	HO	555725.60N 0032105.20W		(RWY 06) The Localiser is not to be used below 3000 ft agl outside 17 nm.
ILS/GP	IVG	329.300 MHz	HO	555652.47N 0032259.34W		3° ILS Ref Datum Hgt 54 ft. Certified for extended range to 15 nm. Not for use below 2200 ft at this range. May not maintain full scale fly up indications when left of localiser centre-line and below glidepath.
ILS III 2.38°W (2017)	ITH	108.900 MHz	HO	555629.19N 0032351.62W		(RWY 24) The Localiser is not to be used below 3000 ft agl outside 17 nm.
ILS/GP	ITH	329.300 MHz	HO	555716.65N 0032148.94W		3° ILS Ref Datum Hgt 50 ft. Certified for extended range to 15 nm. Not for use below 2200 ft at this range.
DME	IVG	26X 108.900 MHz	HO	555706.23N 0032222.77W	123 ft	I VG (RWY 06) On AD. DME freq paired with ILS I VG and I TH.

EGPH AD 2.19 RADIO NAVIGATION AND LANDING AIDS (continued)

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						Zero range is indicated at threshold of Runway 06 and Runway 24.
NDB (L)	UW	368.000 kHz	H24	555418.55N 0033009.04W		Range 25 nm.
NDB (L)	EDN	341.000 kHz	H24	555842.54N 0031707.63W		Range 35 nm.
DME	ITH	26X 108.900 MHz	HO	555706.23N 0032222.77W	123 ft	I TH (RWY 24) On AD. DME freq paired with ILS I VG and I TH. Zero range is indicated at threshold of Runway 06 and Runway 24.

EGPH AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Use governed by regulations applicable to Edinburgh CTR.

(b) All flights, except General Aviation and Military flights, are subject to the prior approval of the Chief Executive Officer, Edinburgh Airport Ltd (EAL) and prior notification to Airport Coordination Ltd, who act as an agent for the airport. Requests for ad-hoc slot allocations should be made to ACL during working hours 0830-1700 Monday to Friday by e-mail: lonacxh@acl-uk.org; or Tel: +44 (0)161-493 1850, Fax: +44 (0)161-493 1853, or at all other times to EAL Airside Operations on Tel: +44 (0)131-344 3139. OCS account holders can add, change and cancel slots at any time on the online coordination portal: https://www.online-coordination.com/default.aspx?AspxAutoDetectCookieSupport=1

(c) Fixed-wing and rotary aircraft using Edinburgh Airport do so in accordance with the Conditions of Use document available on request from Edinburgh Airport Ltd. Tel: +44 (0)844 481 8989 or www.edinburghairport.com/cou

(d) Use by aircraft not able to communicate with ATC by radio is subject to prior permission from ATC.

(e) A handling agent (an EAL licensed airline operator or handling agent based at Edinburgh) is a requirement for all flights including general aviation, cargo, military and helicopter movements. All operators, including executive and private general aviation, must make prior arrangements with a handling agent for the ground handling of all flights. Due to limited parking space all aircraft are PPR with their handling agent.

(f) Pilots of international arriving or departing General Aviation aircraft are responsible for presenting their passengers to the UK Border Agency. Transport to and from the control authority facilities will be provided by the handling agent.

(g) Airline operators are requested to note that stand availability is extremely limited, particularly at night and for large wide-bodied aircraft.

(h) The use of the airport is also subject to the limitations imposed by the night noise limitations.

(i) It is a requirement that every airline using Edinburgh Airport must have local orders compatible with the EAL Emergency Orders. Airlines, General Aviation operators and Flying Clubs should also note that it is their responsibility to recover disabled aircraft and aircraft wreckage and have appropriate arrangements in place before commencing flying operations into the airport. EAL will act as the co-ordinating body throughout the recovery operation and has only very limited equipment which might be used to salvage disabled aircraft.

(j) Aircrew can request ATC departure clearance from EOBT-25. Departing aircraft on first contact with Edinburgh ATC must state aircraft type, stand number and the code letter of the latest ATIS received.

(k) Crews should be in receipt of departure clearance prior to requesting push and start.

(l) ATC departure clearance by Data Clearance Link (DCL) is available at Edinburgh for suitably equipped aircraft. DCL must be compliant with ARINC 623-2 and Eurocae ED 85-A. DCL is available from EOBT-25 until EOBT+15 minutes. DCL Clearances will not be issued if requested later than EOBT+15 minutes.
Successful clearances must be ACCEPTED within 5 minutes of receipt or a 'Revert to voice' message will be received. If any data errors are detected by the system or the controller, a 'Revert to voice' message will be received.
If the attempt to obtain a clearance is unsuccessful the aircraft should revert to voice RTF. Further details of the DCL service may be obtained from ATC operations on +44 (0)131-333 6234.

(m) Crews should request start up clearance only when fully ready to push. This should include doors and hatches closed, steps or air bridge removed, tug attached and communications established with ground crew with confirmation that they are ready. To prevent back of stand vehicle traffic congestion, anti-collision beacons should only be switched on once

EGPH AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

start clearance has been obtained. Where a pushback is to take place with no headset communication between ground crew and aircraft commander, ATC must be advised of this prior to pushback clearance being requested.

(n) Aircraft commanders should not request taxi clearance until all ground crew have vacated the taxilane.

2 Ground Movement

(a) All stands are nose-in/push back. Pilots requiring services on Apron areas, including Customs and Immigration, must ensure that a suitable towbar is available.

(b) General Aviation (GA) aircraft requiring UK Border Agency clearance may be initially directed to the passenger apron. Passengers will be taken to the main passenger terminal for UK Border Agency clearance by their handling agent. When all necessary formalities have been completed, aircraft will be required to reposition to an alternate parking location. GA aircraft not requiring UK Border Agency inspection may taxi directly to their allocated parking area.

(c) Aircrews are advised that there is a short section of parallel taxiway incorporating Lima 1 to Lima 2 and Mike 1 to Mike 2 (Runway 12 threshold) to enable ATC to pass aircraft. Aircraft must remain on the yellow centre-lines to maintain the required minimum wing-tip clearances and should ensure that they understand the routeing given by ATC, particularly at night when both taxiway centre-lines and associated curves are illuminated. The taxiways are clearly delineated by internally illuminated signs and painted ground markings where it has not been possible to provide signs.

(d) At all times, aircrew are responsible for their wingtip separation and, if in any doubt, should stop, hold position and request marshaller assistance. At either end of the Taxiway Alpha, passing places (V and W loops) have been provided to allow aircraft to hold and/or pass aircraft holding on the Taxiway Alpha. Aircraft may pass other aircraft at these locations only when both aircraft concerned have a wingspan of less than 36 m. →

(e) Passenger steps must not be positioned to rear exit(s) of aircraft parked on Stand 5.

3 CAT II/III Operations

(a) Runway 06 and 24, subject to serviceability of the required facilities, are suitable for Category II/III operations by operators whose minima have been accepted by the Civil Aviation Authority.

(b) During Category II and III operations spec ial ATC procedures (ATC low visibility procedures) will be applied. Pilots will be informed by RTF when these procedures are in operation.

(c) Departing Aircraft: Aircraft must not obstruct the Fire Service access road to Runway 06/24 between Holds A10 and A11.

(d) Arriving Aircraft: Pilots should delay the call ‘Runway vacated’ until the aircraft is establisted on Taxiway Alpha and past the coded taxiway centre-line.

4 Warnings

(a) Pilots are warned that there is a large bird population around the aerodrome and to expect the possibility of increased bird activity in the lower airspace, together with visible evidence of deterrent activity in the form of shell crackers being fired.

5 Helicopter Operations

(a) There are no specific helicopter routes.

(b) Arrivals – ATC will select the appropriate aiming point (item AD 2.16 refers) and thereafter will advise on hover/taxiing requirements to the designated parking area.

(c) Departures – As directed by ATC.

6 Use of Runways

(a) Runway 12/30 is a visual runway and is only available for fixed-wing aircraft operation when activated by NOTAM.

(b) The declared distances promulgated for the Bravo, Charlie and Uniform Taxiway intersections are taken at the intersection of the downwind edge of the specified taxiway with the runway centre-line. An appropriate adjustment for a line up allowance must additionally be made by aircrew.

(c) Aircraft departing from Runway 12 should ensure that they are aligned correctly on the runway centre-line and not the yellow taxiway centre-line which is situated to the north of the runway centre-line.

(d) Minimum Runway Occupancy Times

(i) Departures

(1) On receipt of line up clearance, pilots should, commensurate with safety and standard operating procedures, line up on the runway without delay. →!→!

(2) Whenever possible, cockpit checks should be completed prior to line up and any checks requiring completion whilst on the runway should be kept to the minimum required. Pilots should ensure that they are able to commence the take off roll as soon as clearance is issued.

EGPH AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(3) Pilots not able to comply with these requirements should notify ATC as soon as possible once transferred to the Edinburgh Tower frequency.

(ii) Arrivals

(1) Pilots are reminded that rapid exit from the runway will enable ATC to apply minimum spacing on final approach to achieve maximum runway utilisation and will minimise the risk of 'go-arounds'.

7 Training

(a) Flight Training and/or test flying is permitted subject to prior liaison with, and the agreement of, the Head of Airside Operations.

EGPH AD 2.21 NOISE ABATEMENT PROCEDURES

All aircraft inbound to or outbound from this aerodrome are required to conform to the following procedures, notwithstanding that these may at any time be departed from to the extent necessary for avoiding immediate danger.

(a) Any aircraft using the aerodrome shall be operated in such a way that it will not cause a noise reading of more than 94 dBA Lmax by day (0600- 2330 local) or 87 dBA Lmax by night (2330-0600 local) at the relevant noise monitoring terminal(s); the measured noise reading for the event will be taken as the highest recorded at any single noise monitoring terminal.

The sites of the aircraft noise monitoring terminals relating to Edinburgh Airport are:

- EDI 01 - Inveralmond High School, Livingston. NT 0499 6845 - *555359N 0033116W;
- EDI 02 - Scottish Power, Broxburn. NT 0924 7061 - *555508N 0033202W;
- EDI 03 - Cramond Kirk Manse, Cramond. NT 1902 7650 -*555829N 0031757W.

(b) For visual approaches to Runway 06/24 the following limitations will apply:

(i) Propeller driven aircraft whose MTWA does not exceed 5700 kg will not join the final approach to either runway below 1000 ft aal.

(ii) All visual approaches from the south to Runway 24 by aircraft with an MTWA in excess of 5700kg are to be made from a position not less than 7nm DME on the extended centreline. Aircraft are not to descend below 2000ft QNH until after crossing the Firth of Forth coastline northbound. All visual approaches from the north to Runway 24 by aircraft with an MTWA in excess of 5700kg are to be made from a position not less than 4nm DME on the extended centreline. Aircraft approaching Runway 06 are to join the extended runway centreline at a height of not less than 1500ft.

(c) With the exception of aircraft in an emergency - between the hours of 2230 and 0630 (Local), no visual approaches to Runway 06/24 are permitted for IFR aircraft. All IFR aircraft to carry out ILS approaches under ATC control.

(d) Aircraft using the ILS shall not descend below 3000 ft (Edinburgh QNH), unless instructed by ATC, before intercepting the glidepath nor thereafter fly below it. Aircraft landing without assistance from ILS or radar shall follow a descent path which will not result in their being at any time lower than the nominal ILS glidepath.

(e) The Noise Preferential Routeings specified in the following table are compatible with ATC requirements and the tracks are to be flown by all departing jet aircraft and by all other departing aircraft of more than 5700 kg MTWA unless otherwise instructed by ATC or unless deviations are required in the interests of safety.

(f) Noise Preferential Routes must be strictly adhered to. Direct routeings etc offered by ATC should only be taken up after completion of the NPR, unless a mandatory instruction is given or an emergency situation prevails.

EGLF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA (continued)

		PCN 55/F/D/W/U Taxiway FOXTROT: 15 m. Surface: Asphalt. PCN 55/F/D/W/U Taxiway WHISKEY: 15 m. Surface: Asphalt. PCN 55/F/D/W/U Taxiway YANKEE: 15 m. Surface: Asphalt. PCN 55/F/D/W/U Taxiway ZULU: Surface: Asphalt. PCN 55/F/D/W/U
3	Altimeter checkpoint location and elevation	North Apron - 213 FT East Apron - 224 FT South Apron One - 224 FT South Apron Two - 221 FT West One Apron - 212 FT West Two Apron - 217 FT West Three Apron - 217 FT
4	VOR checkpoints	
5	INS checkpoints	
6	Remarks	Alpha Link is the concrete taxiway between East Apron and the Runway. Taxiway DELTA available for Helicopters ONLY. Portion of disused taxiway between Taxiway Zulu and South 1 Apron (as shown on AIP AD 2-EGLF-2-1) may be promulgated as available by NOTAM. This would be an extension of existing Taxiway Yankee.

EGLF AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** : Runway designation, displaced landing thresholds, runway centre-line, runway edge, abbreviated touch down zone, aiming points, turning guidance (yellow centre-line) on runway 06 starter extension suitable for aircraft up to and including BBJ2 size. **Runway light(s):** : Runway edge, threshold, starter extension, caution zone light-ing.**Taxiway light(s):** : Runway guard lights (permanently in operation) at all taxiway/runway intersections, blue edge lighting. Coded centre-line lights in ILS sensitive areas; green centre-line lights on the taxi route across West 1 and North Aprons.
3	Stop bars	At all holding points
4	Remarks	Illuminated WDI east of intersection of taxiways A, B and C and east of Hold F3.

EGLF AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGLF9460) 06/TAKE-OFF	Tree	511712.41N 0004455.50W	327 ft		No	
(EGLF3816) 24/APPROACH	Light	511705.89N 0004524.22W	323 ft		No	
(EGLF9465) 06/TAKE-OFF	Tree	511705.19N 0004454.55W	323 ft		No	
(EGLF3227) 24/APPROACH	Windsleeve	511650.88N 0004558.62W	243 ft		Yes Red	
(EGLF9289) 24/TAKE-OFF	Tree	511611.13N 0004751.53W	286 ft		No	
(EGLF9292) 24/TAKE-OFF	Tree	511609.78N 0004756.31W	296 ft		No	
(EGLF9293) 24/TAKE-OFF	Tree	511609.55N 0004755.16W	296 ft		No	
(EGLF8971) 24/TAKE-OFF	Tree	511608.40N 0004752.61W	287 ft		No	

EGLF AD 2.10 AERODROME OBSTACLES (continued)

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGLF8951) 06/APPROACH	Tree	511607.50N 0004726.89W	288 ft		No	
(EGLF8970) 24/TAKE-OFF	Tree	511605.90N 0004810.17W	315 ft		No	
(EGLF7218) 24/TAKE-OFF	Tree	511605.11N 0004811.25W	315 ft		No	
(EGLF7191) 24/TAKE-OFF	Tree	511559.83N 0004758.09W	309 ft		No	
(EGLF8238) 24/TAKE-OFF	Tree	511559.17N 0004801.03W	316 ft		No	
(EGLF8235) 24/TAKE-OFF	Tree	511557.11N 0004802.57W	316 ft		No	
(EGLF9333) 24/TAKE-OFF	Tree	511551.69N 0004911.00W	389 ft		No	
(EGLF4799) 24/TAKE-OFF	Race-course Tower Aerial	511536.55N 0004909.41W	403 ft		No	
(EGLF7572) 24/TAKE-OFF	Tree	511521.31N 0004927.81W	442 ft		No	
(EGLF7571) 24/TAKE-OFF	Tree	511519.18N 0004928.49W	456 ft		No	
(EGLF7528) 24/TAKE-OFF	Tree	511518.45N 0004926.27W	444 ft		No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGLF1029)	Mast	512124.68N 0004321.29W	765 ft		No	
(EGLF1036)	Pylon	512053.07N 0004229.72W	555 ft		No	
(EGLF1038)	Pylon	512031.42N 0004208.68W	568 ft		No	
(EGLF2308)	Spot Heights	511915.11N 0004146.36W	446 ft		No	
(EGLF1058)	Mast	511909.81N 0004656.02W	453 ft		No	
(EGLF5077)	Tree	511752.86N 0004250.82W	425 ft		No	
(EGLF2252)	Abbey Spire	511749.74N 0004458.37W	420 ft		No	
(EGLF5083)	Tree	511749.43N 0004247.54W	426 ft		No	
(EGLF3902)	Spire	511748.00N 0004500.75W	413 ft		No	
(EGLF7476)	Tree	511557.61N 0004914.52W	405 ft		No	
(EGLF4073)	Tree	511513.11N 0004856.98W	510 ft		No	
(EGLF2232)	Pylon	511504.98N 0005304.27W	449 ft		No	
(EGLF1644)	Tree	511500.82N 0004821.84W	502 ft		No	
(EGLF1645)	Tree	511459.32N 0004823.66W	500 ft		No	
(EGLF2245)	Mast	511445.52N 0004920.30W	704 ft		Yes Red	
(EGLF1034)	Mast	511411.51N 0004900.85W	717 ft		No	

EGLF AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	IBN: Flashing Green 'FH'
2	LDI location and lighting Anemometer location and lighting	Anemometer: centre of central grass area, obstruction light; Runway 06/24 thresholds and threshold anemometers (lit) adjacent to ILS glidepath antennae. Runway 06: 511631.55N 0004655.20W Runway 24: 511641.56N 0004625.76W
3	TWY edge and centre line lighting	Taxiway: . Edge. Blue edge lights. Taxiway: . Centre line. Coded centre-line lead on/exit lights in the ILS sensitive area between: Hold A2 and Runway 06/24; Hold D and Runway 06/24; Hold E and Runway 06/24; Hold F3 and Runway 06/24.
4	Secondary power supply/switch-over time	Yes, 1 Second.
5	Remarks	

EGLF AD 2.16 HELICOPTER LANDING AREA

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EGLF AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	**2**	**3**	**4**	**5**	**6**
FARNBOROUGH ATZ A circle, 2.5 nm radius centred at 511631N 0004639W on longest notified runway (06/24), except that part of the circle located north of the M3 Motorway	Upper limit: 2000 ft Lower limit: SFC	G	FARNBOROUGH RADAR English	6000 ft	ATZ hours: See (a) to (c). (a) The ATZ is hereby notified as being active H24 for the purposes of Rule 11 of the Rules of the Air Regulations 2015. (b) Pilots wishing permission to transit the Farnborough ATZ should in the first instance attempt to obtain that permission from Farnborough ATC on 125.250 MHz during the notified operating hours of that frequency. Outside these hours, contact Farnborough ATC by telephone prior to take-off. (c) Pilots unable to obtain positive information regarding the activity state of the Farnborough ATZ during the notified operating hours of the AD/ATC should assume the ATZ is active and should remain clear. Warning - Pilots must not enter the Farnborough ATZ during notified hours without prior permission.

EGLF AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
RAD	FARNBOROUGH RADAR	134.350 MHz DOC 40 nm/8,000 ft. Frequency may close earlier than Winter 2200 Summer 2100 when no further aerodrome movements are expected.	Winter: Mon-Fri 0700-2200; Sat, Sun and PH 0800-2000. Summer: Mon-Fri 0600-2100; Sat, Sun and PH 0700-1900.	
	FARNBOROUGH RADAR	125.250 MHz Odiham MATZ Penetration. DOC 40 nm/15,000 ft. Outside of Winter 0800-2000 Summer 0700-1900, aircraft may (subject to workload) receive a service from Farnborough or be requested to contact an alternative VHF frequency.	Winter: Mon-Fri 0700-2200; Sat, Sun and PH 0800-2000. Summer: Mon-Fri 0600-2100; Sat, Sun and PH 0700-1900.	
	FARNBOROUGH DIRECTOR	130.050 MHz DOC 25 nm/6000 ft.	As directed by ATC	
TWR	FARNBOROUGH TOWER	122.500 MHz DOC 25 nm/4,000 ft. Frequency may close earlier than Winter 2200 Summer 2100 when no further aerodrome movements are expected.	Winter: Mon-Fri 0700-2200; Sat, Sun and PH 0800-2000. Summer: Mon-Fri 0600-2100; Sat, Sun and PH 0700-1900.	
ATIS	FARNBOROUGH INFORMATION	128.400 MHz DOC 60 nm/40,000 ft.	Winter: Mon-Fri 0700-2200; Sat, Sun and PH 0800-2000. Summer: Mon-Fri 0600-2100; Sat, Sun and PH 0700-1900.	Available from 10 minutes prior to AD opening.
Other	FARNBOROUGH FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	
Other	FARNBOROUGH EMERGENCY	121.500 MHz Emergency Frequency	O/R	

EGLF AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DME	IFRG	52Y 111.550 MHz	Winter: Mon-Fri 0700-2200 Sat, Sun and PH 0800-2000 Summer: Mon-Fri 0600-2100 Sat, Sun and PH 0700-1900	511635.65N 0004640.65W	234 ft	I FRG (RWY 06) On AD. Freq paired with ILS. Bi-directional radiating 35° either side of centre-line. Zero range is indicated at RWY 06/24 Threshold.
ILS I 0.72°W (2017)	IFRG	111.550 MHz	Winter: Mon-Fri 0700-2200 Sat, Sun and PH 0800-2000 Summer: Mon-Fri 0600-2100 Sat, Sun and PH 0700-1900	511656.40N 0004524.06W		(RWY 06) DME instead of Markers. Not suitable for Lower than Cat I Operations.
ILS/GP	IFRG	332.750 MHz	Winter: Mon-Fri 0700-2200 Sat, Sun and PH 0800-2000 Summer: Mon-Fri 0600-2100 Sat, Sun and PH 0700-1900	511630.50N 0004656.11W		3.5 ILS Ref Datum Hgt 50 ft.

EGNR — HAWARDEN

EGNR AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGNR — HAWARDEN

EGNR AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 531041N Long: 0025840W Centre of Runway 04/22
2	Direction and distance from city	3.5 nm WSW of Chester.
3	Elevation / Reference temperature	45 ft / 18 C
4	Geoid undulation at AD ELEV PSN	173 FT
5	Magnetic Variation/ Annual Change	1.77°W (2017) / 0.16°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	AIRBUS OPERATIONS LTD. Post: Hawarden Airport, Broughton, Chester, N Wales, CH4 0DR. Phone: 01244-522012 (ATC) Fax: 01244-523035 Email: atcopshawarden@airbus.com →
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	All calls to ATC will be recorded.

EGNR AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: Mon-Fri 0630-2100; Sat, Sun, PH 0830-1900. Summer: Mon-Fri 0530-2000; Sat, Sun, PH 0730-1800. →
2	Customs and Immigration	By arrangement. PPR 24 hours
3	Health and sanitation	
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	
7	Air Traffic Service	As AD hours. See also AD 2.18.
8	Fuelling	As AD hours. By prior arrangement.
9	Handling	As AD hours. By prior arrangement.
10	Security	As AD hours. By prior arrangement.
11	De-icing	As AD hours. By prior arrangement.
12	Remarks	This aerodrome is **PPR**. Additional activity outside published hours by NOTAM.

EGNR AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	
2	Fuel and oil types	AVTUR JET A-1 AVGAS 100LL
3	Fuelling facilities/capacity	AVGAS: Fixed pump. AVTUR: Bowser (pressure and overwing). →
4	De-icing facilities	Mobile rig by prior arrangement.
5	Hangar space for visiting aircraft	On Apron N, limited for light aircraft (by prior arrangement).
6	Repair facilities for visiting aircraft	Limited for light aircraft on Apron N and C (by prior arrangement). Full services for Marshall Aviation customers.
7	Remarks	

EGNR AD 2.5 PASSENGER FACILITIES

1	Hotels	In the vicinity.
2	Restaurants	Diner on Aerodrome.
3	Transportation	Taxis, trains.
4	Medical facilities	Limited first aid on site.
5	Bank and Post Office	Broughton village.
6	Tourist Office	Chester.
7	Remarks	

EGNR AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A6
2	Rescue equipment	2x Panther fire tenders (12,000 lt water/1500 lt foam, each) 2x Simon Protector fire tenders (4631 lt water/568 lt foam each).
3	Capability for removal of disabled aircraft	Contact Fire Control Room on 01244-522371. Aircraft 150 tonnes (if aircraft can be rolled) with prior approval from accountable manager.
4	Remarks	**RFF Category 6:** As AD hours. **RFF Category 8** by prior approval.

EGNR AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical. Chemical de-icing.
2	Clearance priorities	Runway 04/22; Beluga Apron and Taxiways B and E; Apron A and Taxiway A; Apron C and Taxiway C; Apron N and Taxiway N; Taxiways D, J and G.
3	Remarks	Latest information available from ATC. Tel: 01244-522012.

EGNR AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	A Surface: Concrete. PCN 23/F/D/Y/U BELUGA APRON Surface: Concrete. PCN 66/R/D/X/T C Surface: Asphalt. PCN 23/F/D/Y/U D Surface: Asphalt. PCN 23/F/D/Y/U N Surface: Asphalt. PCN 23/F/D/Y/U
2	Taxiway width, surface and strength	Taxiway ALPHA: 25 m. Surface: Asphalt. PCN 23/F/D/Y/U Width: 25 m between runway and Taxiway D intersection; 15 m between Taxiway D intersection and Apron A. Taxiway BRAVO: 25 m. Surface: Asphalt. PCN 66/R/D/X/T Taxiway CHARLIE: 15 m. Surface: Asphalt. PCN 23/F/D/Y/U Taxiway DELTA: 15 m. Surface: Asphalt. PCN 23/F/D/Y/U Taxiway ECHO: 23 m. Surface: Concrete and asphalt. PCN 66/R/D/X/T Taxiway GOLF: 18 m. Surface: Asphalt. PCN 23/F/D/Y/U Taxiway JULIET: 10.5 m. Surface: Asphalt.

EGNR AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA (continued)

		PCN 23/F/D/Y/U Taxiway NOVEMBER: 15 m. Surface: Asphalt. PCN 23/F/D/Y/U
3	Altimeter checkpoint location and elevation	
4	VOR checkpoints	
5	INS checkpoints	
6	Remarks	

EGNR AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** : Designators 04/22. Permanently displaced thresholds. TDZ and fixed distance markers. Blue edge markers on runway turning circles.**Taxiway light(s):** : A, B, C, E and N have blue edge lighting. Taxiways D and J are not lit, but have retro reflective lin-laner markers. Runway guard lights at Runway 04 crossing and Hold points A1, B1, C1, D1, E1, G1 and N1.
3	Stop bars	Hold E1
4	Remarks	Taxiways D, G and J are unlit and not available for use at night. 2 illuminated windsleeves.

EGNR AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGNR6882) 04/APPROACH 22/TAKE-OFF	Lampost	531010.78N 0025923.25W	78 ft		No	
(EGNR6851) 04/APPROACH 22/TAKE-OFF	Lampost	531009.75N 0025910.37W	79 ft		No	
(EGNR7765) 04/APPROACH 22/TAKE-OFF	Hedge	531007.32N 0025950.41W	132 ft		No	
(EGNR7732) 04/APPROACH 22/TAKE-OFF	Tree	530957.46N 0025921.86W	124 ft		No	
(EGNR6752) 04/APPROACH 22/TAKE-OFF	Lampost	530956.85N 0025933.94W	120 ft		No	
(EGNR6824) 04/APPROACH 22/TAKE-OFF	Chimney	530955.51N 0025934.88W	126 ft		No	
(EGNR6747) 04/APPROACH 22/TAKE-OFF	Lampost	530953.90N 0025939.51W	124 ft		No	
(EGNR7744) 04/APPROACH 22/TAKE-OFF	Tree	530949.02N 0025929.12W	158 ft		No	
(EGNR5202) 04/APPROACH 22/TAKE-OFF	Tree	530943.11N 0030020.37W	178 ft		No	
(EGNR7963) 04/APPROACH 22/TAKE-OFF	Lampost	530939.17N 0030028.87W	190 ft		No	
(EGNR7922) 04/APPROACH 22/TAKE-OFF	Tree	530929.99N 0030043.56W	265 ft		No	
(EGNR8093) 04/APPROACH 22/TAKE-OFF	Tree	530859.46N 0030153.32W	450 ft		No	
(EGNR8016) 04/APPROACH 22/TAKE-OFF	Tree	530855.83N 0030037.15W	239 ft		No	
(EGNR8200) 04/APPROACH 22/TAKE-OFF	Tree	530825.16N 0030234.34W	471 ft		No	
(EGNR693) 04/APPROACH 22/TAKE-OFF	Pylon	530804.44N 0030319.69W	408 ft		No	
(EGNR691) 04/APPROACH 22/TAKE-OFF	Pylon	530742.78N 0030317.38W	368 ft		No	

EGNR AD 2.10 AERODROME OBSTACLES (continued)

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGNR4205) 04/APPROACH 22/TAKE-OFF	Telegraph Pole	530716.48N 0030436.03W	881 ft		No	
(EGNR784) 04/APPROACH 22/TAKE-OFF	Hill	530706.48N 0030432.17W	935 ft		No	
(EGNR4293) 04/APPROACH 22/TAKE-OFF	Pylon	530650.15N 0030327.39W	724 ft		No	
(EGNR779) 04/APPROACH 22/TAKE-OFF	Hill	530647.99N 0030412.94W	948 ft		No	
(EGNR4292) 04/APPROACH 22/TAKE-OFF	Pylon	530640.94N 0030330.00W	886 ft		No	
(EGNR707) 04/APPROACH 22/TAKE-OFF	Pylon	530630.72N 0030332.89W	1015 ft		No	
(EGNR708) 04/APPROACH 22/TAKE-OFF	Pylon	530622.85N 0030333.19W	1088 ft		No	
(EGNR4038) 04/APPROACH 22/TAKE-OFF	High Ground	530502.39N 0030558.30W	1230 ft		No	
(EGNR4082) 04/APPROACH 22/TAKE-OFF	Pylon	530458.95N 0030616.50W	1207 ft		No	
(EGNR4079) 04/APPROACH 22/TAKE-OFF	Pylon	530433.58N 0030540.65W	1113 ft		No	
(EGNR435) 22/APPROACH 04/TAKE-OFF	Chimney	531644.88N 0024825.43W	403 ft		No	
(EGNR4056) 22/APPROACH 04/TAKE-OFF	Chimney	531635.31N 0025051.12W	414 ft		No	
(EGNR4064) 22/APPROACH 04/TAKE-OFF	Chimney	531614.60N 0025017.59W	526 ft		No	
(EGNR363) 22/APPROACH 04/TAKE-OFF	Pylon	531305.61N 0025445.04W	192 ft		No	
(EGNR354) 22/APPROACH 04/TAKE-OFF	Pylon	531253.78N 0025503.77W	175 ft		No	
(EGNR5014) 22/APPROACH 04/TAKE-OFF	Pylon	531251.10N 0025610.31W	174 ft		No	
(EGNR6166) 22/APPROACH 04/TAKE-OFF	Tree	531223.27N 0025539.35W	151 ft		No	
(EGNR313) 22/APPROACH 04/TAKE-OFF	Pylon	531216.18N 0025643.33W	102 ft		No	
(EGNR310) 22/APPROACH 04/TAKE-OFF	Pylon	531156.62N 0025628.47W	92 ft		No	
(EGNR7308) 22/APPROACH 04/TAKE-OFF	Tree	531127.16N 0025728.32W	66 ft		No	
(EGNR5761) 22/APPROACH 04/TAKE-OFF	Tree	531125.06N 0025638.20W	82 ft		No	
(EGNR787) 22/APPROACH 04/TAKE-OFF	Trains on railway line	531109.97N 0025803.80W	32 ft		No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGNR784) 04/APPROACH 22/TAKE-OFF	Hill	530706.48N 0030432.17W	935 ft		No	
(EGNR331)	Pylon	531300.47N 0025627.37W	185 ft		No	
(EGNR3164)	Tower Block	531202.78N 0025556.63W	196 ft		No	
(EGNR4148)	Pylon	531128.05N 0030232.10W	363 ft		No	
(EGNR45)	Hangar	531102.69N 0025753.93W	67 ft		Yes	

EGNR AD 2.10 AERODROME OBSTACLES (continued)

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGNR70)	Building	531029.88N 0025835.45W	105 ft		Yes	Infringes the Transitional Surface for both runway directions.
(EGNR5962)	Tree	531017.35N 0030144.36W	487 ft		No	
(EGNR773)	Pylon	530949.79N 0030304.54W	524 ft		No	
(EGNR630)	Mobile Phone Aerial	530939.46N 0030203.51W	583 ft		No	
(EGNR7906)	Tree	530917.79N 0030038.91W	249 ft		No	
(EGNR6465)	Chimney	530903.14N 0030343.47W	712 ft		Yes	
(EGNR8048)	Tree	530846.87N 0030114.10W	306 ft		No	
(EGNR5994)	Tree	530819.35N 0030146.25W	359 ft		No	
(EGNR6149)	Tree	530726.66N 0030404.64W	640 ft		No	
(EGNR4275)	Tree	530635.77N 0030135.77W	545 ft		No	
(EGNR705)	Mast	530619.13N 0030322.81W	1107 ft		No	
(EGNR778)	Trig Pillar	530616.52N 0030317.35W	1090 ft		No	

EGNR AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	As per operational hours.
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 9 hrs.
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self briefing/Telephone. www.metoffice.gov.uk
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs and METARs. English.
7	Charts and other information available for briefing or consultation	Available on request from ATC.
8	Supplementary equipment available for providing information	Fax, e-mail, ATIS on telephone.
9	ATS units provided with information	HAWARDEN.
10	Additional information (limitation of service, etc.)	Live MET information available at www.egnr.airbrief.net

EGNR AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
04	040.99°	2042 x 45 m	RWY surface: Concrete and asphalt. PCN 66/R/D/X/T	531023.68N 0025904.93W 173 ft	THR 31 ft
22	221.00°	2042 x 45 m	RWY surface: Concrete and asphalt. PCN 66/R/D/X/T	531058.84N 0025814.06W 173 ft	THR 17 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
RWY 04 -1:239 Down RWY 22 1:239 Up		150 x 150 m	2162 x 300 m		RWY 04 Threshold displaced by 300 m.
RWY 04 -1:239 Down RWY 22 1:239 Up		193 x 150 m	2162 x 300 m		RWY 22 Threshold displaced by 300 m.

EGNR AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
04	1962 m	2109 m	1962 m	1660 m	
22	2042 m	2208 m	2042 m	1742 m	

EGNR AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
04	427 m Light intensity high.	HI indented Green with green wingbars	PAPI Right/ 3.5° 47 ft	480 m 8 bar	1663 m 30 m spacing White (900 m red/ white caution zone) HI (LED)	HI elev bi-directional omni-directional component	Red.		**Approach Lighting:** One crossbar **PAPI dist from THR:** 269 m Runway 04 has a final cleared plane of 1:32 over a distance of 1.75 miles, safeguarded at 1:50 incorporating a 3.5° ILS glideslope with an OCA of 570 ft.
22	366 m Light intensity high.	HI indented Green with green wingbars	PAPI Left/3° 42 ft	540 m 9 bar	1743 m 30 m spacing White (900 m red/ white caution zone) HI (LED)	HI elev bi-directional omni-directional component	Red.		**Approach Lighting:** Two crossbars **PAPI dist from THR:** 291 m

EGNR AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: Flashing White/Green Displayed at night during ATC operational hours.
2	LDI location and lighting Anemometer location and lighting	Anemometer: RWY 04: 531032.82N 0025902.39W RWY 22: 531054.58N 0025830.96W
3	TWY edge and centre line lighting	Taxiway: . Edge. Blue edge lights on Taxiways A,B,C,E and N. Taxiway: . Centre line. Green centre-line on Taxiway E.
4	Secondary power supply/switch-over time	UPS and stand-by generator by ATC tower. 1 second switch-over time on generator.
5	Remarks	Obstacle lighting, apron floodlighting (except Apron N).

EGNR AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF : 531052.44N 0025841.23W 173 ft
2	TLOF and/ or FATO elevation	TLOF : 14 ft
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	Unlit Helicopter TLOF marked by H is positioned North of Taxiway Juliet, suitable for helicopters with greatest overall length not exceeding 13 m (daylight use only). Police aiming point marked by Triangle at north end of taxiway Juliet, exclusively for use by police aircraft in accordance with unit specific procedures.

EGNR AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
HAWARDEN RMZ 1 531309N 0025059W - 530940N 0025059W - 531427N 0030140W - 531309N 0025059W	Upper limit: 2500 ft ALT Lower limit: SFC	G	HAWARDEN RADAR English	5000 ft	RMZ hours coincident with aerodrome hours as detailed at EGNR AD 2.3. For conditions of RMZ entry see EGNR AD 2.22 Flight Procedures. Contiguous with overlying CAS.
HAWARDEN RMZ 2 530940N 0025059W - 530823N 0025059W - 530400N 0025720W - 530845N 0031227W - 531525N 0030250W - 531427N 0030140W - 530940N 0025059W	Upper limit: 3000 ft ALT Lower limit: SFC	G	HAWARDEN RADAR English	5000 ft	Contiguous with overlying CAS.
HAWARDEN RMZ 3 530400N 0025720W - 530000N 0030305W - 530000N 0030711W - 530321N 0031150W - 530845N 0031227W - 530400N 0025720W	Upper limit: 4500 ft ALT Lower limit: SFC	G	HAWARDEN RADAR English	5000 ft	Contiguous with overlying CAS.
HAWARDEN ATZ A circle, 2.5 nm radius centred at 531041N 0025840W on longest notified runway (04/22)	Upper limit: 2000 ft Lower limit: SFC	G	HAWARDEN RADAR English	5000 ft	

EGNR AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
TWR	HAWARDEN TOWER	124.950 MHz DOC 25 nm	Winter: Mon-Fri 0630-2100; Sat, Sun, PH 0830-1900. Summer: Mon-Fri 0530-2000; Sat, Sun, PH 0730-1800.	ATZ hours coincident with Tower hours.
RAD	HAWARDEN RADAR	123.350 MHz DOC 25 nm	Winter: Mon-Fri 0630-2100; Sat, Sun, PH 0830-1900. Summer: Mon-Fri 0530-2000; Sat, Sun, PH 0730-1800.	
Other	HAWARDEN FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	
ATIS	HAWARDEN INFORMATION	125.425 MHz DOC 25 nm	Winter: Mon-Fri 0630-2100; Sat, Sun, PH 0830-1900. Summer: Mon-Fri 0530-2000; Sat, Sun, PH 0730-1800.	

EGNR AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (L)	HAW	340.000 kHz	H24	531045.00N 0025846.33W		On AD. Range 25 nm.
DME	IHWD	40Y 110.350 MHz	HO	531043.90N 0025844.32W	48 ft	I HWD (RWY 04) On AD. Freq paired with ILS I HDN. Zero range to threshold Runway 22 and Runway 04. Due to terrain effects DME unusable below 4500 ft in sector 240 to 270 MAG, in excess of 15 nm.
ILS I 1.77°W (2017)	IHWD	110.350 MHz	HO	531043.61N 0025844.66W		04 ILS is offset 2.6° to the right. Due to terrain considerations, the LOC and associated DME are restricted to operations within ± 35° to a range of 10 nm and ± 10° out to a range of 18 nm. Pilots should be warned that glidepath flags may be experienced outside 8 nm when left or right of the centre-line.
ILS/GP	IHWD	334.850 MHz	HO	531032.82N 0025902.39W		3.5° ILS Ref Datum Hgt 42 ft.
ILS I 1.77°W (2017)	IHDN	110.350 MHz	HO	531011.61N 0025922.39W		LOC off-course clearance:. It should be noted that false capture may occur in the sector 26° to 30° left of centre-line with certain types of aircraft navigation receiver. 22 ILS has an infringement of the transitional surface by hangar ENE of the runway threshold.

EGNR AD 2.19 RADIO NAVIGATION AND LANDING AIDS (continued)

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/GP	IHDN	334.850 MHz	HO	531054.58N 0025830.96W		3° ILS Ref Datum Hgt 52 ft.
DME	IHDN	40Y 110.350 MHz	HO	531043.90N 0025844.32W	48 ft	I HDN (RWY 22) On AD. Freq paired with ILS I HDN. Zero range to threshold Runway 22 and Runway 04. Due to terrain effects DME unusable below 4500 ft in sector 240 to 270 MAG, in excess of 15 nm.

EGNR AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Not available to aircraft unable to communicate by radio.

(b) High visibility clothing to be worn on all aprons.

(c) Marshalling is mandatory on all aprons.

(d) Aerodrome not available to gliders, motor-gliders and aircraft with an MTOW of less than 450 kg.

(e) Tail-wheel type aircraft (tail-draggers) are not permitted unless the pilot-in-command has at least 200 hours on type. →

2 Ground Movement

(a) The visibility of Aprons N and C from the ATC control Tower is restricted. Aircraft may be issued with conditional clearances, concerning other aircraft movements. Aircraft movements and engine running on these aprons are subject to ATC approval.

3 CAT II/III Operations

(a) CAT II/III Operations not available.

(b) **Low Visibility Procedures (LVPs)**

(i) LVPs in force when visibility 1639 m or less;

(ii) Visibility 800 m or less - operations restricted to one aircraft movement at a time;

(iii) Visibility 400 m or less - all airfield operations cease until visibility increases above 400 m.

4 Warnings

(a) Pilots are reminded of the proximity of Restricted Area EG R311, 5 nm north of the aerodrome.

(b) The reinforcing steel within the concrete pavement of Runway 04/22 may cause compass deviation on stationary aircraft.

(c) Westerly and Easterly surface winds of greater than 15 kt may lead to turbulence from factory buildings.

(d) Runway 22 strip end is infringed on the left hand side by a frangible garden fence to a distance of 34 m.

(e) High Ground rising up to 1848 ft amsl between 5 nm and 10 nm Southwest of the aerodrome

(f) The ground rises steeply beyond 6500 m throughout the climb out area.

(g) A hangar (obstacle EGNR45) infringes the southern transitional surface to Runway 04/22 by 7.94 m. It is fitted with an obstruction light.

5 Helicopter Operations

(a) Helicopter Operations 'H' is available for helicopters up to 'd' value not exceeding 13.5 m, during daylight hours only.

(b) Aiming point on Taxiway J is available ONLY for approved Police Air Support Unit in accordance with locally agreed procedures.

EGNR AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

6 Use of Runways

Not applicable

7 Training

(a) VFR and IFR training for based and non-based operators available during published operational hours. Contact ATC for details.

(b) Glide approaches are not permitted to Runway 04 from right-hand circuit.

EGNR AD 2.21 NOISE ABATEMENT PROCEDURES

The following procedures may be departed from only to the extent necessary for avoiding immediate danger and for complying with ATC instructions.

(a) Operators of all aircraft using the airport are to ensure that their aircraft conform to the noise abatement techniques laid down for the type of aircraft and that operations are conducted in a manner calculated to cause the least disturbance practicable in areas surrounding the airport.

(b) Jet and turbo-prop aircraft must not join the Final Approach Track at a height of less than 1000 ft QFE.

(c) Runway 22 - All traffic turning left, including circuit traffic, climb straight ahead to DME 1.5 nm or 1000 ft QFE before turning on course.

(d) Helicopters are to avoid overflying the village of Broughton (1 nm southwest of the airport) and the factory buildings that are situated northwest and southeast of Runway 04/22 below 1000 ft QFE.

(e) Aircraft should avoid overflying built up areas and dwellings and minimize noise nuisance as far as possible.

(f) Circuit height: piston engined fixed wing 1000 ft; Jet or turbo prop aircraft 1500 ft; Helicopters 800 ft.

EGNR AD 2.22 FLIGHT PROCEDURES

1 Procedures for aircraft inbound to Hawarden from the Airways System

(a) In order to provide improved ATC handling of Airways flights inbound to Hawarden, a system of Standard Inbound Routes is established. In some case these are coincident with Standard Arrival Routes (STARs) to Liverpool Airport in which case the appropriate STAR Designators will be used (See AD 2-EGGP-7-3).

Approach From	Via	Route	Decsent Planning Information (Note)
Southeast	N601(R3)/UN601/UP6	LESTA - TNT VOR - NANT I - KEGUN (EGGP KEGUN 2A STAR)	FL 200 by LESTA. FL 100 by NANTI →
	N57/T420	TNT VOR -NANTI -KEGUN (EGGP KEGUN 2B STAR)	FL 200 by 25 nm before TNT FL 100 by NANTI →
	N57(B53)/Y537	PEDIG - NANTI - KEGUN (EGGP KEGUN 2C STAR)	
South	N864/UN864	MONTY - KEGUN (EGGP KEGUN 1D STAR)	FL 200 by NITON
West	L975/UL975	LYNAS - WAL VOR - TORGO - KEGUN	FL 240 by NATKO
	L10/UL10	IOM VOR - WAL VOR - TORGO -KEGUN	FL 230 by KELLY
North and Northeast	L612/UL612	CROFT - WAL VOR - TORGO - KEGUN	FL 200 10 nm before LAKE
	N57/POL	POL VOR - WAL VOR - TORGO -KEGUN	
East	L975/UL975	DESIG - WAL VOR -TORGO - KEGUN	FL 290 by VEGUS FL 170 by UPTON

Note: *For planning purposes only, pilots within the Airways System should plan for possible descent to the levels indicated.* ***Actual descent clearance will be as directed by ATC.***

Holding Point	Holding Procedures
KEGUN 531113N 0030901W	Holding axis aligned on WAL VOR RDL 185° (inbound track 005° MAG) at 12 nm, turning left at the fix (KEGUN) Maximum holding speed 210 kt. Holding levels FL 60 to FL 100. **Note:** Holding may not be fully contained within controlled airspace between 0700 and 2000. Radar monitoring will be provided by ATC. For aircraft joining the hold from the north (via WAL VOR) and east (via Liverpool KEGUN STARs) an entry fix TORGO (530757N 0031559W) is established on the outbound leg. Aircraft must be at 250 kt or less by WAL VOR and 210 kt or less by TORGO.

(i) **Holding**

(ii) **Loss of Communications**

(1) Follow the appropriate loss of communications procedures detailed at ENR 1.1.3 to KEGUN. Descend at KEGUN to leave controlled airspace and proceed to NDB(L) HAW and carry out an appropriate instrument approach procedure in accordance with the standard loss of communications procedures.

(b) Instrument Approach Procedures (IAP) for this aerodrome are established outside controlled airspace. See ENR 1.5.

(c) Circuit directions variable. Circuit heights: Fixed-wing piston 1000 ft QFE, Jet 1500 ft QFE, Helicopters 800 ft QFE. →

(d) Standard Terminal Arrival Routes (STAR) refer to AD 2-EGGP-7-1 to AD 2-EGGP-7-3.

(e) Pilots are to advise POB on first contact with ATC.

2 Procedures for Aircraft departing Hawarden to join the Airways System

All Airways departures will be issued with a standard outbound clearance referred as a REXAM 5 departure as follows:

(a) REXAM 5 Runway 22 — join controlled airspace on track REXAM climbing to 5000 ft ALT. If no contact with Scottish Control by REXAM, take up a right hand orbit at REXAM and re-contact Hawarden on previous frequency;

(b) REXAM 5 Runway 04 — after departure, immediate right turn remaining outside the Manchester CTA, join controlled airspace on track REXAM climbing to 4000 ft ALT, on crossing the WAL 167R, climb to 5000 ft. If no contact with Scottish Control by REXAM, take up a right hand orbit at REXAM and re-contact Hawarden on previous frequency;

(c) WAL4 Runway 04: Turn immediately left on track WAL, climb to altitude 4000 ft. If no contact with Scottish Control, take up a right hand orbit at WAL and re-contact previous ATC agency;

(d) WAL4 Runway 22: Turn immediately right on track WAL, climb to altitude 4000 ft. If no contact with Scottish Control, take up a right hand orbit at WAL and re-contact previous ATC agency.

Note: *The transition altitude for this procedure is 5000 ft due to the proximity of the Mancheter TMA. Aircrew should ensure that autopilots and FCM's are set accordingly.*

EGNR AD 2.22 FLIGHT PROCEDURES (continued)

3 Radio Mandatory Zone

For flight within the RMZ aircraft commanders must comply with one of the following:

(a) Establish satisfactory two-way RTF communication with and pass pertinent flight details to Hawarden Radar (123.350 MHz) prior to entering the RMZ. Maintain two-way communication with Hawarden Radar whilst operating inside the RMZ, unless otherwise instructed.

(b) Display the Hawarden Frequency Monitoring Code (FMC) (*4607) with Mode C as detailed in ENR 1.6 paragraph 2.6, UK SSR Code Allocation Plan, and monitor Hawarden Radar (123.350 MHz) prior to entering and whilst inside the RMZ. Pilots must maintain a listening watch and establish two-way RTF communication, if directed, whilst operating inside the RMZ.

Selection of the FMC does not imply receipt of an ATC service and pilots remain responsible for navigation, separation, terrain clearance, and are expected to remain outside of Controlled Airspace at all times.

When a pilot leaves the RMZ they should deselect the FMC.

(c) Non-radio aircraft should contact Hawarden ATC by telephone (01244-522012) or email (atcopshawarden@airbus.com) prior to commencing any planned flight that will enter or cross the RMZ, supplying aircraft registration, type, estimates and points of entry/exit, planned altitudes and duration/activity in the RMZ (if applicable). On receipt of this information an acknowledgement will be issued by ATC Hawarden.

(d) Conduct flight in accordance with valid Letter of Agreement with Hawarden ATC.

4 Visual Reference Points (VRPs)

VRP	WAL VOR/DME FIX	HAW NDB FIX
Beeston Castle 530742N 0024131W	137°/22.5 nm	108° MAG/10.8 nm
Flint Bridge 531346N 0030400W	168°/10.1 nm	316° MAG/4.4 nm
Mold Town 530954N 0030731W	181°/13.6 nm	263° MAG/5.3 nm
Padeswood Cement Factory 530916N 0030342W	172°/14.5 nm	245° MAG/3.3 nm
Poulton Disused Aerodrome 530756N 0025330W	153°/17.9 nm	133° MAG/4.2 nm
Wrexham Industrial Estate 530221N 0025433W	161°/22.7 nm	165° MAG/8.8 nm

EGNR AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGNR AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGNR-2-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGNR-5-1

Figure: INSTRUMENT APPROACH CHART OFFSET ILS/DME/NDB(L) RWY 04 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-1

Figure: INSTRUMENT APPROACH CHART OFFSET LOC/DME/NDB(L) RWY 04 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-2

Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 04 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-3

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 04 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-4

Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 22 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-5

EGNR AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 22 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-6

Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 22 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-7

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 22 (ACFT CAT A,B,C) - ICAO

AD 2-EGNR-8-8

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EGNJ AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
02	2070 m	2208 m	2070 m	2070 m	
20	2196 m	2196 m	2196 m	1950 m	TORA, ASDA and TODA start at red lights across runway.
02	772 m	910 m	772 m		Take off from abeam Holding point S.
02	800 m	937 m	800 m		Take off from abeam Holding point U.
20	1325 m	1325 m	1325 m		Take off from abeam Holding point S.
20	1300 m	1300 m	1300 m		Take off from abeam Holding point U.
20	1846 m	1846 m	1846 m		Take off from abeam Holding point A.
08	769 m	769 m	799 m	799 m	
26	799 m	799 m	799 m	701 m	

EGNJ AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
02	840 m Light intensity high.	HI inset Green with elevated wingbars	PAPI Left/3.5° 51 ft		Coded centre-line 30 m spacing Light intensity high.	HI bi-directional with LI omni-directional component	Red HI		**Approach lighting Type:** Coded centre-line with five crossbars **PAPI Dist from THR:** 390 m The red lights across the runway mark the end of usable pavement. Blue edge lights at turning areas.
20	912 m Light intensity high.	HI inset Green with elevated wingbars	PAPI Left/3° 53 ft		Coded centre-line 30 m spacing Light intensity high.	HI bi-directional with LI omni-directional component	Red HI		**Approach lighting Type:** Coded centre-line with five crossbars **PAPI Dist from THR:** 325 m Blue edge lights at turning areas.

EGNJ AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: Located at 533356.24N 0002130.58W - 533442.24N 0002044.04W
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	Yes. 8 seconds.
5	Remarks	Obstacle marking and lighting: Localizer aerial – Glide Path aerial – DME aerial – Radar – Windsleeves – Control Tower – Fire Station Watch Tower

EGNJ AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	FATO :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	Heliport Helicopter Stands: H9, H10 and H11 - Up to AW139. H12 - Up to MD900. Southern Apron: H6, H7 and H8 - Up to AW139. Main Apron: H1N and H1S - Up to AW139. SAR Apron: HS1 and HS2 - Up to S92.

EGNJ AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	**2**	**3**	**4**	**5**	**6**
HUMBERSIDE ATZ A circle, 2.5 nm radius centred at 533424N 0002105W on longest notified runway (02/20)	Upper limit: 2000 ft Lower limit: SFC	G	HUMBERSIDE RADAR English	3000 ft	SAR operations may occur H24, including outside of the operating hours of the aerodrome and ATZ. Pilots are recommended to make a blind call on the Humberside Tower frequency 124.900 MHz when the aerodrome is published closed and they are transiting through or close to the ATZ.

EGNJ AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	**2**	**3**	**4**	**5**
APP	HUMBERSIDE APPROACH	119.125 MHz DOC 40 nm/20,000 ft.	Winter: 0620-2115. Summer: 0510-2015.	ATZ hours coincident with Approach hours.
TWR	HUMBERSIDE TOWER	124.900 MHz DOC 25 nm/4,000 ft.	Winter: 0620-2115. Summer: 0510-2015.	
		119.125 MHz DOC 40 nm/20,000 ft.	As directed by ATC	
RAD	HUMBERSIDE RADAR	119.125 MHz	Winter: 0620-2115. Summer: 0510-2015.	LARS is provided coincident with Approach hours.
		129.255 MHz DOC 40 nm/20,000 ft.	As directed by ATC	
ATIS	HUMBERSIDE INFORMATION	124.125 MHz DOC 40 nm/10,000 ft.	Winter: 0620-2115. Summer: 0510-2015.	
Other	HUMBERSIDE FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGPE — INVERNESS

EGPE AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGPE — INVERNESS

EGPE AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 573233N Long: 0040251W Mid-point of Runway 05/23
2	Direction and distance from city	7 nm NE of Inverness.
3	Elevation / Reference temperature	31 ft / 14 C
4	Geoid undulation at AD ELEV PSN	172 FT
5	Magnetic Variation/ Annual Change	2.97°W (2017) / 0.18°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	HIGHLANDS AND ISLANDS AIRPORTS LTD Post: Inverness Airport, Inverness IV2 7JB. Phone: 01667-464000 (Administration) Phone: 01667-464276 (ATC) Phone: 01667-464255 (MET) Fax: 01667-462041 (Administration) Fax: 01667-462586 (ATC)
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Telephone calls to ATC will be recorded.

EGPE AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2115; Tue-Sat 0145-2115; Sun 0545-2115.
2	Customs and Immigration	By arrangement. 6 hours notice required for EU flights, H24 for other flights.
3	Health and sanitation	
4	AIS Briefing Office	As AD hours.
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	As AIS briefing hours.
7	Air Traffic Service	As AD hours. See also AD 2.18.
8	Fuelling	Winter AVTUR JET A-1 and AVGAS 100LL: Mon-Fri 0600-1900; Sat 0600-1430; Sun 0600-1900. Summer: 0500-1800. Out of hours (Tel: +44 (0)7836-202637 or +44 (0)7595-223613).
9	Handling	
10	Security	
11	De-icing	
12	Remarks	This aerodrome is **PPR**. Aircraft not subject to compulsory handling should contact Apron Operations on 07917-071144 a minimum of 2 hours prior to ETA to obtain permission to operate.

EGPE AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	Prearrange with cargo handling agent, Tel: 01667-462121; Fax: 01667-462750.
2	Fuel and oil types	AVGAS 100LL AVTUR JET A-1
3	Fuelling facilities/capacity	100,000 lts stored. Delivery 700 lts per minute.
4	De-icing facilities	Full aircraft de-icing capability.
5	Hangar space for visiting aircraft	None.
6	Repair facilities for visiting aircraft	Limited.
7	Remarks	Handling Agents: Dalcross Handling Ltd: Tel: 01667-464120; Fax: 01667-464129; Frequency: 129.750 MHz. Highlands Jet Centre: Tel: 01667-462121. Signature Flight Support: Tel: 01667-461122; Fax: 01667-461133; Frequency 122.350 MHz.

EGPE AD 2.5 PASSENGER FACILITIES

1	Hotels	In Inverness.
2	Restaurants	Buffet in terminal.
3	Transportation	Taxis.
4	Medical facilities	First aid facilities.
5	Bank and Post Office	ATM in Terminal Building.
6	Tourist Office	
7	Remarks	

EGPE AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A6
2	Rescue equipment	
3	Capability for removal of disabled aircraft	Limited.
4	Remarks	**RFF Category 6** Winter: Sun-Fri 0630-2200; Sat 0630-2045. Summer: Mon-Sat 0530-2115; Sun 0545-2115. **RFF Category 5** Winter: Tue-Sat 0245-0630. Summer: Tue-Sat 0145-0530. During RFF Category 6 periods, RFF Category 7 provision will be available by prior arrangement.

EGPE AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Snow ploughs and blowers
2	Clearance priorities	Runway 05/23. Taxiway Alpha and Golf. Apron. Runway 11/29.
3	Remarks	Latest Information from ATC, Tel: 01667-464293

EGPE AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undu-lation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
05	049.45°	1887 x 46 m	RWY surface: Asphalt, grooved. PCN 40/F/C/X/T	573214.55N 0040331.24W 172 ft	THR 30 ft
23	229.47°	1887 x 46 m	RWY surface: Asphalt, grooved. PCN 40/F/C/X/T	573252.81N 0040208.05W 172 ft	THR 21 ft
11	109.59°	700 x 18 m	RWY surface: Asphalt. PCN 39/F/C/X/T	573240.71N 0040335.53W 172 ft	THR 31 ft
29	289.60°	700 x 18 m	RWY surface: Asphalt. PCN 39/F/C/X/T	573233.09N 0040255.72W 172 ft	THR 25 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
05/23 1:774		150 x 150 m	x 150 m		RWY 05
05/23 1:774		147 x 150 m	x 150 m		RWY 23
RWY 11/29 1:459			x 30 m		RWY 11
RWY 11/29 1:459			x 30 m		RWY 29

EGPE AD 2.13 DECLARED DISTANCES

Runway desig-nator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
05	1887 m	2037 m	1887 m	1820 m	
23	1820 m	1970 m	1820 m	1820 m	
05	947 m	1097 m	947 m		Take-off from intersection of Runway 11.
23	846 m	996 m	846 m		Take-off from intersection of Runway 11.
11	700 m	700 m	700 m	700 m	
29	700 m	700 m	700 m	700 m	

EGPE AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
05	900 m Light intensity high.	Green Wingbars	PAPI Left/3° 50 ft			White HI Final 600 m yellow	Red.		**Approach Lighting:** with five crossbars **PAPI Dist from THR:** 362 m
23	900 m Light intensity high.	Green Wingbars	PAPI Left/3° 57 ft			White HI Final 600 m yellow	Red.		**Approach Lighting:** with five crossbars **PAPI dist from THR:** 348 m
11		Green Wingbars				White HI 700 m at 60 m	Red.		Runway 11/29 edge lighting is out of gauge.
29		Green Wingbars				White HI 700 m at 60 m	Red Wingbars		Runway 11/29 edge lighting is out of gauge.

EGPE AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 573221.27N 0040306.47W 573242.83N 0040219.56W
3	TWY edge and centre line lighting	Taxiway: . Edge. Blue edge lights from Runway 05 to Runway 11 threshold. Taxiway: . Centre line. Green centre-line from Runway 05/23 centre-line to SAR Apron. Green centre-line from Hold F, through north apron and taxiway to south apron.
4	Secondary power supply/switch-over time	Standby generator/15 seconds.
5	Remarks	

EGPE AD 2.16 HELICOPTER LANDING AREA

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EGPE AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
INVERNESS ATZ A circle, 2.5 nm radius centred at 573233N 0040251W on longest notified runway (05/23)	Upper limit: 2000 ft Lower limit: SFC	G	INVERNESS APPROACH English	3000 ft	SAR operations may occur H24, including outside of the operating hours of the aerodrome ATZ. Pilots are recommended to make a blind call on the Inverness Approach frequency 122.600 MHz when the aerodrome is published closed and they are transiting through or close to the ATZ.

EGPE AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	INVERNESS APPROACH	122.600 MHz Combined TWR and APP service is provided on 122.600 during hours when RAD is unavailable. DOC 40 nm/15,000 ft.	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2115; Tue-Sat 0145-2115; Sun 0545-2115.	ATZ hours coincident with Approach hours. **VDF** **573226.12N 0040249.92W** Northwest of ATC.
TWR	INVERNESS TOWER	118.400 MHz DOC 25 nm/4,000 ft.	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon-Fri 0730-1630; Sat 0845-1630; Sun 0930-1630.	**VDF** **573226.12N 0040249.92W** Northwest of ATC.
		122.600 MHz Combined TWR and APP service is provided on 122.600 during hours when RAD is unavailable. DOC 40 nm/15,000 ft.	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon-Fri 0730-1630; Sat 0845-1630; Sun 0930-1630.	
RAD	INVERNESS RADAR	122.600 MHz DOC 40 nm/15,000 ft.	Winter: Mon-Fri 0945-1750; Sun 0945-1730. Summer: Mon-Fri 0730-1630; Sat 0845-1630; Sun 0845-1630.	**VDF** **573226.12N 0040249.92W** Northwest of ATC.
ATIS	INVERNESS INFORMATION	109.200 MHz Broadcast on Inverness VOR.	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: H24.	Unverified outside hours of approach.
Other	INVERNESS FIRE CHIEF	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGPE AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/DME I 2.97°W (2017)	IDX	108.500 MHz	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.	573208.40N 0040344.60W		(RWY 23)
ILS/DME/GP	IDX	329.900 MHz	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.	573242.94N 0040217.53W		3° ILS Ref Datum Hgt 50 ft.
ILS/DME I 2.97°W (2017)	ILN	108.500 MHz	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.	573303.40N 0040145.02W		(RWY 05) Pilots may not receive full fly-up indications when below glidepath and right of centre-line.
ILS/DME/GP	ILN	329.900 MHz	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.	573218.23N 0040311.72W		3° ILS Ref Datum Hgt 50 ft.
DME/VOR	INS	29X 109.200 MHz	H24 Available for approach and landing purposes only during the hours of APP.	573233.41N 0040227.97W	40 ft	VOR DOC: 40 nm/ 25000 ft. Due to terrain, VOR coverage at low level is reduced in Sector R143°-183°. DME co-located and freq paired with VOR and unmonitored outside Inverness ATC hours of operation. The DME may unlock on R305° when aircraft are at ranges in excess of 34 nm and below 5500 ft. VOR declination 2.7° W
DME	IDX	22X 108.500 MHz	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.	573230.47N 0040246.46W	43 ft	(RWY 23) DME freq paired with ILS I LN and I DX. Zero range is indicated at threshold Runway 05 and Runway 23.
NDB	IVR	328.000 kHz	Hours of operation for aerodrome purposes: Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer: Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.	573229.43N 0040245.48W		Normally radiates H24. Range 25 nm.
DME	ILN	22X 108.500 MHz	Winter: Mon 0630-2200; Tue-Fri 0245-2200; Sat 0245-2045; Sun 0630-2200. Summer:	573230.47N 0040246.46W	43 ft	(RWY 05) DME freq paired with ILS I LN and I DX. Zero range is indi-

EGPE AD 2.19 RADIO NAVIGATION AND LANDING AIDS (continued)

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
			Mon 0530-2030; Tue-Sat 0145-2030; Sun 0600-2045.			cated at threshold Runway 05 and Runway 23.

EGPE AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) All operators of domestic flights whose MAUW is 3000 kg or greater, and international flights (including executive and private General Aviation, Channel Islands and Republic of Ireland flights) regardless of MAUW, must make prior arrangements with a handling agent.

(b) Inverness Airport is strictly PPR outside published hours. Requests should be made to Inverness Apron Operations Tel: +44 (0)1667-464307, Mobile: +44 (0)7917-071144 or e-mail: invernessapronoperations@hial.co.uk.

(c) Smoking airside is strictly prohibited.

(d) Use of Inverness aerodrome is subject to standard Terms and Conditions of Use, which can be requested from the aerodrome.

(e) In order to comply with airport regulations, all persons entering airside areas on foot are required to wear high visibility clothing, appropriate PPEs and be in possession/display an appropriate and valid HIAL ID pass.

(f) All aircraft using Inverness Aerodrome or its facilities are required to have third party liability insurance cover. Proof of this insurance should be available for inspection at any time whilst the aircraft is on the aerodrome.

2 Ground Movement

(a) The taxiway between the north end of the south apron and threshold Runway 11 is available for use only by aircraft with a wingspan up to but not including 36 m.

(b) To permit crossing of Taxiway Echo through the North Apron by non-radio equipped vehicles, two crossings are installed, indicated by black/white checked edges. One, at the north end, leads to the GA Terminal, Landing Fee Office and Flight Plan Centre, the other to AFS and the Terminal Building. These crossings are not available during Stage 2 LVP operations, ATC will advise. In addition a pedestrian crossing has been marked, green in colour with 'walking man' symbols, between the two vehicle crossings. All pedestrians, wishing to cross Taxiway Echo are required to use the pedestrian or vehicular crossings.

(c) All ground movement west of Hold D is at the pilots discretion. Only Inverness based aircraft, aircraft under tow to Hangar 3, or aircraft for which previous arrangements have been made with a handling agent or Apron Control (07917-071144), are permitted west of Hold D.

(d) Aircrew are requested to use minimum power settings whilst turning to leave the parking stands on either apron in order to avoid blast injury to personnel or blast damage to other aircraft.

(e) Push-back not available at Inverness, so marshalling is routinely provided to all aircraft movements to or from South Apron. Therefore, pilots of inbound aircraft are not to turn off Taxiway Alpha prior to parking, nor are pilots of outbound aircraft to request taxi, unless they are in visual contact with, and receiving guidance from, the Duty Marshaller. In the event that no marshaller is in sight at the appointed time, the pilot should hold position and advise ATC of the situation. In such circumstances ATC may instruct the pilot to await the marshaller, or, if the delay is likely to be excessive, advise the pilot to park or leave the apron at his discretion. This instruction will be in respect of other aircraft movements and will take no account of vehicle and personnel movements on the apron.

(f) ATC will issue clearances to vehicles on the TWR VHF frequency, which is cross-coupled to the UHF GMC frequency. Pilots will not hear responses from drivers.

(g) Only aircraft operating to and from the SAR Apron are permitted to use the G Taxiway.

3 CAT II/III Operations

Not applicable

4 Warnings

(a) No ground signals except light signals.

(b) Caution should be exercised when taxiing to hangars Nº 1 and 2 due to the close proximity of an adjacent security fence.

(c) Despite the presence of a deer fence, roe deer are occasionally seen on the airport. Pilots are requested to report the location of any animals sighted to ATC.

EGPE AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(d) Due to coastal location, birds are a hazard throughout most of the year. This hazard level is raised during the migration season when large numbers of wintering wildfowl transit across approaches to feeding locations on farmland adjacent to the airport.

(e) In a strong southerly airstream, severe turbulance may occur below 4000 ft. In lee wave conditions, the turbulance may be particularly bad at very low levels

(f) High ground to the South 1500 ft at 5 nm rising to 2018 ft at 7.4 nm.

(g) Paragliding and Hang gliding takes place at Alturlie Point in an area known as the Alturlie Box (573118.29N 0040850.83W - 573106.00N 0040755.59W - 573042.84N 0040812.67W - 573045.90N 0040914.11W - 573118.29N 0040850.83W). Due to the serious risks presented by wake turbulence, helicopter pilots should avoid overflying or operating in close proximity to this area at low level. The status of the Alturlie Box is available from ATC.

(h) All pilots should be aware of the activities of a dangerous nature between Fort George (EG D702) and the Black Isle SFC - 500 ft during the operating hours of EG D702.

(i) Pilots of aircraft with a MTOW exceeding 2000 kg are requested to carry out all 180 degree turns on the concrete portion of RWY 05/23 (Approx. first 220 m from threshold 23, full runway width).

5 Helicopter Operations

(a) Helicopters are expected to make approaches to, and departures from, notified runways. Those with wheeled undercarriages will be treated similarly to fixed wing aircraft and must ground taxi whilst within the apron/taxiway area. For skid-equipped helicopters, the aiming point will generally be Runway 11 threshold followed by hover taxiing to one of the four marked helipads for parking. Two, (H1 and H2) are provided on the west side of the North apron, H3 and H4 being marked on the northern end of the grass area to the east of the North apron. If all of these are in use, helicopters can expect to park on the east side of the North apron. No hover taxiing by helicopters is permitted west of Hold D.

(b) Exceptionally, if weather conditions make lengthy hover taxiing undesirable, departure into wind over the grass area west of Runway 11/29 will be permitted. Overflying the aprons and Terminal building is to be avoided.

6 Use of Runways

(a) Runway Departure Restriction – Except where an AOC holder has a less restrictive State authorised take-off minima, departures in RVR conditions of less than 400 m are not permitted.

(b) Runway 11/29 is not available during night hours to aircraft requiring a licensed aerodrome.

7 Training

(a) Practice engine failures after departure by single engine aircraft are permitted when Runway 23 is in use provided the aircraft has passed the aerodrome access road.

(b) Asymmetric training by multi-engined aircraft is permitted following departure or go-around on any runway, provided that the aircraft concerned will not descend below 500 ft QFE (or QNH equivalent) during such maneouvres.

(c) All training by visiting aircraft must be pre-booked with ATC on 01667-464293.

(d) The following procedures are applicable for visual circuit training aircraft only with a MTOW of 5700 kg or more:

(i) Circuit training shall only be permitted between 0800-1900 (local) Mon-Fri and between 0900-1800 Sat/Sun;

(ii) In the event of continuous circuit flying for 2 hours, a 30 minute break from circuit training shall occur for all aircraft with a MTOW of 5700 kg or more;

(iii) Circuit direction will be frequently varied by ATC;

(iv) Where possible, pilots shall avoid overflying surrounding villages and/or hamlets whilst operating in the circuit. This is particularly important for those portions of the flight that are operated below 1000 ft. Examples of such locations are, but not limited to:

- Croy
- Treeton
- Dalcross Castle
- Holme Rose
- Ardersier

EGPE AD 2.21 NOISE ABATEMENT PROCEDURES

Not applicable

EGPE AD 2.22 FLIGHT PROCEDURES

1 Instrument Approach Procedures

(a) Instrument Approach Procedures (IAP) for this aerodrome are established outside controlled airspace. See ENR 1.5.

2 Restrictive Areas

(a) Inverness airport is situated adjacent to RAF Lossiemouth, and Danger Area EG D703, Tain Range. IFR flights may require extended vectoring due to military activity in the area.

3 North Atlantic Departures

(a) Due to the proximity of the Shanwick Oceanic boundary to Inverness, pilots must consider timescales for requesting Oceanic clearance. Refer to ENR 2-2 for details.

(b) Pilots are reminded that the Oceanic clearance (including level allocation) is valid only from the OCA Entry Point. **Domestic ATC Clearance to the OCA Entry point is issued separately.**

4 Air Traffic Services Outside Controlled Airspace

(a) Pilots of aircraft filing VFR flight plans or booking out VFR shall endeavour to notify ATC prior to departure if a Deconfliction Service is likely to be requested.

(b) Pilots of aircraft filing IFR flight plans or booking out IFR shall notify ATC prior to departure if any service other than a Deconfliction Service is likely to be requested.

(c) This does not preclude pilots from requesting any appropriate service once airborne.

5 Visual Reference Points (VRP)

(a) Visual Reference Points are established for use by aerodrome and enroute traffic as follows:

VRP	Co-ordinates
Invergordon	574132N 0041003W
Lochindorb	572410N 0034257W
Tomatin	572002N 0035930W
Dores	572255N 0041955W
Dingwall	573558N 0042553W

EGPE AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGPE AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGPE-2-1

Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO

AD 2-EGPE-2-2

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGPE-5-1

Figure: INSTRUMENT APPROACH CHART ILS/DME/VOR RWY 05 (CAT A, B) - ICAO

AD 2-EGPE-8-1

Figure: INSTRUMENT APPROACH CHART ILS/DME/VOR RWY 05 (CAT C) - ICAO

AD 2-EGPE-8-2

Figure: INSTRUMENT APPROACH CHART LOC/DME/VOR RWY 05 (CAT A, B) - ICAO

AD 2-EGPE-8-3

Figure: INSTRUMENT APPROACH CHART LOC/DME/VOR RWY 05 (CAT C) - ICAO

AD 2-EGPE-8-4

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 05 (CAT A, B) - ICAO

EGPA AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
09	1428 m	1428 m	1428 m	1268 m	
27	1368 m	1428 m	1368 m	1326 m	
09	972 m	972 m	972 m		Take-off from intersection with Runway 14/32.
27	1050 m	1110 m	1050 m		Take-off from intersection with Eastern taxiway.
14	560 m	560 m	560 m	560 m	
32	680 m	680 m	680 m	560 m	

EGPA AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
09	900 m Light intensity high.	Green wingbars	PAPI Right/ 3.5° 42 ft			HI 1320 m/60 m spacing white Final 420 m yellow	Red.		**Approach lighting:** Five crossbars **PAPI Dist from Thr:** 230 m For Runway 09 the first 120 m of edge lights are red due to the displaced threshold
27	450 m Light intensity high.	Green wingbars	PAPI Left/3.5° 47 ft			HI 1320 m/60 m spacing white Final 420 m yellow	Red.		**Approach lighting:** Two crossbars **PAPI Dist from Thr:** 256 m

EGPA AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: Runway 09: 585731.97N 0025433.00W - Runway 27: 585725.76N 0025342.89W
3	TWY edge and centre line lighting	Taxiway: . Edge. LI Blue taxiway edge lights from runway intersection to apron and entrance to small apron, width 18 m.
4	Secondary power supply/switch-over time	Yes.
5	Remarks	Apron floodlighting. Obstacle lighting.

EGPA AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	FATO :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	When traffic allows, light helicopters may arrive/depart directly to/from the appropriate apron or grass areas at the pilots discretion. The aerodrome buildings must not be overflown.

EGPA AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
KIRKWALL ATZ A circle, 2 nm radius centred at 585729N 0025402W on longest notified runway (09/27)	Upper limit: 2000 ft Lower limit: SFC	G	KIRKWALL APPROACH English	3000 ft	ATZ may be re-activated at short notice at any time for air ambulance or emergency traffic. Pilots are advised to regard the ATZ as permanently active and to call and listen out on RTF.

EGPA AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	KIRKWALL APPROACH	118.300 MHz	Winter: Mon-Fri 0715-1945; Sat 0715-1745; Sun 0845-1945. Summer: Mon-Fri 0615-1845; Sat 0615-1645; Sun 0745-1845.	ATZ hours coincident with Approach hours.
TWR	KIRKWALL TOWER	118.300 MHz DOC 40 nm/15,000 ft.	Winter: Mon-Fri 0715-1945; Sat 0715-1745; Sun 0845-1945. Summer: Mon-Fri 0615-1845; Sat 0615-1645; Sun 0745-1845.	
AFIS	KIRWALL INFORMATION	118.300 MHz	By arrangement outside hours of ATC - Normally only available for SAR, ambulance and emergency Flights.	For FISO training and maintenance of competency, FISO phraseology may be in use during ATC published hours providing basic service only. Pilots will be alerted to this by the use of call sign Kirkwall Information and ATIS message. ATC in attendance at all times and available immediately upon request if procedural service required.
ATIS	KIRWALL INFORMATION	108.600 MHz Freq shared with VOR KWL.	Winter: Mon-Fri 0715-1945; Sat 0715-1745; Sun 0845-1945. Summer: Mon-Fri 0615-1845; Sat 0615-1645; Sun 0745-1845.	
Other	KIRKWALL FIRE CHIEF	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGPA AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/DME I 2.72°W (2017)	IORK	110.100 MHz	Winter: Mon-Fri 0715-1945; Sat 0715-1745; Sun 0845-1945. Summer: Mon-Fri 0615-1845; Sat 0615-1645; Sun 0745-1845.	585730.25N 0025301.59W		(RWY 09) Due to terrain LOC reduced coverage of +/- 10 degrees at 18 nm and +/- 35 degrees at 10 nm.
ILS/DME/GP	IORK	334.400 MHz	Winter: Mon-Fri 0715-1945; Sat 0715-1745; Sun 0845-1945. Summer: Mon-Fri 0615-1845; Sat 0615-1645; Sun 0745-1845.	585724.18N 0025423.13W		3.5° ILS Ref Datum Hgt 50 ft.

EGNM AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	LEEDS APPROACH	134.575 MHz DOC 40 nm/10,000 ft	H24	ATZ hours coincident with Approach hours. Certain services may be PPR during 2300-0700 (Winter), 2200-0600 (Summer). Pilots are advised that making calls outside the DOC is likely to cause interference from adjacent paired frequencies. **VDF** **535158.41N 0013925.17W** On AD.
TWR	LEEDS TOWER	120.300 MHz DOC 25 nm/4,000 ft.	H24	
	LEEDS DELIVERY	121.800 MHz DOC 5 nm/GND.	Winter: 0600-2200 Summer: 0500-2100	
RAD	LEEDS RADAR	134.575 MHz DOC 40 nm/10,000 ft.	H24	
	LEEDS RADAR	125.375 MHz As directed by ATC.	H24	
ATIS	LEEDS INFORMATION	118.025 MHz DOC 50 nm/20,000 ft.	H24	
Other	LEEDS FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGNM AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS I 1.37°W (2017)	ILBF	110.900 MHz	HO	535129.18N 0013854.98W		(RWY 14)
ILS/GP	ILBF	330.800 MHz	HO	535208.89N 0014002.18W		3.5° ILS Ref Datum Hgt 46 ft.
ILS III 1.37°W (2017)	ILF	110.900 MHz	HO	535227.98N 0014025.34W		(RWY 32)
ILS/GP	ILF	330.800 MHz	HO	535146.80N 0013914.18W		3° ILS Ref Datum Hgt 50 ft.
DME	ILF	46X 110.900 MHz	H24	535200.78N 0013931.48W	677 ft	I LF (RWY 32) On AD. DME freq paired with ILS I LF and I LBF. Zero range is indicated at THR of Runway 14/32.
DME	ILBF	46X 110.900 MHz	H24	535200.78N 0013931.48W	677 ft	I LBF (RWY 14) On AD. DME freq paired with ILS I LF and I LBF. Zero range is indicated at THR of Runway 14/32.
NDB (L)	LBA	402.500 kHz	H24	535153.97N 0013910.41W		On AD. Range 25 nm.

EGNM AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Mandatory handling applies for all visiting non-based aircraft.

(b) Aircraft using the aerodrome are to carry Third Party Insurance cover of not less than £2,000,000.

(c) Microlight aircraft are not accepted.

(d) The aerodrome is not available to aircraft unable to communicate with ATC by radio, unless by special arrangement with Airport Authority for maintenance purposes.

(e) Use governed by regulations applicable to Leeds CTR.

(f) Pilots of VFR/SVFR aircraft are to book out by telephone directly with ATC. Book out by radio will not be accepted.

(g) The wearing of high visibility clothing is mandatory for all personnel working on airside areas, except for flight and cabin crew when bussing to/from the aircraft steps to terminal.

(h) All flights, except General Aviation below 5700 kg and Military flights, are subject to the prior approval of the Director of Operations, Leeds Bradford International Airport Ltd and prior notification to Airport Coordination Ltd, who act as an agent for the airport. Requests for ad-hoc slot allocations should be made to ACL during working hours 0830-1700 Monday to Friday by e-mail: lonacxh@acl-uk.org; or Tel: +44 (0)161-493 1850, Fax: +44 (0)161-493 1853, or at all other times to Airfield Operations +44 (0)113-391 3232 or email: airside.safetyunit@lba.co.uk. OCS account holders can add, change and cancel slots at any time on the online coordination portal: https://www.onlinecoordination.com/default.aspxAspxAutoDetectCookieSupport=1

(i) It is a requirement that every airline using Leeds Bradford International Airport must have local orders compatible with LBIA Emergency Orders. Airlines, General Aviation operators and Flying clubs should also note that it is their responsibility to recover disabled aircraft and aircraft wreckage and have appropriate arrangements in place before commencing flying operations into the aerodrome. LBIA will act as the co-ordinating body throughout the recovery operation and has only very limited equipment which might be used to salvage disabled aircraft.

(j) QFE will not be passed by ATC unless requested.

(k) Visiting G/A pilots must ensure that they are fully briefed on arrival, departure and taxi procedures prior to using the Aerodrome. ATZ entry may be refused, or flights can expect significant delays if unfamiliar with ATC procedures.

(l) Non ACL slot allocated GA/BA movements can expect significant delays between 0800-0900 local, March-October due to runway capacity.

2 Ground Movement

(a) In order to maximise use of parking space all aircraft using the north side stands, must be able to accept push-back. Aircraft, which cannot will be parked remotely, marshalled and will only be accepted if space permits. Companies and handling agents are to ensure that the equipment necessary to provide push-back is available when required.

(b) Supplementary (Multi Access Ramp System) parking arrangements for aircraft with wingspans of 30 m or less may be initiated at any time, ATC will advise. Aircraft will be marshalled under these conditions.

(c) ATC Clearance should be requested before start up but not before EOBT – 15 mins. Following a pilot request, cancel and refile messages may be sent by ATC. Aircraft must declare the stand number, or position, together with the ATIS letter received and QNH. Start up should not be requested until the aircraft is fully ready for start and or pushback with a tug attached.

(d) The marked centre-line turning circle for larger aircraft (B767/300, A310/A300 or B777/200) using the Runway 32 turning pad may only be achieved using up to 52° of nose wheel steering. Additionally, there is no straight section of the centre-line parallel to runway centre-line before commencement of the 180° turn onto the runway centre-line.

(e) To assist with planning, aircraft must advise ATC as soon as possible if it becomes apparent that they will not be ready for departure upon reaching the holding points. Pilots **must** inform ATC prior to entering the runway if they are aware that they will not be ready for departure on line up. Backtracking should be as expeditious as possible, consistent with safety. Aircraft able to use intersections for departure (particularly D1 for Runway 32 or A1 for Runway 14) should inform ATC when requesting push back or start up.

(f) In to wind parking is available in accordance with procedures published in the LBIA Aerodrome Manual.

(g) The main northside apron is designated under the Aviation and Maritime Security Act 1990. For security and safety reasons operators of all aircraft using the aerodrome are advised that the use of a handling agent is mandatory. All persons embarking or disembarking to/from aircraft must be escorted by their handling agent.

(h) Taxiways F, G and M not available at night.

(i) Leeds Delivery is responsible for passing ATC clearance to aircraft prior to start-up only.

(j) Pushback Procedures:

(i) Pushback and start instructions may contain reference to an adjacent stand or defined point on a taxiway. The term long push may also be used together with a location definition.

(ii) The pushback instruction will normally include a direction to face as east, west or south.

EGNM AD 2.22 FLIGHT PROCEDURES (continued)

VRP	VOR/DME Fix
Dewsbury (DBY) 534130N 0013806W	POL 102°/17 nm
Eccup Reservoir (ECP) 535216N 0013236W	POL 070°/21 nm
Harrogate (HGT) 535930N 0013136W	POL 055°/25 nm
Keighley (KLY) 535200N 0015436W	POL 044°/10 nm

5 Flying Within 10 nm of the Leeds CTR

(a) Pilots flying within 10 nm of Leeds CTR and maintaining a listening watch only on the Leeds Approach frequency may select code 2677. Selection of 2677 does not imply the receipt of an ATC service. Aircraft displaying the code are not expected to contact ATC under normal circumstances, remain responsible for their own navigation, separation, terrain clearance and are expected to remain clear of the Leeds CTR/CTA at all times. When an aircraft ceases to maintain a listening watch or is no longer flying within 10 nm of the Leeds CTR, the pilot will deselect transponder code 2677. Aircraft who intend to either transit Leeds CTR or route underneath any portion of the CTA, should still contact Leeds Radar on 134.575 MHz for a service and clearance if required. →|

EGNM AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGNM AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGNM-2-1

Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO

AD 2-EGNM-2-2

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGNM-5-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) NELSA/POLE HILL - ICAO

AD 2-EGNM-6-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) DOPEK/LAMIX - ICAO

AD 2-EGNM-6-2

Figure: INSTRUMENT APPROACH CHART ILS/DME y RWY 14 - ICAO

AD 2-EGNM-8-1

Figure: INSTRUMENT APPROACH CHART ILS/DME z RWY 14 - ICAO

AD 2-EGNM-8-2

Figure: INSTRUMENT APPROACH CHART LOC/DME y RWY 14 - ICAO

AD 2-EGNM-8-3

Figure: INSTRUMENT APPROACH CHART LOC/DME z RWY 14 - ICAO

AD 2-EGNM-8-4

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME y RWY 14 - ICAO

AD 2-EGNM-8-5

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME z RWY 14 - ICAO

AD 2-EGNM-8-6

Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 32 - ICAO

AD 2-EGNM-8-7

Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 32 - ICAO

AD 2-EGNM-8-8

EGNM AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: INSTRUMENT APPROACH CHART NDB(L) DME RWY 32 - ICAO

AD 2-EGNM-8-9

EGHF AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGHF2002) 23/APPROACH 05/TAKE-OFF	Antenna	505133.28N 0010727.08W	416.15 ft		No	
(EGHF1095) 23/APPROACH 05/TAKE-OFF	Tree	504928.25N 0011143.56W	92.09 ft		No	
(EGHF1090) 23/APPROACH 05/TAKE-OFF	Tree	504918.60N 0011153.70W	78.22 ft		No	
(EGHF1163) 23/APPROACH 05/TAKE-OFF	Tree	504915.18N 0011157.78W	63.52 ft		No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGHF2001)	Monument	505137.89N 0010802.82W	389.07 ft		No	
(EGHF2026)	Mast	505132.11N 0010639.25W	471.46 ft		No	
(EGHF2029)	Streetlight	505124.34N 0010632.09W	469.03 ft		No	
(EGHF2042)	Radar	505124.08N 0010522.44W	490.06 ft		No	
(EGHF2043)	Pylon	505118.88N 0010455.98W	459.97 ft		No	
(EGHF2066)	Chimney	504903.36N 0011944.73W	647.97 ft		Yes Red	
(EGHF2049)	Spinnaker Tower	504744.05N 0010630.46W	560.07 ft		Yes Red	

EGHF AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	
2	Hours of service MET Office outside hours	
3	Office responsible for TAF preparation Periods of validity	
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	
6	Flight documentation Language(s) used	
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	
10	Additional information (limitation of service, etc.)	

EGHF AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
05	045.22°	1325 x 30 m	RWY surface: Asphalt. PCN 11/F/B/Y/T	504846.36N 0011239.90W 151 ft	THR 32 ft
23	225.23°	1325 x 30 m	RWY surface: Asphalt. PCN 11/F/B/Y/T	504909.75N 0011202.70W 151 ft	THR 31 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					RWY 05 Threshold displaced 153 m from starter extension. Threshold displaced by 277 m from start of asphalt. Starter extension of 153 x 20 m.
					RWY 23 Threshold displaced by 23 m from start of asphalt.

EGHF AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
05	1178 m	1178 m	1178 m	1025 m	
23	1025 m	1025 m	1199 m	1025 m	

EGHF AD 2.14 APPROACH AND RUNWAY LIGHTING

INTENTIONALLY BLANK

EGHF AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	
5	Remarks	Before Runway 05 Threshold. Helicopter aiming point lights for SAR Dispersal (MCA): Solar powered lighting.

EGHF AD 2.16 HELICOPTER LANDING AREA

INTENTIONALLY BLANK

EGHF AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
LEE-ON-SOLENT ATZ 504810N 0010929W - thence anti-clockwise by the arc of a circle radius 2 nm centered on 504857N 0011224W to 504828N 0010920W - 505047N 0011110W - thence anti-clockwise by the arc of a circle radius 2 nm centered on 504857N 0011224W to 504810N 0010929W	Upper limit: 2000 ft Lower limit: SFC	G	LEE RADIO English	3000 ft	

EGHF AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
Other	LEE RADIO	118.925 MHz A/G Frequency	Winter: 0900-1630; Summer: 0800-1700.	ATZ hours coincident with A/G hours.

EGHF AD 2.19 RADIO NAVIGATION AND LANDING AIDS

EGHF AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Refer to the Aerodrome website for pilot briefing and PPR.

(b) Aircraft approaching Lee-on-Solent Aerodrome are encouraged to contact Solent Radar (120.225 MHz) for an air traffic service prior to contacting Lee Radio to reduce the risk of infringing adjacent controlled airspace.

(c) If intending to fly within the Fleetlands ATZ to the east of the disused railway line, pilots must contact Fleetlands prior to entry on 135.700 MHz. →

(d) Visiting traffic to Lee-on-Solent should be familiar with the layout and topography of the aerodrome (see aerodrome website). There are some significant changes to the aerodrome which will continue to happen as major infrastructure changes come online.

(e) Pilots whose track remains to the west of the disused railway line do not need to call Fleetlands but may choose to do so for information on local traffic.

(f) When ‘Fleetlands Information' is operating, they may be contacted for information but it is not necessary if remaining clear of the Eastern Sector. Fleetlands monitor Lee Radio and vice versa and can advise of any traffic in the local area. Fleetlands traffic will not enter the Western Sector without coordinating with ‘Lee Radio’.

2 Ground Movement

(a) Control Tower is now the location for all VISITOR PARKING.

(b) North East and South East aprons are not for visitor parking without pre-booking with the aerodrome authority.

(c) The Coastguard apron, helipad and dispersal is out of bounds and is not to be used by visiting aircraft.

(d) The Bravo and Delta taxiways should be used by aircraft to avoid back-tracking on the runway wherever possible.

(e) Collection point for fees and charges in Visitor Reception.

3 CAT II/III Operations

Not applicable

4 Warnings

(a) Solent CTA approximately 3 nm west of aerodrome.

(b) Glider winch launching takes place at the aerodrome. Cables can extend up to 2100 ft amsl.

EGHF AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(c) SAR and Rotary daily H24 operations, regular glider winch launch and aero-tow operations at the aerodrome.

(d) Model Aircraft Flying operate on the aerodrome around the disused Runway 17/35.

(e) Fleetlands Heliport is located 1.9 nm to the northeast of Lee-On-Solent.

5 Helicopter Operations

(a) SAR rotary operations take priority for departures and arrivals.

(b) No additional or special published procedures exist for rotary traffic. All non-SAR rotary operations should use same arrival, departure, circuit and ground procedures.

(c) Visiting rotary aircraft should follow circuit, arrival and departure procedures and should hover-taxi using the taxiways, where appropriate, to the designated visitor areas of the aerodrome.

(d) Based rotary operators may follow pre-agreed taxiing and routing procedures.

6 Use of Runways

(a) Due to gliding operations all aircraft to join downwind.

(b) No straight-in or long finals (except SAR ops).

(c) Grass strips either side of the runway should not be used without local knowledge.

7 Training

Not applicable

EGHF AD 2.21 NOISE ABATEMENT PROCEDURES

(a) The circuit patterns are drawn to avoid noise sensitive areas (avoid overflying Stubbington and Hill Head, which are inside the circuit). For a 'go around' keep to north side of the runway.

(b) When departing Runway 23, track the extended centre-line to avoid overflying housing near the threshold of Runway 05.

EGHF AD 2.22 FLIGHT PROCEDURES

1 Circuits

(a) Circuits – Main Runways 05/23

(i) Suggested join is left base for Runway 05 or downwind for Runway 23. A downwind join for Runway 05 from the north is also possible if you know the local landmarks (see Arrival chart), available at: http://www.daedalusairfield.co.uk/visit-by-air.

(ii) Circuits at 1000 ft aal. Glider circuit to the south - LH on Runway 23 and RH on Runway 05 and powered circuits to the north, LH on Runway 05 and RH on Runway 23.

(b) Be aware that gliders approach from the opposite direction on base leg. They will normally be lower than powered aircraft and have priority.

(c) No dead-side, overhead or crosswind joins.

EGHF AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGHF AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGHF-2-1

EGGP AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Pilots are to 'book out' by telephoning details to ATC. ‘Booking out’ by radio is not accepted.

(b) The wearing of high visibility clothing is mandatory for all personnel employed on each of the apron areas including flight crews, except when direct bussing to/from the aircraft steps and terminal.

(c) The aerodrome is PPR for aircraft which are not based at Liverpool Airport. Mandatory handling is required for all visiting or non-based aircraft. Prior permission should be requested through a handling agent, AOC and aero@liverpoolairport.com; (see AD 2.4). No permission will be granted by ATC. Aircraft without prior permission could be refused landing clearance except in an emergency. Filing a flight plan does not constitute a PPR request.

(d) Prior permission for departures and arrivals is required from ATC for aircraft unable to communicate with ATC by radio.

(e) Aircraft Captains, through their staff and/or Handling agents, are responsible for the safety of persons and/or vehicles on the apron during engine start.

(f) All flights, except General Aviation and Military flights, are subject to the prior approval of the Airport Operations Director, Liverpool Airport Ltd and prior notification to Airport Co-ordination Ltd, who act as an agent for the airport. Requests for ad-hoc slot allocations should be made to ACL during working hours 0830-1700 Monday to Friday by SITA: LONACXH; e-mail: lonacxh@acl-uk.org ; or Tel: +44 (0)161-493 1850, Fax: +44 (0)161-493 1853, or at all other times to Airfield Operations +44 (0)151-907 1551. OCS account holders can add, change and cancel slots at any time on the online coordination portal: https://www.online-coordination.com

2 Ground Movement

(a) Aircraft entering the Main Apron will be as directed by ATC, however, aircraft with a wingspan of 36 m or more will enter through Taxiway Whiskey (W) under follow-me guidance.

(b) Aircraft re-positioning on the aprons must obtain ATC permission and then follow the marshaller’s guidance.

(c) Taxiway Alpha from Holding Point Alpha 3 to Runway 27 threshold is restricted to aircraft with less than 52 m wingspan (code E). Aircraft with a wing span of 52 m or more shall be escorted by a follow-me vehicle ensuring nose wheel is maintained on the taxiway centre-line. A wing person shall be provided on the single story building 41.5 m north of the taxiway centre-line between Alpha 3 and the 27 threshold which infringes the code E taxiway strip.

(d) Owing to the position of the hangars, Stands 1 and 32 are out of sight of ATC. Pilots should listen carefully to their taxi instructions.

(e) Pilots are to report their stand number when requesting start-up. Start-up must not be requested until the aircraft is fully ready to start.

(f) Take-off, landing and taxiing on grass areas is not permitted. Helicopters may be permitted to alight on the grass area adjacent to the General Aviation parking area.

(g) The General Aviation parking area is limited to aircraft of 5700 kg or less.

(h) Visiting aircraft entering the GA apron at Kilo are to call Ravenair on 131.750 MHz for parking instructions.

(i) All runway holding position stop bars are constantly illuminated except when de-selected by ATC to permit aircraft and vehicles to enter runway.

(j) A vehicle crossing point at Z15 also has a red stop bar which is controlled by ATC and is for use by vehicles only.

3 CAT II/III Operations

(a) During CAT ll operations, special ATC procedures (LVP’s) will be applied. Pilots will be informed by ATC when these procedures are in operation. Pilots are advised that implementation of these procedures can cause delays for inbound and outbound traffic.

(b) Aircraft departing Runway 27 must hold at the Alpha 2 holding point.

(c) Arriving aircraft must continue to the end of the runway to vacate via CHARLIE. Aircraft must report runway vacated and report reaching Alpha 8.

(d) For CAT ll Operations, changeover standby power to mains takes place in 1 second.

(e) Aircraft parking on the main apron will normally enter at Whiskey and exit at Uniform, except when directed by ATC.

(f) Illuminated stop bars will be in operation at Holding Points A2, A3, A8, K, T, U, V and W during Low Visibility Operations.

(g) All aircraft must have a follow me whilst taxiing on the main apron.

EGGP AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

4 Warnings

(a) Pilots should positively identify the runway in use before committing the aircraft to a landing.

(b) Pilots are reminded of the proximity of Restricted Area EG R311, 5 nm southwest of the aerodrome.

(c) Aircraft completing visual approaches to Liverpool airport from the south and southeast are requested to avoid overflying the industrial chemical works situated on the south bank of the River Mersey, 1 nm south of the NDB LPL.

(d) Pilots should exercise caution when leaving the main apron via Taxiway Victor to ensure they do not enter the rapid exit turn-off at ECHO when taxiing to Runway 09 or Runway 27.

(e) Pilots are reminded that throughout the year, bird concentrations may be present on all areas under agricultural use on the approaches to Runway 09/27. Deterrent/dispersal within the aerodrome boundary is conducted by the Airfield Operations Unit and pilots may be requested by ATC to delay a departure or arrival if dispersal proves difficult.

(f) Radio controlled models up to 20 kg operate at maximum altitude 400 ft agl during daylight hours only, between 1000-2100 (local), within the confines of :

(i) Frodsham Marshes (132° - 4.4 nm)

(ii) Halton Moss (085° - 7.6 nm)

(iii) Arrowe Park (290° - 11 nm)

(g) Runway 27 undershoot RESA is only 37 m long due to a public highway. The under shoot RESA contains the following obstacles:

(i) ILS Localiser 117 m from 27 threshold;

(ii) Wooden fence and light hedge.

(h) Maintenance equipment on airport hotel roof. When in use equipment penetrates through the Obstacle Limitation Surface by maximum of 2.0 m. Obstacle approximately 625 m on a bearing of 329° from ARP. Equipped with obstacle warning light that automatically illuminates when the equipment is in use. When not in use and in parked position it is no longer an obstacle.

(i) Over recent years, three specific Laser Hotspot areas have been identified in the vicinity of Liverpool Airport from which aircraft are more susceptible to laser attack from the ground. These areas are Liverpool city centre (7 nm northwest), Warrington town centre (10 nm northeast) and Runcorn town centre (4.5 nm east). Pilots are encouraged to report all laser attacks immediately to ATC including details of the colour of the laser and, where possible, the precise location of the laser. This information is then passed to the local police for an immediate response.

5 Helicopter Operations

(a) Parts of the manoeuvring area can be used for take-offs and landings as instructed by ATC. Thresholds of the operational runways are designated as aiming points.

(b) Arrivals: ATC will either select the appropriate threshold or instruct the helicopter to make an approach to the runway. If instructed to approach the runway, the helicopter is to turn on to a final approach and arrange the descent to flare to ground or hover taxiing speed in the fixed wing runway touchdown zone.

(c) Taxiway Alpha Arrivals/Departures: Approach/Departures to the Alpha taxiway are only permitted when:

(i) the runway is closed; and

(ii) the helicopter is operating on a VFR clearance; and

(iii) there are no aircraft, vehicles or personnel on the taxiway.

(d) Departures: These will be made from the runway, Aiming Points or parallel taxiway as selected by ATC.

(e) Taxiing - Hover (or ground taxiing if applicable) is required to/from the parking area via designated taxiways.

(f) A training area for helicopter hovering has been designated to the west of Taxiway Charlie on a disused taxiway and grassed area. Manoeuvring helicopters shall be exempt from the 500 ft rule if it is conducting manoeuvres, in accordance with normal aviation practice, within boundaries of a licensed or Government aerodrome or, with the written permission of the CAA at other sites. When flying in accordance with the above exemption the helicopter must not be operated closer than 60 m to any persons, vessels, vehicles or structures located outside the aerodrome or site.

(g) A FATO has been created south of the main runway that is available for use by Liverpool John Lennon Airport based helicopters only. The midpoint of the FATO is 531956.30N 0025107.80W with dimensions of 30 m x 30 m.

6 Use of Runways

(a) Variable circuit directions at the discretion of ATC.

(b) Overhead join of the circuit is not available. Pilots should join the circuit as instructed by ATC.

EGGP AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

7 Training

(a) Training flights by turbo-jet powered aircraft shall be subject to the prior approval of ATC. They will not normally be permitted on Sundays before 1000 or after 2000. On other days they will not be permitted between 2300-0700 (Winter) 2200-0600 (Summer). They will be subject to the following conditions:

(i) All crew training circuits shall be carried out at least 1500 ft aal;

(ii) In other respects, training aircraft shall comply with the noise abatement procedures detailed below.

(b) All types of IFR/VFR training are only available by prior arrangement with ATC and are subject to availability of training slots. Pilots are strongly advised to book their training slots with ATC well in advance. Failure to make a booking may result in the aircraft being refused use of the facilities.

(c) Pilots unable to make the booked time must inform ATC as soon as possible so that a new booking may be made. Pilots should inform ATC as soon as possible of booking cancellations. Any flight delayed by 30 minutes or more will be deemed to have been cancelled.

(d) When Runway 09 is the declared runway in use, instrument training to Runway 27 will not be permitted. Only radar vectored ILS/DME approaches will be available for instrument training to Runway 09.

(e) The filing of a flight plan does not constitute a booking to carry out training from the airport.

EGGP AD 2.21 NOISE ABATEMENT PROCEDURES

1 General

Every operator of aircraft using the aerodrome shall ensure at all times that aircraft are operated in a manner calculated to cause the least disturbance practicable in LPL Controlled Airspace.

2 Reverse Thrust

To minimise disturbance in areas adjacent to the aerodrome, Flights Crew shall avoid the use of reverse thrust after landing, unless necessary for the safe operation of the aircraft, especially between 23:00 and 06:00 (local time).

3 Aircraft Noise Quota System

Liverpool John Lennon Airport operates and manages a Night Noise Quota System, which is based on the CAA Supplement to the UK AIP, pertaining to the Airport Noise Restrictions Notice for London Heathrow, London Gatwick and London Stansted. The quota count value for the take-off and landing by individual aircraft types is shown in the Annexe to the above mentioned Supplement.

(a) The night quota period is between 23:00 and 07:00 (local time), with the quota count period being between 23:30 and 06:00.

(b) Operators must supply information appertaining to the noise characteristics (aircraft type, engine type, operating weight and maximum certificated landing or take-off weight as appropriate) and quota count for all non-exempt aircraft using Liverpool John Lennon Airport, between 2300–0700. This information must be provided as part of the PPR request process and copied to the Environment Team. E-mail: environment@liverpoolairport.com.

(c) Quota Count Operational Restrictions†

(i) 2300-2330 – Aircraft with quota count of QC/8 and QC/16 must not be scheduled to take-off or land;

(ii) 2330-0600 – Aircraft with quota count of QC/8 and QC/16 must not take-off or be scheduled to land;

(iii) 0600-0700 – Aircraft with quota count of QC/16 must not take-off or be scheduled to land.

Note: Certain exemptions (including emergencies) apply contact the Environmental Manager for a full list of exemptions.

4 Arrivals

Inbound aircraft, other than light aircraft flying under VFR or Special VFR, shall maintain a height of at least 2000 ft above aerodrome level until cleared to descend for landing. Aircraft approaching without assistance from ILS or radar shall follow a descent path which will not result in its being at any time lower than the approach path which would be followed by aircraft using the ILS glidepath, and it is recommended that aircraft join final approach at not less than 3 nm.

EGGP AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

5 Departures

(a) Runway 27

(i) After take-off all aircraft of more than 5700 kgs (12,500 lbs) MTWA shall climb straight ahead at maximum rate to 1000 ft aal before turning.

(b) Runway 09

(i) Between 2300 and 0700 (winter) 2200 and 0600 (summer), Runway 09 will only be available for take-off when over-riding operational considerations necessitate its use, eg performance requirements.

(ii) After take-off the initial turn onto outbound heading shall be commenced as soon as practicable, but not below 500 ft aal and not before passing the end of the runway.

(c) After completion of the initial turn onto outbound heading, all turbo-jet powered aircraft shall reduce power for noise abatement purposes so as to maintain a rate of climb of at least 500 ft per minute at power settings which will ensure progressively decreasing noise levels at points on the ground under the flight path.

6 Engine Testing

Aircraft engine testing is subject to the approval of the Airport Authority and shall only be permitted between the hours of 0700 and 2300 (local). Outside these hours engine testing will not be permitted other than in exceptional operational circumstances.

7 Requirements

These requirements may be departed from the extent necessary for avoiding immediate danger or risk to life or property.

8 Continuous Descent Approaches to Runway 09

(a) Turbo-jet and turbo-prop aircraft are expected to apply continuous descent, low power, low drag approach techniques at all times.

(b) Subject to ATC instructions, inbound aircraft are to maintain as high an altitude as practical and adopt a low power, low drag, continuous descent approach profile. ATC will provide estimated track distance to touchdown to allow pilots to descend at a rate they judge best suited to achieve continuous descent without using more power or drag than necessary. The object will be to join the glidepath at the appropriate height for the distance without level flight.

(c) To facilitate these techniques aircraft should be flown no faster than 250 kt from the Speed Limiting Points and below FL 100 and 250-210 kt during the intermediate approach phase. Thereafter speed should be managed so as to achieve a continuous descent using as little power or drag as possible. ATC may impose speed control if required for seperation purposes.

(d) ATC will provide regular range checks. Pilots who require additional track mileage to facilitate a successful CDA should inform ATC as soon as possible.

Note: *Continuous descent approaches are only available on Runway 09. Runway 27 operations may require prolonged flight at lower altitude for airspace integration. See EGGP AD 2.22 2 (e) (iii).*

EGGP AD 2.22 FLIGHT PROCEDURES (continued)

VRP	VOR/DME FIX
Neston 531730N 0030336W	WAL 158°/6.6 nm MCT 265°/29 nm
Oulton Park 531034N 0023648W	WAL 127°/22.8 nm MCT 232°/16.7 nm
Runcorn Bridge 532046.82N 0024416.41W	WAL 103°/14.5 nm
Seaforth 532741N 0030205W	WAL 043°/5.5 nm MCT 285°/28.4 nm
Stretton Aerodrome 532046N 0023135W	WAL 099°/22 nm MCT 268°/9.5 nm
The Liver Building (Pier Head) 532420.73N 0025945.19W	WAL 083°/5 nm
Tarvin Roundabout 531141.96N 0024637.80W	WAL 135°/17.5 nm
Tarbock Island 532353.86N 0024830.41W	WAL 090°/11.7 nm

Note 1: *Burtonwood/M56 Junction 11. Remain to the east of these VRPs to remain clear of Liverpool CTR.*

Note 2: *Stretton AD. Remain to the west of these VRPs to remain clear of Manchester CTR.*

EGGP AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGGP AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGGP-2-1

Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO

AD 2-EGGP-2-2

Figure: CONTROL ZONE AND CONTROL AREA CHART - ENTRY/EXIT LANES AND VRPs

AD 2-EGGP-4-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGGP-5-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) POLE HILL - ICAO

AD 2-EGGP-6-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) REXAM - ICAO

AD 2-EGGP-6-2

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) BARTN 1T 1V - ICAO

AD 2-EGGP-6-3

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) WALLASEY/NANTI - ICAO

AD 2-EGGP-6-4

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via TIPOD (northeast & west) - ICAO →

AD 2-EGGP-7-1

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via TIPOD (south & southeast) - ICAO →

AD 2-EGGP-7-2

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via KEGUN (south & southeast) - ICAO →

AD 2-EGGP-7-3

Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 09 - ICAO

AD 2-EGGP-8-1

Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 09 - ICAO

EGGP AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

AD 2-EGGP-8-2

Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 09 - ICAO

AD 2-EGGP-8-3

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 09 - ICAO

AD 2-EGGP-8-4

Figure: INSTRUMENT APPROACH CHART ILS/DME/NDB(L) RWY 27 - ICAO

AD 2-EGGP-8-5

Figure: INSTRUMENT APPROACH CHART LOC/DME/NDB(L) RWY 27 - ICAO

AD 2-EGGP-8-6

Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 27 - ICAO

AD 2-EGGP-8-7

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 27 - ICAO

AD 2-EGGP-8-8

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 27 - ICAO

AD 2-EGGP-8-9

Figure: INSTRUMENT APPROACH PROCEDURE CODING TABLES RWY 09 - ICAO

AD 2-EGGP-8-10

Figure: INSTRUMENT APPROACH PROCEDURE CODING TABLES RWY 27- ICAO

AD 2-EGGP-8-11

EGLC — LONDON CITY

EGLC AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGLC — LONDON CITY

EGLC AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 513019N Long: 0000319E Mid point of Runway 09/27.
2	Direction and distance from city	6 nm E of City of London.
3	Elevation / Reference temperature	19 ft / 20 C
4	Geoid undulation at AD ELEV PSN	149 FT
5	Magnetic Variation/ Annual Change	0.45°W (2017) / 0.15°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	LONDON CITY AIRPORT LTD Post: Royal Docks, Silvertown, London E16 2PX. Phone: 020-7646 0205 (ATC) Phone: 020-7646 0000 (Administration) Fax: 020-7511 3167 (ATC) Fax: 020-7511 1040 (Administration) Fax: 020-7511 0248 (Ops/FBU)
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	All telephone calls to ATC are recorded.

EGLC AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: Mon-Fri 0630-2200; Sat 0630-1230; Sun 1230-2200; PH 0900-2200. Summer: Mon-Fri 0530-2100; Sat 0530-1130; Sun 1130-2100; PH 0800-2100.
2	Customs and Immigration	Winter: Mon-Fri 0630-2230; Sat 0630-1330; Sun and PH 0900-2300. Prior notice required by 1400 on previous day. Summer: Mon-Fri 0530-2130; Sat 0530-1230; Sun and PH 0800-2200. Prior notice required by 1300 on previous day.
3	Health and sanitation	
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	As aerodrome hours.
7	Air Traffic Service	As aerodrome hours. See also AD 2.18.
8	Fuelling	As aerodrome hours.
9	Handling	As aerodrome hours.
10	Security	As aerodrome hours.
11	De-icing	As aerodrome hours.
12	Remarks	Aerodrome Hours are maximum permitted for scheduling purposes. No static customs presence, contact Waterloo International Terminal: 020-7919 6710.

EGLC AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	
2	Fuel and oil types	AVTUR JET A-1
3	Fuelling facilities/capacity	Road Tanker up to 37,500 lt.
4	De-icing facilities	Available via handling agent.
5	Hangar space for visiting aircraft	None.
6	Repair facilities for visiting aircraft	Available by arrangement.
7	Remarks	A nominated handling agent is mandatory for all visiting aircraft. Handling for corporate and General Aviation by arrangement with London City Airport Jet Centre, Tel: 020-7646 0400; Fax: 020-7646 0450; SITA: LCYGAXH

EGLC AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in the vicinity
2	Restaurants	Restaurant, buffet bar.
3	Transportation	Trains, buses, taxis, hire cars. Nearest railway station: London City Airport (Docklands Light Railway).
4	Medical facilities	Limited first aid treatment.
5	Bank and Post Office	Bureau de Change.
6	Tourist Office	
7	Remarks	

EGLC AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A6
2	Rescue equipment	Water borne rescue equipment. RFFS extinguishing agent provided: Foam concentrate media, Film Forming Fluoroprotein (FFFP), meeting the criteria for performance level B specifications under test conditions. Foam is used at the 6% solution strength. Cat A6 cover provides 12,000 lt of water, 1,440 lt of foam.
3	Capability for removal of disabled aircraft	Limited facilities available
4	Remarks	

EGLC AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical, Chemical de-icing.
2	Clearance priorities	Standard
3	Remarks	

EGLC AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Surface: Concrete. PCN 30/R/C/Y/T
2	Taxiway width, surface and strength	Taxiway : 15 m. Surface: Concrete. PCN 30/R/C/Y/T
3	Altimeter checkpoint location and elevation	Apron 17 FT
4	VOR checkpoints	
5	INS checkpoints	See Aircraft Parking/Docking Chart.
6	Remarks	

EGLC AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Self-manoeuvring stand marking (with marshalling assistance).
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** : Runway threshold. Runway designators. Displaced landing threshold arrows. Aiming point and TDZ markings. **Taxiway marking aid(s):** : Yellow centre-line. Enhanced taxiway centre-line markings in place on all taxiways.
3	Stop bars	Red stop bars and co-located runway guard lights on access taxiways.
4	Remarks	**Taxiway:** Apron and access taxiways green centre-line lights augmented with blue edge lights on curves. Selectable lead-on lights. Blue edge lights on edges of runway turning areas and apron. Two illuminated wind direction indicators.

EGLC AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
09/APPROACH 27/TAKE-OFF	Bridge Control Box	513023.39N 0000223.60E	77 ft		No	
09/APPROACH 27/TAKE-OFF	Building	513020.32N 0000101.22W	703 ft		Yes	
09/APPROACH 27/TAKE-OFF	Building	513019.58N 0000049.73W	529 ft		Yes	
09/APPROACH 27/TAKE-OFF	Building	513013.43N 0000103.45W	692 ft		Yes	
09/APPROACH 27/TAKE-OFF	Building	513019.38N 0000152.00E	170 ft		No	
09/APPROACH 27/TAKE-OFF	CNS Building	513019.35N 0000152.98E	169 ft		No	
09/APPROACH 27/TAKE-OFF	Building	513019.16N 0000149.65E	178 ft		No	
09/APPROACH 27/TAKE-OFF	Canary Wharf Tower	513017.79N 0000110.16W	806 ft		Yes	
09/APPROACH 27/TAKE-OFF	Building	513011.57N 0000112.65W	525 ft		Yes	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
	Mast	513028.09N 0000446.07E	244 ft		No	
	ATC Tower	513014.47N 0000300.44E	67 ft		Yes	
SILVERTOWN EGLC1090	Chimney	513000.78N 0000252.89E	308 ft		Yes	
SILVERTOWN EGLC1020	Chimney	513000.65N 0000254.16E	307 ft		Yes	
	Mast	512806.28N 0000356.47E	579 ft		No	
	Mast	512806.25N 0000356.46E	568 ft		Yes	

EGLC AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 9 hours
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self briefing/telephone.
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs/METARs. English
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	Automated recording telephone: 020-7646 0224.
9	ATS units provided with information	LONDON CITY.
10	Additional information (limitation of service, etc.)	RVR 25-1500 m. There is no MID transmissometer. If either the TDZ or END transmissometer fails the system is notified as partly serviceable and available information will be passed.

EGLC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
09	092.89°	1508 x 30 m	RWY surface: Asphalt, grooved. PCN 43/F/C/W/T	513019.90N 0000244.71E 149 ft	THR 16 ft
27	272.90°	1508 x 30 m	RWY surface: Asphalt, grooved. PCN 43/F/C/W/T	513017.72N 0000353.83E 149 ft	THR 19 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					RWY 09 Runway End Safety Areas (Overrun) are provided as follows: Runway 09: 120 x 90 m, of which first 104 m is grooved asphalt widening from 30 m to 60 m. Non-standard TDZ markings for both runways.
					RWY 27 Runway End Safety Areas (Overrun) are provided as follows: Runway 27: 190 x 90 m, of which first 90 m is grooved asphalt widening from 30 m to 60 m. Non-standard TDZ markings for both runways.

EGLC AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
09	1199 m	1319 m	1319 m	1319 m	
27	1199 m	1385 m	1319 m	1319 m	

EGLC AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
09		HI Green with HI Elev green wingbars	PAPI Left/5.5° 38 ft		Colour coded 15 m spacing Light intensity high.	Bi-directional HI 30 m spacing First 99 m Red	Red.		**Approach Lighting:** Centre-line with two cross-bars 401 m HI 15 m spacing **PAPI distance from THR:** 122 m
27		HI Green with HI green flush wingbars	PAPI Right/ 5.5° 38 ft		Colour coded 15 m spacing Light intensity high.	Bi-directional HI 30 m spacing First 74 m Red	Red.		**Approach Lighting:** Centre-line with two cross-bars 462 m HI 15 m spacing **PAPI distance from THR:** 130 m Two pairs of white inset HI lights on runway 336 m upwind of threshold mark end of TDZ's (see AD 2.20, paragraph 6). Yellow runway edge lights for final 450 m of the full runway length. The approach and runway lighting and PAPI are set for 5.5° approach

EGLC AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 513021.77N 0000300.55E - 513020.55N 0000339.77E
3	TWY edge and centre line lighting	Taxiway: . Main apron taxiway and holding area between Kilo and Mike has green centre-line and blue edge lights. Taxiway west of Alpha has blue edge lights only.
4	Secondary power supply/switch-over time	Yes/15 seconds (1 second when RVR <800 m).
5	Remarks	Apron floodlighting. Obstacle lighting.

EGLC AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	FATO :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	See AD 2.20, paragraph 5a

EGLC AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
LONDON/CITY CTR 513445N 0001108W - 513409N 0000826E - thence clockwise by the arc of a circle radius 5 nm centered on 513019N 0000319E to 512610N 0000747E - 512640N 0000811W - thence anti-clockwise by the arc of a circle radius 12 nm centered on 512812N 0002713W to 513445N 0001108W	Upper limit: 2500 ft ALT Lower limit: SFC	D	HEATHROW RADAR English	6000 ft	H24.
LONDON/CITY CTA 513547N 0001221W - 513505N 0001022E - thence clockwise by the arc of a circle radius 6.5 nm centered on 513019N 0000319E to 512507N 0000932E - 512541N 0000828W - thence anti-clockwise by the arc of a circle radius 12 nm centered on 512812N 0002713W to 512640N 0000811W - 512610N 0000747E - thence anti-clockwise by the arc of a circle radius 5 nm centered on 513019N 0000319E to 513409N 0000826E - 513445N 0001108W - thence anti-clockwise by the arc of a circle radius 12 nm centered on 512812N 0002713W to 513547N 0001221W	Upper limit: 2500 ft ALT Lower limit: 1500 ft ALT	D	HEATHROW RADAR English	6000 ft	H24.
LONDON/CITY ATZ A circle, 2 nm radius centred at 513019N 0000319E on longest notified runway (09/27)	Upper limit: 2000 ft Lower limit: SFC	D	HEATHROW RADAR English	6000 ft	H24.

EGLC AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	THAMES RADAR	132.700 MHz Also used by Biggin Hill traffic.	As directed by ATC	
TWR	CITY TOWER	118.075 MHz DOC 25 nm/4,000 ft.	Winter: Mon-Fri 0630-2230; Sat 0630-1230; Sun 1230-2230 PH 0900-2230. Summer: Mon-Fri 0530-2130; Sat 0530-1130; Sun 1130-2130 PH 0800-2130. Hours are maximum consult latest NOTAM. See AD 2.3, item 12.	
	CITY TOWER	129.450 MHz DOC 25 nm/4,000 ft.	As directed by ATC	
	CITY GROUND	121.825 MHz DOC 2 nm/GND.	As directed by ATC	
RAD	THAMES DIRECTOR	132.700 MHz	Winter: 0600-2230 Summer: 0500-2130	
	THAMES DIRECTOR	133.450 MHz	As directed by ATC	
	HEATHROW RADAR	125.625 MHz	H24	
	THAMES DIRECTOR	128.025 MHz	As directed by ATC	
ATIS	CITY INFORMATION	136.350 MHz If unavailable call Tower on 118.075 MHz. Thames Radar will advise. DOC 60 nm/20,000 ft.	Winter: Mon-Fri 0630-2230; Sat 0630-1230; Sun 1230-2230 PH 0900-2230 Summer: Mon-Fri 0530-2130; Sat 0530-1130; Sun 1130-2100 PH 0800-2100	

EGLC AD 2.22 FLIGHT PROCEDURES (continued)

(1) **RCF occurring prior to arrival at GODLU**. The pilot is to adopt the RCF procedures detailed in ENR 1.1 paragraph 3.4.2.2.4, squawking Mode A 7600 when the RCF is detected. On leaving the GODLU hold, route ELMIV direct RAVSA then continue on the appropriate arrival transition, complying with the vertical profile shown on the chart and complete an instrument approach for the appropriate runway in use.

(2) **RCF occurring on the sequencing leg after GODLU**. Squawk Mode A 7600. Fly at the last assigned level to the end of the sequencing leg at LCE13, route to RAVSA, then continue on the appropriate arrival transition complying with the vertical profile shown on the chart and complete an instrument approach for the appropriate runway in use.

(3) **RCF occurring having been cleared off the sequencing leg**. Squawk Mode A 7600. Fly direct to RAVSA then continue on the appropriate arrival transition complying with the vertical profile shown on the chart and complete an instrument approach for the appropriate runway in use.

(b) **Inbound Non-RNAV 1 Aircraft via JACKO and GODLU**

(i) In the event of complete RCF in an aircraft, the pilot is to adopt the appropriate procedure described at ENR 1.1 paragraph 3.4.2.2.4 until reaching JACKO or GODLU. When ready to commence an arrival procedure, the pilot is to follow the procedure as detailed below.

(1) **Via JACKO**

Route via JACKO (FL 80) – TRIPO (6,000 ft) – SPEAR (5,000 ft) – ALKIN (3,000 ft) and continue in accordance with the standard procedures from ALKIN.

(2) **Via GODLU**

Route via GODLU (FL 100) – DET (4,000 ft) – ALKIN (3,000 ft) and continue in accordance with the standard procedures from ALKIN.

(c) **Outbound Aircraft**

For the purposes of radio failure, the climb to flight planned level should be commenced after the last position where an altitude is specified in the Communications Failure Procedure Text Box which is shown in the Standard Departure Chart - Instrument (SID) - ICAO at AD 2-EGLC-6-1 to 6-7.

4 Procedures for Transit Aircraft

(a) Aircraft wishing to transit the London City CTR/CTA (or the London CTR) shall contact 'Heathrow Radar' (H24).

5 Aerodrome Operating Minima - Non-Public Transport Flights

(a) Refer to AD 1.1 sub-section 4 before application.

6 Visual Reference Points (VRP)

(a) For the benefit of pilots on VFR flights who prefer to determine their position by visual pin-points, rather than by radio navigation aids, suitably defined VRPs for London City are given below:

VRP	VOR/DME FIX
Banbury Reservoir 513616N 0000206W	BIG R351°/D16.6 LAM R251°/D7.4
Beckton Roundabout 513131N 0000424E	BIG R007°/D11.8 LAM R202°/D7.8
M11, Junction 4 513538N 0000213E	BIG R001°/D15.8 LAM R234°/D5.3
Thames Barrier 512950N 0000213E	BIG R001°/D10.0 LAM R206°/D9.9
Three Mills Gasometers 513131N 0000011W	BIG R353°/D11.8 LAM R219°/D9.3

EGLC AD 2.23 ADDITIONAL INFORMATION

1 Mode S Barometric Pressure Setting Data

(a) London Terminal Control has the ability to downlink Mode S Barometric Pressure Setting (BPS) data. Therefore, if the downlinked pressure data is at variance with the BPS expected by Air Traffic Control, pilots can expect additional challenge. When Air Traffic Control pass a reminder of the appropriate BPS, it is anticipated that the aircrew will cross check the altimeter settings and confirm set.

EGLC AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGLC-2-1

Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO

AD 2-EGLC-2-2

Figure: CONTROL ZONE AND CONTROL AREA CHART

AD 2-EGLC-4-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGLC-5-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 09/27 DVR 5T 5U LYD 5T 5U - ICAO

AD 2-EGLC-6-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 09/27 CLN 7T 7U - ICAO

AD 2-EGLC-6-2

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 09/27 BPK 5T 5U CPT 6T 6U - ICAO

AD 2-EGLC-6-3

Figure: RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 09/27 EKNIV 1A 1H - ICAO

AD 2-EGLC-6-4

Figure: RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 27 BPK 1A CPT 1A - ICAO

AD 2-EGLC-6-5

Figure: RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 09 BPK 1H CPT 1H - ICAO

AD 2-EGLC-6-6

Figure: RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) RWY 09/27 CLN 1A 1H - ICAO

AD 2-EGLC-6-7

Figure: STANDARD INSTRUMENT DEPARTURE CODING TABLES RWY 09 EKNIV 1H, RWY 27 EKNIV 1A

AD 2-EGLC-6-8

Figure: STANDARD INSTRUMENT DEPARTURE CODING TABLES RWY 27 BPK 1A, CPT 1A

AD 2-EGLC-6-9

Figure: STANDARD INSTRUMENT DEPARTURE CODING TABLES RWY 09 BPK 1H, CPT 1H

AD 2-EGLC-6-10

Figure: STANDARD INSTRUMENT DEPARTURE CODING TABLES RWY 09 CLN 1H, RWY 27 CLN 1A

AD 2-EGLC-6-11

Figure: RNAV5 (VOR/DME, DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT RWY 09/27 JACKO 1A 1B 1D - ICAO

AD 2-EGLC-7-1

Figure: RNAV5 (VOR/DME, DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT RWY 09/27 GODLU 1A 1C 1D 1F - ICAO

AD 2-EGLC-7-2

Figure: RNAV5 (VOR/DME, DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT RWY 09/27 JACKO 1H - ICAO

AD 2-EGLC-7-3

Figure: RNAV5 (VOR/DME, DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT RWY 09/27 JACKO 1L 1M - ICAO

AD 2-EGLC-7-4

Figure: RNAV5 (VOR/DME, DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT RWY 09/27 GODLU 1G 1H - ICAO

AD 2-EGLC-7-5

EGKK AD 2.13 DECLARED DISTANCES (continued)

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
26L	2464 m	2608 m	2525 m		Take-off from intersection with Hold Charlie 1.

EGKK AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
08R	914 m Light intensity high.	HI Green with HI green wingbars	PAPI Right/3° 68 ft	893 m HI	Colour coded 15 m spacing HI	HI flush bi-directional 60 m spacing, first 393 m from RWY end showing red to displaced landing THR	Red.	74 m beyond RWY end lights Red.	**Approach Lighting:** Coded centre-line with five cross-bars Supplementary lighting inner 300 m **PAPI dist from THR:** 430 m During any runway change, pilots are warned that PAPI indicators are advisory only within the first 15 minutes of alteration and should be used with caution. Rapid Exit Taxiway Indicator Lights (RETILs) installed on the first and second Rapid Exit Taxiways (RETs) for Runway 08R/ 26L. They provide a 3-2-1 countdown pattern of amber lights to enable pilots to locate the nearest RET and apply braking action for a more efficient roll-out and runway exit speed.
26L	914 m Light intensity high.	HI Green with green wingbars	PAPI/3° 69 ft	893 m HI	Colour coded 15 m spacing HI	HI flush bi-directional 60 m spacing, first 267 m from RWY end showing red to displaced landing THR	Red.	Red 61 m beyond RWY end lights	**Approach Lighting:** Coded centre-line with five cross-bars Supplementary lighting inner 300 m **PAPI dist from THR:** 440 m During any runway change, pilots are warned that PAPI indicators are advisory only within the first 15 minutes of alteration and should be used with caution. Rapid Exit Taxiway Indicator Lights (RETILs) installed on the first and second Rapid Exit Taxiways (RETs) for Runway 08R/ 26L. They provide a 3-2-1 countdown pattern of amber lights to enable pilots to locate the nearest RET and apply braking action for a more efficient roll-out and runway exit speed.
08L	420 m Light intensity high.	HI Green with green wingbars	PAPI/3° 65 ft			HI flush bi-directional 60 m spacing, with LI omni-directional component	Red.		**Approach Lighting:** Centre-line with one cross-bar Runway threshold identification lights - 2 synchronised flashing white lights, one at each end of the THR

EGKK AD 2.14 APPROACH AND RUNWAY LIGHTING (continued)

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									bar. Visible in the approach sector only. **PAPI dist from THR:** 450 m During any runway change, pilots are warned that PAPI indicators are advisory only within the first 15 minutes of alteration and should be used with caution.
26R	420 m Light intensity high.	HI Green with green wingbars	PAPI/3° 68 ft			HI flush bi-directional 60 m spacing, with LI omni-directional component	Red.		**Approach Lighting:** Centre-line with one cross-bar Runway threshold identification lights - 2 synchronised flashing white lights, one at each end of the THR bar. Visible in the approach sector only. **PAPI dist from THR:** 425 m During any runway change, pilots are warned that PAPI indicators are advisory only within the first 15 minutes of alteration and should be used with caution.

EGKK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 510843.55N 0001206.91W 510854.68N 0001027.52W
3	TWY edge and centre line lighting	Taxiway: . Edge. Taxiway Yankee has blue edge lights. Taxiway: . Centre line. Green centre-line lighting with selective switching on all taxiway routes except Taxiway Yankee. Taxiway: . Taxiway Unavailable Bars (TUBS) comprising of a line of red stop lights spaced at approximately 3 m centres across the full width of the mouth of each RET/RAT adjacent to Runway 08R/26L and running parallel to the runway centre-line.
4	Secondary power supply/switch-over time	Yes - CAT I/II/III. 1 second.
5	Remarks	Apron floodlighting. Obstacle lighting.

EGKK AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	FATO : 510916.68N 0001149.56W
2	TLOF and/ or FATO elevation	FATO : 190 ft
3	TLOF and FATO area dimensions, surface, strength, marking	FATO :
4	True bearing of FATO	170.00°
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	No Approach or FATO lighting. 9 m sided triangular aiming point. See AD 2.20, section 5.

EGKK AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
LONDON GATWICK CTR 511258N 0001129W - 511200N 0000341E - thence clockwise by the arc of a circle radius 10 nm centered on 510853N 0001125W to 510550N 0000342E - 510240N 0001923W - thence clockwise by the arc of a circle radius 8 nm centered on 510853N 0001125W to 511118N 0002332W - 511258N 0001129W	Upper limit: 2500 ft ALT Lower limit: SFC	D	GATWICK DIRECTOR English	6000 ft	See EGKR AD 2.22, Section (3) for details of Redhill Local Flying Area.
LONDON GATWICK CTA 510100N 0000458E - 510100N 0002545W - thence clockwise by the arc of a circle radius 12 nm centered on 510853N 0001125W to 511124N 0003003W - 511618N 0000533E - thence clockwise by the arc of a circle radius 13 nm centered on 510853N 0001125W to 510100N 0000458E but excluding the Gatwick CTR.	Upper limit: 2500 ft ALT Lower limit: 1500 ft ALT	D	GATWICK DIRECTOR English	6000 ft	See EGKR AD 2.22, Section (3) for details of Redhill Local Flying Area.
LONDON GATWICK ATZ A circle, 2.5 nm radius centred at 510853N 0001125W on longest notified runway (08R/26L)	Upper limit: 2000 ft Lower limit: SFC	D	GATWICK DIRECTOR English	6000 ft	See EGKR AD 2.22, Section (3) for details of Redhill Local Flying Area.

EGKK AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	GATWICK DIRECTOR	126.825 MHz DOC 45 nm/24,500 ft.	H24	ATZ hours coincident with Approach hours.
	GATWICK DIRECTOR	118.950 MHz When instructed by ATC. DOC 25 nm/10,000 ft.	H24	
	GATWICK DIRECTOR	129.025 MHz When instructed by ATC. DOC 45 nm/24,500 ft.	H24	
	GATWICK DIRECTOR	121.500 MHz Emergency frequency O/R.	H24	
TWR	GATWICK TOWER	124.225 MHz DOC 25 nm/10,000 ft.	H24	

EGKK AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES (continued)

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
	GATWICK TOWER	134.225 MHz When instructed by ATC. DOC 45 nm/15,000 ft.	H24	
	GATWICK TOWER	121.500 MHz Emergency frequency O/R.	H24	
	GATWICK DELIVERY	121.950 MHz Ground Movement Planning. Departing aircraft are to make initial call to 'Gatwick Delivery' on this frequency during hours of operation. At other times call 'Gatwick Ground'. DOC 5 nm/GND.	Winter - 0630-2100 or as directed. Summer - 0500-2100 or as directed.	
	GATWICK GROUND	121.800 MHz Ground Movement Control. DOC 5 nm/GND.	Winter - 0530-2300 Summer - 0400-2300	
ATIS	GATWICK INFORMATION	136.525 MHz DOC 60 nm/20,000 ft.	H24	
Other	GATWICK FIRE	121.600 MHz Non-ATS Frequency	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGKK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DME	IGG	46X 110.900 MHz	HO	510849.97N 0001120.44W	209.5 ft	DME I GG (RWY 08R) On AD. DME freq paired with ILS I GG and I WW. Zero range is indicated at THR of Runway 08R/26L.
ILS III 0.5°W (2017)	IGG	110.900 MHz	HO	510906.94N 0000946.15W		RWY 08R
ILS/GP	IGG	330.800 MHz	HO	510842.54N 0001207.41W		3° ILS Ref Datum Hgt 51 ft.
ILS III 0.5°W (2017)	IWW	110.900 MHz	HO	510841.15N 0001253.25W		RWY 26L
ILS/GP	IWW	330.800 MHz	HO	510855.48N 0001033.05W		3° ILS Ref Datum Hgt 51 ft.
DME	IWW	46X 110.900 MHz	HO	510849.97N 0001120.44W	209.5 ft	DME I WW (RWY 26L) On AD. DME freq paired with ILS I GG and I WW. Zero range is indicated at THR of Runway 08R/26L.

EGLL AD 2.22 FLIGHT PROCEDURES (continued)

12 The Specified Area (EG R160)

Straight lines joining:

Kew Bridge (512912N 0001716W) —

Eastern extremity of Brent Reservoir (513420N 0001407W) —

Gospel Oak Station (513318N 0000904W) —

Southeast corner of Springfield Park (513409N 0000318W) —

Bromley-by-Bow Station (513130N 0000045W) —

Southwest corner of Hither Green (512645N 0000044W) —

Herne Hill Station (512712N 0000610W) —

Wimbledon Station (512515N 0001222W) —

Northwest corner of Castlenau Reservoir (512854N 0001407W) —

Kew Bridge (512912N 0001716W),

excluding so much of the bed of the River Thames as lies within that area between the ordinary high water marks on each of its banks.

13 London CTR Transponder Mandatory Zone (TMZ)

(a) The London CTR is notified as a Mode S Elementary Transponder Mandatory Zone (TMZ) as detailed at GEN 1.5, paragraph 5.3.

(b) The London CTR TMZ has the same vertical and lateral dimensions as the London CTR, see EGLL AD 2.17.

(c) TMZ exceptions are detailed in GEN 1.5 paragraph 5.3.4, AD-2 EGLD, AD-2 EGTF, AD-2 EGLM, AD-2 EGWU and for Brooklands see EGLL AD 2.22 paragraph 8.

EGLL AD 2.23 ADDITIONAL INFORMATION

1 Mode S Barometric Pressure Setting Data

(a) London Terminal Control has the ability to downlink Mode S Barometric Pressure Setting (BPS) data. Therefore, if the downlinked pressure data is at variance with the BPS expected by Air Traffic Control, pilots can expect additional challenge. When Air Traffic Control pass a reminder of the appropriate BPS, it is anticipated that the aircrew will cross check the altimeter settings and confirm set.

2 Time Based Separation (TBS) for Final Approach

(a) Time Based Separation minima are in permanent use for wake turbulence separation in place of UK fixed distance based minima for wake turbulence. This change has been made on the basis of an extensive data collection campaign of measured wake vortex behaviour over a number of years at Heathrow. A system of using real time aircraft data to derive Met conditions has been proven using operational data.

(b) When in stronger headwind conditions, a moderate reduction in separation distances from lead and follower aircraft may be observed in comparison to distance based wake turbulence minima. For further details, please refer to AIC P 001/ 2015.

(c) During TBS operations, RNAV (GNSS) final approach requests may be refused by Heathrow Director to ensure runway efficiency is maintained.

EGLL AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGLL-2-1

Figure: AIRCRAFT GROUND MOVEMENT/ALL TAXIWAYS CHART - ICAO

AD 2-EGLL-2-2

Figure: AERODROME CHART A380/CODE F AIRCRAFT GROUND MOVEMENT - ICAO

AD 2-EGLL-2-3

Figure: AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING - TERMINAL 5 CHART - ICAO

AD 2-EGLL-2-4

EGLL AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING - TERMINAL 4 CHART - ICAO

AD 2-EGLL-2-5

Figure: AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING - TERMINAL 3 CHART - ICAO

AD 2-EGLL-2-6

Figure: AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING - TERMINAL 1 & 2 CHART - ICAO

AD 2-EGLL-2-7

Figure: AIRCRAFT GROUND MOVEMENT - REMOTE DE-ICING AREAS LOCATION CHART - ICAO

AD 2-EGLL-2-8

Figure: GROUND MOVEMENT CHART - HOLDING AREAS FOR RUNWAY 27R - ICAO

AD 2-EGLL-2-9

Figure: GROUND MOVEMENT CHART - HOLDING AREAS FOR RUNWAY 27L - ICAO

AD 2-EGLL-2-10

Figure: GROUND MOVEMENT CHART - HOLDING AREAS FOR RUNWAY 09L - ICAO

AD 2-EGLL-2-11

Figure: GROUND MOVEMENT CHART - HOLDING AREAS FOR RUNWAY 09R - ICAO

AD 2-EGLL-2-12

Figure: LONDON CTR LOCAL FLYING AND ENTRY/EXIT PROCEDURES

AD 2-EGLL-3-1

Figure: HELICOPTER ROUTES IN THE LONDON CTR AND LONDON/CITY CTR

AD 2-EGLL-3-2

Figure: HELICOPTER CROSSING OPERATIONS

AD 2-EGLL-4-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGLL-5-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART INFORMATION - ICAO

AD 2-EGLL-5-2

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) COMPTON 3F 3G 5J 4K - ICAO

AD 2-EGLL-6-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) MIDHURST 4F 3G 3J 3K - ICAO

AD 2-EGLL-6-2

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) BROOKMANS PARK 7F 7G 6J 5K - ICAO

AD 2-EGLL-6-3

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) WOBUN 3F 3G - BUZAD 4J 3K - ICAO

AD 2-EGLL-6-4

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) DET 2F 2G 1J 1K - ICAO

AD 2-EGLL-6-5

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) GOGSI 1F 1G GASGU 1J 1K - ICAO

AD 2-EGLL-6-6

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) MAYFIELD 3F 2G 2J 2K - ICAO

AD 2-EGLL-6-7

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via BIGGIN - ICAO

AD 2-EGLL-7-1

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via WEALD (VOR BIG u/s) - ICAO

AD 2-EGLL-7-2

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via BOVINGDON - ICAO

EGLL AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

AD 2-EGLL-7-3

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via BOVVA (VOR BNN u/s) - ICAO

AD 2-EGLL-7-4

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via LAMBOURNE - ICAO

AD 2-EGLL-7-5

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via OCKHAM (North and West) - ICAO

AD 2-EGLL-7-6

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via TOMMO (North & West) VOR OCK u/s - ICAO

AD 2-EGLL-7-7

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via OCKHAM (South-West) - ICAO

AD 2-EGLL-7-8

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via TOMMO (South-West) VOR OCK u/s - ICAO

AD 2-EGLL-7-9

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via OCKHAM (east) - ICAO

AD 2-EGLL-7-10

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via TOMMO (east) VOR OCK u/s - ICAO

AD 2-EGLL-7-11

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 09L/R Without Radar Control via BIG and OCK

AD 2-EGLL-7-12

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 09L/R Without Radar Control via BNN and LAM

AD 2-EGLL-7-13

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 27L/R Without Radar Control via BIG

AD 2-EGLL-7-14

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 27L/R Without Radar Control via OCK

AD 2-EGLL-7-15

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 27L/R Without Radar Control via BNN and LAM

AD 2-EGLL-7-16

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 09L/R Without Radar Control via CHT and EPM

AD 2-EGLL-7-17

Figure: INITIAL APPROACH PROCEDURES - ILS or MLS RWY 27L/R Without Radar Control via CHT and EPM

AD 2-EGLL-7-18

Figure: INSTRUMENT APPROACH CHART ILS/DME I-AA RWY 09L - ICAO

AD 2-EGLL-8-1

Figure: INSTRUMENT APPROACH CHART LOC/DME I-AA RWY 09L - ICAO

AD 2-EGLL-8-2

Figure: INSTRUMENT APPROACH CHART MLS/M-HAA DME I-AA RWY 09L - ICAO

AD 2-EGLL-8-3

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) Z RWY 09L - ICAO

AD 2-EGLL-8-4

Figure: INSTRUMENT APPROACH CHART ILS/DME I-BB RWY 09R - ICAO

AD 2-EGLL-8-5

Figure: INSTRUMENT APPROACH CHART LOC/DME I-BB RWY 09R - ICAO

AD 2-EGLL-8-6

Figure: INSTRUMENT APPROACH CHART MLS/M-HBB DME/I-BB RWY 09R - ICAO

AD 2-EGLL-8-7

EGLL AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) Z RWY 09R - ICAO

AD 2-EGLL-8-8

Figure: INSTRUMENT APPROACH CHART ILS/DME I-LL RWY 27L - ICAO

AD 2-EGLL-8-9

Figure: INSTRUMENT APPROACH CHART LOC/DME I-LL RWY 27L - ICAO

AD 2-EGLL-8-10

Figure: INSTRUMENT APPROACH CHART MLS/M-HRL DME/I-LL RWY 27L - ICAO

AD 2-EGLL-8-11

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) Z RWY 27L - ICAO

AD 2-EGLL-8-12

Figure: INSTRUMENT APPROACH CHART ILS/DME I-RR RWY 27R - ICAO

AD 2-EGLL-8-13

Figure: INSTRUMENT APPROACH CHART LOC/DME I-RR RWY 27R - ICAO

AD 2-EGLL-8-14

Figure: INSTRUMENT APPROACH CHART MLS/M-HER DME/I-RR RWY 27R - ICAO

AD 2-EGLL-8-15

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) Z RWY 27R - ICAO

AD 2-EGLL-8-16

Figure: INSTRUMENT APPROACH PROCEDURE CODING TABLES RNAV (GNSS) Z

AD 2-EGLL-8-17

EGGW AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

as having flown wholly within the Lateral Swathe (LS). Where the aircraft is clearly flying outside the LS, the aircraft is identified as causing a "possible" track violation and is subject to a nominal fine, as defined in LLA's Charges and Conditions of Use.

Take-off Run-way	ATC Clearance	Procedure	Take-off Run-way	ATC Clearance	Procedure
26	OLNEY KILO/ Juliet	Climb straight ahead to 500 ft (AAL) turn left to intercept BNN VOR R033°. At BNN D7 turn right onto HEN QDM 257°. At BNN VOR 005° turn right onto BNN VOR R345°. Crossing BNN R345°/D6 at 4000.	08	OLNEY Sierra	Climb straight ahead. At I-LTN D2.6 turn left to intercept BPK VOR R316°.
	Compton Papa	Climb straight ahead to 500 ft (AAL) turn left to intercept BNN VOR R033°. At BNN D7 turn right onto HEN QDM 257° ensuring that BNN DME does not decrease below 4 nm.		Compton Uniform/Victor	Climb straight ahead. At I-LTN D3 turn right onto HEN QDM 258°. Ensure that BNN DME does not decrease below 4 nm. (See Note 3)
	Non – RNAV MATCH/Detling MIKE	Climb straight ahead to 500 ft AAL turn left to intercept BNN VOR R033°. At BNN D7 turn left onto BPK VOR R285°.		MATCH/ Detling TANGO	Climb straight ahead to LUT NDB (I-LTN D3.9), then turn right to intercept BPK VOR R337°.
	RNAV MATCH/ Detling	Climb straight ahead to 1030 ft QNH, then turn left direct GWS01, then to GWS06, left to GWS12, right to GWE16, GWE19, BPK VOR. (See Note 2)			

Note 1: *The Noise Preferential Routeings specified above are compatible with normal ATC requirements, however in individual cases ATC may vary them when necessary. The use of the routeings is supplementary to noise abatement take-off techniques as used by piston-engined, turboprop and turbo-jet aircraft.*

Note 2: *Unless otherwise instructed by ATC, aircraft departing from Runway 26 for RNAV MATCH/DETLING will be routinely kept within the NPR corridor until crossing the railway line (GWE) between St. Albans and Harpenden.*

Note 3: *Unless otherwise instructed by ATC, aircraft departing from Runway 08 for COMPTON, UNIFORM/VICTOR must remain at 4000 ft (Luton QNH) until west of Radial 039° from Bovingdon VOR.* →

Note 4: *The crossing points and altitudes are detailed at AD 2-EGGW-6-1 to 6-6 charts of the Standard Instrument Departure procedures for aircraft departing the airport via the Airways System. The Standard Departure Route procedures for aircraft departing outside the Airways System are detailed at AD 2-EGGW-6-7 to 6-9*

6 Ground Running and Testing of Aircraft Engines

(a) The ground running and testing of the engines of any aircraft other than at ground idle power setting shall be carried out only in the designated areas.

(b) The aircraft shall be positioned in such a manner that the jet blast will not impinge on any runway, taxiway, aircraft, equipment installation, or other property of the airport or third party.

(c) ATC shall be notified by radio at the commencement and cessation of each run and the following information should be provided:

(i) The aircraft's registration number or letters;

(ii) The aircraft's position on the airport;

(iii) The percentage power setting anticipated; and

(iv) The expected duration of the engine run.

(d) A single engine run at ground idle power settings may be undertaken provided that:

(i) the aircraft is positioned so as to cause no damage or inconvenience to persons or property;

(ii) the engine run does not exceed 10 minutes;

(iii) a person is at all times in attendance outside the aircraft to ensure the safety of persons and property during the engine run;

(iv) Continuous radio contact is maintained with air traffic control, from whom permission to start the engine(s) must be obtained and to whom notification must be given when the engine run is completed.

(e) Engine ground running and testing will normally be permitted within the following periods:

(i) Weekdays: between 0600-2300 hours local;

(ii) Saturdays, Sundays and Public Holidays: between 0700-2300 hours local;

EGGW AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

(iii) In exceptional circumstances, operators can apply to Airport Operations for permission to operate outside this period.

7 Night Noise Restrictions

(a) Chapter 2 aircraft are not permitted to operate during the periods of 2300-0700 hours local;

(b) The aircraft with a QC value of greater than 2 must not operate during the night period.

(c) All departure flights recording a level above 80 dB, 6.5 km from 'start of roll' during the night period will be subject to a nominal fine, as defined in LLA's Charges and Conditions of Use.

8 Noise Abatement Procedures for Helicopters

(a) Fixed-wing aircraft and helicopters operating under VFR or SVFR to the south of Luton Airport should endeavour to avoid overflying built-up areas.

EGGW AD 2.22 FLIGHT PROCEDURES

1 Procedures for Inbound Aircraft under IFR

(a) Inbound via the Airways System

(i) The Standard Arrival Routes (STAR) for aircraft inbound to London Luton are shown at AD 2-EGGW-7-1 to AD 2-EGGW-7-6.

(ii) The Terminal Holding facility at LOREL/ASKEY and at ABBOT/CASEY is shared with arrivals to both London Stansted and Cambridge airports and therefore some STAR designators are shared.

(b) Inbound other than on Airways

(i) Aircraft wishing to enter the Luton CTR/CTA direct from the London FIR should obtain ATC clearance at least 10 minutes before reaching the CTR or CTA boundary, when they will be advised of the route to be followed consistent with the current traffic situation.

(ii) Aircraft arriving from the north and northeast should expect to route via a Reporting Point BIGLI (520748N 0001430W, BKY VOR/DME fix R309/D14; BNN VOR/DME fix R027/D27) established beneath the London TMA (base 5500 ft QNH).

(iii) For aircraft receiving a service from London Military Radar, co-ordination procedures have been agreed between Luton ATC and London Military involving the use of BIGLI. There is no holding procedure associated with BIGLI.

(iv) Aircraft must not enter Controlled Airspace unless specific clearance to do so has been given.

(c) Approach Procedures – with Radar Control

(i) When inbound traffic is being sequenced by Radar, the Approach procedure will be flown from under directions from the appropriate Radar Controller, and will consist of that part of the approach between the holding pattern and the Final Approach Track.

(ii) Once the aircraft is under Approach Radar Control, changes of Flight Level/Altitude and heading will be made only under instructions from the Radar Controller, except in cases of radio communications failure in the aircraft or at the Radar Unit.

(iii) Headings and Flight Levels/Altitudes will be passed by ATC. When holding is not necessary, radar vectors will be given prior to the aircraft reaching the holding pattern and descent clearance will include an estimate of track distance to touchdown.

(iv) Further distance information will be given between initial descent clearance and intercept heading to the ILS. On receipt of descent clearance, the pilot will descend at the rate he judges will be best suited to the achievement where possible, of continuous descent, the objective being to join the glidepath at the appropriate height for the distance, without recourse to level flight.

(v) Between the hours of 2300 and 0700 (local), all jet aircraft and all propeller driven aircraft whose MTOM exceeds 5700 kg, irrespective of the type of approach, are to be vectored onto a closing heading which will position the aircraft for Runway 26 on final approach no closer than 8 nm from touchdown and for Runway 08 no closer than 10 miles from touchdown. Descent below 3000 ft QNH is not to be given until 10 nm from touchdown.

(vi) Pilots should typically expect the following speed restrictions to be enforced:
220 kt from the holding facility during the intermediate approach phase;
180 kt on base leg/closing heading to the ILS;
180-160 kt when first established on the ILS;
165 kt +/-5 to 5 DME.

(vii) These speeds are applied for ATC separation purposes and are mandatory. In the event of a new (non-speed related) ATC clearance being issued (eg an instruction to descend on ILS), pilots are not absolved from a requirement to maintain a previously allocated speed. All speed restrictions are to be flown as accurately as possible.

EGSS AD 2.22 FLIGHT PROCEDURES (continued)

(d) Flights via airways to Luton are to file a BKY SID as far as BKY and route BKY-BUSTA-LOREL.

3 Radio Communications Failure Procedures

In the event of complete radio communication failure in an aircraft, the pilot is to adopt the appropriate procedures notified in ENR 1.1.3, with the exceptions described below:

(a) Aircraft inbound to London Stansted or Cambridge via LOREL † or ABBOT ‡

(i) When complete communication failure occurs in the aircraft before ETA, or before EAT, when this has been received and acknowledged the aircraft will:

(1) continue to the appropriate holding point LOREL † or ABBOT ‡ as detailed at AD 2-EGSS-7-1 to 7-6;

(2) hold until the last acknowledged ETA plus 10 minutes, or EAT when this has been given;

(3) then commence descent for landing in accordance with the approach procedure for the runway in use and effect a landing within 30 minutes (or later if able to continue visually).

(ii) If complete radio failure occurs after an aircraft has reported to ATC on reaching the holding point the aircraft will:

(1) Maintain the last assigned level at LOREL † or ABBOT ‡ until:

aa ATA over the holding point plus 10 minutes or 10 minutes after the last acknowledged communication with ATC whichever is the later; or

bb EAT when this has been received and acknowledged.

(2) then commence descent for landing in accordance with the approach procedure for the runway in use and effect a landing within 30 minutes (or later if able to continue visually).

(iii) Radio failure during a Radar Directed Initial Approach to London Stansted

If complete radio failure occurs after clearance to descend to an altitude has been given during a radar directed initial approach, the following procedure should be adopted:

(1) continue visually or by means of an appropriate final approach aid;

(2) if not possible, maintain 3000 ft ALT or last assigned altitude if higher and proceed to BKY VOR, then;

(3) hold at BKY VOR for 5 minutes (Holding axis 270° MAG inbound track (BKY RDL 090°), turning left at the facility, Max IAS 220 kt), then;

(4) descend in the holding pattern if necessary to 3000 ft ALT, then;

(5) leave BKY VOR on RDL 197 (Runway 04) or RDL 070 (Runway 22) to join the Initial Approach Procedure detailed at AD 2-EGSS-7-7 or 7-8;

(6) in the event of a missed approach, follow the Missed Approach Procedure to BKY VOR and adopt the basic radio failure procedure detailed at ENR 1.1.3

(iv) The route and level to be used when leaving Controlled Airspace in accordance with the procedures given at ENR 1.1.3 is as follows:

Position at time of decision	Route
ABBOT/CASEY	Turn right onto track 360°M at last assigned level.
LOREL	Turn left onto BPK VOR RDL 030° at last assigned level.
ASKEY	Turn left onto LAM VOR RDL 360° at last assigned level.
BKY VOR	BKY VOR RDL 360° at 3000 ft ALT.
† ASKEY when BPK VOR is out of service	‡ CASEY when BKY VOR is out of service.

(b) Outbound Aircraft

(i) All outbound traffic except those operating on NUGBO 1R/1S: Comply with the route and altitude limitations detailed in the allocated Stansted Instrument Departure Procedure detailed at AD 2-EGSS-6 or ATC clearance and commence climb to flight planned level after the last position at which an altitude is specified.

(ii) Outbound traffic operating on NUGBO 1R/1S: If a clearance to climb or re-routing instructions have not been given, comply with the route and altitude limitations detailed in the allocated Stansted Instrument Departure Procedure detailed at AD 2-EGSS-6-1/6-2, then route via M183 to SILVA; at SILVA, commence climb to flight planned level.

4 Special VFR Flight

(a) Clearance may be requested for Special VFR flight within the London Stansted CTR and will be given whenever the traffic situation permits. Special VFR flights are subject to the general conditions laid down at ENR 1.4

Note: *Pilots holding a Private Pilots Licence (Aeroplanes) are reminded of the flight visibility requirements for Special VFR flight laid down in Schedule 7 of the Air Navigation Order 2009 and the related notification at ENR 1-4, para 2.4.1.1 note 4 (j).*

EGSS AD 2.22 FLIGHT PROCEDURES (continued)

(b) Aircraft may be subject to radar vectoring whilst within the CTR if, due to the traffic situation, ATC considers it necessary. Pilots are reminded that they must at all times when operating on a Special VFR Clearance, remain clear of cloud and in sight of the surface and in flight conditions which will enable them to determine their flight path and remain clear of obstacles. Pilots **must** inform the radar controller if compliance with these requirements entails a change of heading or level.

(c) Pilots are reminded that a Special VFR clearance applies only to flight within the CTR and does not extend to flight within the surrounding airspace of the London TMA or London Luton airspace

(d) In order to reduce conflict with IFR flights, Special VFR arriving and departing flights will normally be cleared not above 1500 ft ALT via the following routes.

(i) Audley End Railway Station VRP via M11 Motorway;

(ii) Great Dunmow VRP via B1256 (old A120) and Takeley Village;

(iii) Puckeridge VRP via A120 Trunk road **avoiding Bishops Stortford** .

(iv) Nuthampsted VRP.

5 VFR Flights

(a) VFR flights inbound to London Stansted or transitting the Stansted CTR/CTA should contact Essex Radar at least five minutes prior to the CTR/CTA boundary and must not enter the CTR/CTA unless clearance has been given.

(b) VFR flights will be given routeing instructions and/or altitude restrictions in order to integrate VFR flights with other traffic. Clearance may be subject to delay or re-routeing. Pilots should anticipate clearance with reference to the Visual Reference Points detailed below.

(c) In order to reduce conflict with IFR flights, VFR arriving and departing flights will normally be cleared not above 2000 ft ALT via the routes detailed in paragraph 4 d.

(d) Pilots are reminded of the Stansted Transponder Mandatory Zones and of the close proximity of busy minor aerodromes.

(e) Visual Reference Points (VRP) detailed below are established to facilitate the routes detailed in paragraphs 4d and 5b and to enable pilots of transit flights to plan alternative routes around the CTR/CTA when traffic conditions require.

VRP	VOR/VOR	VOR/DME FIX
Audley End Railway Station 520015N 0001225E	BKY RDL 082° LAM RDL 006°	BKY 082°/5 nm
Braintree 515242N 0003314E	BKY RDL 111° LAM RDL 047°	LAM 047°/20 nm
Chelmsford 514400N 0002824E	BKY RDL 136° LAM RDL 066°	LAM 066°/13 nm
Epping 514200N 0000640E	BKY RDL 175° BNN RDL 095°	BNN 095°/25 nm
Great Dunmow 515218N 0002145E	BKY RDL 124° LAM RDL 030°	BKY 124°/13 nm
Haverhill 520457N 0002604E	BKY RDL 069° LAM RDL 022°	LAM 022°/28 nm
Nuthampstead AD 515924N 0000343E	BKY VOR 007°	LAM 351°/21 nm
Puckeridge (A10/A120 Intersection) 515306N 0000016E	BKY RDL 200° LAM RDL 339°	BKY 200°/7 nm
Ware 514842N 0000136W	BKY RDL 198° LAM RDL 326°	LAM 326°/12 nm

6 Helicopters

(a) Helicopters inbound to or overflying London Stansted Airport may be required to hold at the following additional VRPs within the aerodrome boundary for integration with arriving and departing flights:

- **From the North:**

  North end of Hangar 7 †.

- **From the South:**

  Hangar 8 (clear of the airside road) (515240N 0001409E).

  † See AD 2-EGSS-2-1 for aerodrome chart

(b) Helicopters positioning from the VRPs to either the Helicopter Aiming Point or the runway shall maintain at least 500 ft agl until aligned with the let down point.

EGMD AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	B Surface: Asphalt. PCN 46/F/C/X/T C Surface: Asphalt.
2	Taxiway width, surface and strength	Taxiway A AND D: 10.5 m. Surface: Asphalt. Taxiway B AND C: 18 m. Surface: Asphalt. PCN 46/F/C/X/T
3	Altimeter checkpoint location and elevation	Apron 10 FT
4	VOR checkpoints	
5	INS checkpoints	See Aircraft Parking/Docking Charts
6	Remarks	

EGMD AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Apron Bravo is marked with 8 self-manoeuvring stands for up to B738, A319. Marshalling assistance is available if required. Apron Charlie is for General Aviation aircraft to self-park
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** : Runway designation, displaced threshold 21, centre-line, TDZ, fixed distance markings, edge stripes. **Taxiway marking aid(s):** : Yellow centre-line, hatched edge line on Taxiways B and C, holding point markings and boards. **Taxiway light(s):** : Blue edge, guard lights and illuminated holding point signs on Taxiways B and C lighting. Blue refelective edge studs on Taxiway A.
3	Stop bars	
4	Remarks	Runway Lighting: Runway edge, threshold, caution zone (Runway 21), PAPI, stopend lighting lluminated wind direction indicators adjacent to touchdown zone for Runways 03 and 21.

EGMD AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGMD4937) 03/APPROACH 21/TAKE-OFF	Bush	505658.28N 0005551.61E	18 ft		No	
(EGMD3098) 03/APPROACH 21/TAKE-OFF	Sign	505656.57N 0005554.45E	18 ft		No	
(EGMD3156) 03/APPROACH 21/TAKE-OFF	Fence/ Hedge	505655.35N 0005557.51E	16 ft		No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGMD3121)	Pylon	505804.98N 0005335.56E	167 ft		No	
(EGMD4439)	Windfarm	505802.25N 0004852.30E	388 ft		No	Height and position relate to the highest of a group.
(EGMD4052)	Glidepath Aerial	505736.00N 0005628.24E	46 ft		Yes	
(EGMD3093)	Terminal Building	505713.65N 0005601.75E	27 ft		Yes	

EGMD AD 2.10 AERODROME OBSTACLES (continued)

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGMD3006)	Water Tower	505637.48N 0005633.36E	125 ft		No	
(EGMD3131)	Pylon	505636.77N 0005348.65E	198 ft		No	Height and position relate to the highest of a group.
(EGMD3133)	Pylon	505633.96N 0005333.72E	207 ft		No	
(EGMD3035)	Pylon	505623.80N 0005403.05E	200 ft		No	Height and position relate to the highest of a group.
(EGMD3050)	Pylon	505512.59N 0005557.24E	206 ft		No	
(EGMD3024)	Power Station	505448.65N 0005732.88E	267 ft		No	

EGMD AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 9 hours.
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	Self briefing/telephone.
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs/METARs. English.
7	Charts and other information available for briefing or consultation	214 Spot winds, 215 low level wx.
8	Supplementary equipment available for providing information	Internet access in Flight Briefing. ATIS 129.225 MHz or 01797-322422.
9	ATS units provided with information	LYDD.
10	Additional information (limitation of service, etc.)	RVR by human observer method, only one runway direction available at a time. AUTOMETAR produced outside aerodrome opening hours.

EGMD AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	**True bearing**	**Dimensions of RWY**	**Surface of RWY/ SWY/ Strength (PCN)**	**THR co-ordinates/ THR Geoid undulation**	**THR elevation/ Highest elevation of TDZ of precision APP RWY**
1	**2**	**3**	**4**	**5**	**6**
03	032.72°	1505 x 32 m	RWY surface: Asphalt, grooved. PCN 46/F/C/X/T	505701.75N 0005600.11E 146 ft	THR 10 ft
21	212.73°	1505 x 32 m	RWY surface: Asphalt, grooved. PCN 46/F/C/X/T	505741.75N 0005640.79E 146 ft	THR 12 ft

Slope of RWY/ SWY	**SWY dimensions**	**Clearway dimensions**	**Strip Dimensions**	**OFZ**	**Remarks**
7	**8**	**9**	**10**	**11**	**12**
					RWY 03
					RWY 21 RWY 21 Threshold displaced by 35 m to allow for full RESA.

EGCB — MANCHESTER BARTON

EGCB AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGCB — MANCHESTER BARTON

EGCB AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 532818N Long: 0022323W Mid-point of Runway 08R/26L
2	Direction and distance from city	5 nm W of Manchester.
3	Elevation / Reference temperature	73 ft / 18 C
4	Geoid undulation at AD ELEV PSN	168 FT
5	Magnetic Variation/ Annual Change	1.58°W (2017) / 0.16°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	CITY AIRPORT LTD. Post: City Airport , Liverpool Road, Eccles, Manchester, M30 7SA. Post: City Heliport, Liverpool Road, Eccles, Manchester, M30 7RU. Phone: 0161-789 1362 (Administration and Operations) Email: info@cityairportltd.com URL: http://www.cityairportandheliport.com
7	Type of Traffic permitted (IFR/VFR)	VFR
8	Remarks	VFR (See AD 2.22).

EGCB AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: 0900-SS and by arrangement. Summer: 0715-1900 or SS (whichever is earlier) and by arrangement.
2	Customs and Immigration	By arrangement. Customs: 4 hours notice required inbound/24 hours outbound. Immigration: 24 hours inbound/outbound. CTU (Special Branch): 24 hours inbound/outbound
3	Health and sanitation	
4	AIS Briefing Office	As AD hours. Self-brief computer.
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	As AD hours. Self-brief computer.
7	Air Traffic Service	As AD hours.
8	Fuelling	Winter: 0845 until 15 minutes before SS and by arrangement. Summer: 0700 until 1845 or 15 minutes before SS (whichever is earlier) and by arrangement.
9	Handling	By arrangement for helicopters using City Heliport facility.
10	Security	
11	De-icing	
12	Remarks	This aerodrome is **PPR**.

EGCB AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	
2	Fuel and oil types	AVTUR JET A-1(does not contain anti-icing additive) AVGAS 100LL AVGAS UL-91 Oil: 15/50, 80, Multigrade (W)80, 100, (W)100
3	Fuelling facilities/capacity	Airport Fixed Bowser AVGAS 100LL 28500 lt, Airport Fixed Bowser AVTUR JET-A1 22000 lt, Airport Fixed Bowser AVGAS UL-91 13000 lt. Heliport Fixed Bowser AVTUR JET-A1 18000 lt.
4	De-icing facilities	
5	Hangar space for visiting aircraft	Limited by prior arrangement.
6	Repair facilities for visiting aircraft	Westair Aircraft Maintenance,Tel: 0161-787 8811.
7	Remarks	

EGCB AD 2.5 PASSENGER FACILITIES

1	Hotels	In vicinity.
2	Restaurants	Cafe/Bar.
3	Transportation	Taxis, Buses. Nearest Railway Station: Eccles: 2.8 miles.
4	Medical facilities	Limited First Aid.
5	Bank and Post Office	Bank within 2.0 miles. Post Office within 1.5 miles.
6	Tourist Office	Local information available from reception.
7	Remarks	Transport arrangements can be made via aerodrome operations.

EGCB AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A1
2	Rescue equipment	
3	Capability for removal of disabled aircraft	Limited
4	Remarks	

EGCB AD 2.7 SEASONAL AVAILABILITY - CLEARING

EGCB AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	
2	Taxiway width, surface and strength	
3	Altimeter checkpoint location and elevation	
4	VOR checkpoints	
5	INS checkpoints	
6	Remarks	

EGCB AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	
2	Runway and taxiway markings and lighting	
3	Stop bars	
4	Remarks	

EGCB AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGCB4899) 02/APPROACH 20/TAKE-OFF	Tree	532801.26N 0022329.73W	116.60 ft	51 ft	No	
(EGCB4961) 08L/APPROACH 26R/TAKE-OFF	Tree	532817.28N 0022355.96W	108.83 ft	33 ft	No	
(EGCB4945) 08L/APPROACH 26R/TAKE-OFF	Tree	532817.15N 0022358.63W	114.93 ft	39 ft	No	
(EGCB4402) 08L/APPROACH 26R/TAKE-OFF	Tree	532816.99N 0022357.01W	112.96 ft	44 ft	No	

EGCB AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(i) Category A Police and Air Ambulance helicopter flights take place H24 from the Aerodrome. Pilots should afford these flights priority where possible, subject to rules of the air and safe operation.

(j) Paramotors operate non-radio from a site approximately 2.5 nm West of the airfield during daylight hours.

(k) Runway 08R/26L transitional surface is impinged by Control Tower building by 0.72 m.

5 Helicopter Operations

(a) Helicopter circuit height 500 ft.

(b) Helicopter circuit training is flown in accordance with the chart on page EGCB 4-1.

(c) Helicopters must not fly above 500 ft as shown on page EGCB-4-1 unless practicing emergency procedures and only once ATS has been informed. →

(d) Helicopters are to arrive via the specific entry/exit point as displayed on page EGCB 4-1, reporting prior to reaching and at the appropriate point. Pilots must inform ATS if performing a non-standard join prior to entering the ATZ.

(e) Helicopters must ensure that they give adequate safety clearance (minimum 50 m) with consideration for downwash when operating in the hover close to runways, taxilanes and parked aircraft. →

(f) Helicopter Fuelling

(i) JET A1 – Airport facility – A landing pad is provided adjacent to the fuel bund. White ‘H’s are marked around the bund tank. Please note:

(1) The marked ‘H’s act as a visual guide to ensure adequate hose reach only.

(2) The marked ‘H’s do not guarantee any clearance from helicopters parked adjacent. The pilot remains responsible for ensuring safe seperation from adjacent helicopters.

(ii) AVGAS – Helicopters should position on pads 1-4 as directed by ATS ensuring safe separation from adjacent helicopters. Caution is advised when manoeuvring in this area close to parked aircraft. →

(g) City Heliport

(i) A dedicated heliport facility is located on the SW corner of the Aerodrome.

(ii) The heliport is not available for flights that require the use of a licensed aerodrome.

(iii) The heliport apron is floodlit at night. →

(iv) Use of the heliport is subject to PPR. Terms and conditions available on request.

(v) JET A1 Heliport facility – A landing apron with two marked pads is provided adjacent to the fuel facility. The hose length allows for the fuelling of helicopters parked on these pads.

(1) The marked pads act as a visual guide to ensure adequate hose reach only.

(2) The marked pads do not guarantee any clearance from helicopters parked adjacent. The pilot remains responsible for ensuring safe operation from adjacent helicopters.

6 Use of Runways

(a) Computer ATIS.

(i) A Computer ATIS Display is provided for departing aircraft. This Provides the following information:

Runway in use — QFE / QNH — Unofficial Weather — Runway State.

(ii) Prior to departure, pilots should obtain the current airfield information from the Computer ATIS Display.

(iii) On initial RTF call, pilots should advise the information received the appropriate pressure (QFE/QNH) and the flight detail (ie circuits, local or the destination).

(b) Runway availability subject to suitable surface conditions as determined by Airfield Duty Manager. Information available from AFISO.

7 Training

Not applicable

EGCB AD 2.21 NOISE ABATEMENT PROCEDURES

(a) Pilots are to avoid overflying the cemetery to the Northeast of the aerodrome.

(b) Helicopters must avoid overflying the built up areas South and East of the airfield, indicated at AD 2.24.

EGCB AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

(c) Climbing turns after take off should not normally be commenced below a height of 500 ft agl except as indicated at c(i). Should pilots wish to make an early turn below 500 ft agl on take-off, this may be permitted for safety reasons only. In this case, the ATS must be informed prior to commencement of the take-off roll.

(i) To minimise local noise disturbance when departing from Runway 20 and when safe to do so, upon reaching the Manchester Ship Canal aircraft should commence a right turn onto crosswind to avoid overflying the residential areas of Flixton and Irlam.

EGCB AD 2.22 FLIGHT PROCEDURES

1 Communications and SSR

(a) Aircraft in communication with Barton ATS may be allocated a conspicuity squawk of 7365. Aircraft **must not** select this squawk unless instructed to do so by ATS.

(b) Allocation of this conspicuity squawk does not constitute any radar service.

2 Fixed Winged

(a) Fixed winged circuit height is 1000 ft (Barton QFE).

(b) Fixed winged standard join is overhead at 1800 ft Barton QFE. Pilots must inform ATS if performing a non-standard join prior to entering the ATZ.

(c) Variations on circuit direction are permitted for training, weather or operational requirements providing the ATS is informed of the pilots intentions.

(d) Circuit directions: Runways 14, 20, 26L, 26R - RH; Runways 02, 08L, 08R and 32 - LH.

(e) Orbits within the circuit are not permitted unless required for safety reasons.

(f) Go-Arounds

(i) Approaches to runways must not be continued below 200 ft aal if:

(1) The approach ahead or runway is occupied or obstructed by aircraft, vehicles or personnel.

(2) The PIC feels that the approach or landing is becoming unstable or unsafe.

(g) Go-Around Procedure

(i) To initiate the go-around, manoeuvre the aircraft to the deadside of the runway climbing parallel to the runway in use climbing to circuit height (1000 ft aal) before turning crosswind.

(ii) Exercise caution when low flying in the go-around over aircraft on the ground including helicopters air taxiing, ground instructions, personnel and vehicles.

(iii) Ensure aircraft ahead are kept in sight.

(iv) Do not manoeuvre onto the live side as this may conflict with helicopter operations.

(v) Do not climb initially above 500 ft aal until you have passed the upwind end of the runway in use, which ensures maximim separation between you and aircraft joining overhead, flying crosswind at circuit height.

(h) Pilots must not carry out 'run and break' manoeuvres within the circuit.

(i) IFR Procedures

(i) The aerodrome does not have any instrument or approach/navigational aids. All arrivals and departures must operate under VFR /VMC only.

(ii) Pilots flying IFR should plan routings that avoid controlled airspace and for arrivals must plan a suitable alternative in the event that flight conditions preclude flight in VMC on arrival.

3 Helicopter Procedures

(a) **Helicopter Arrival Procedures** - Refer to page EGCB-4-1

(i) Astley or Worsley: Pilots should enter the published helicopter circuit (not above 500 ft agl) or as requested by ATS.

(ii) Irlam: Pilots should route along the Manchester Ship Canal (not above 500 ft agl within 1 nm of the aerodrome) and follow the published procedure on page EGCB-4-1 or as requested by ATS.

Note: *Subject to circuit traffic and to aid traffic separation ATS may request an alternative routing.*

(iii) M60/Junc 9: Pilots should route from M60/Junc 9 (not above 500 ft agl once within 1 mile of the aerodrome), and then proceed to Runway 02, 32 or 26 threshold as requested by ATS.

(b) **Helicopter Departure Procedures** (Refer to page EGCB-4-1)

(i) Helicopters must request rotor start from ATS.

EGCB AD 2.22 FLIGHT PROCEDURES (continued)

(ii) Helicopters must not lift until positive instruction has been obtained.

(iii) Helicopters should conform to the published helicopter circuit on departure.

(iv) Subject to traffic, helicopters may be requested to depart direct or via a specified runway.

(v) Helicopters must not overfly the Southwest corner of the airfield below 200 ft due to Control Line Model Flying which takes place.

(vi) South East Departures via M60/Junc 9: Pilots should request clearance to enter the Manchester CTR from ATS prior to departure. Pilots should remain on 120.250 MHz until 1 mile South East of the aerodrome (not above 500 ft agl).

(c) **Helicopter Hover Training**

(i) Two Helicopter Training Areas (HTA N and HTA S) are established for the purposes of helicopter hover training. Refer to EGCB-2-1.

(ii) HTA S is established solely for the purposes of hover training and must not be used as an aiming point or to conduct circuit training.

(iii) HTA N is established for the purposes of hover training and circuit training.

(iv) Helicopters must not leave the confines of any HTA or cross any runway without approval from ATS.

(d) **Helicopter Aiming Points**

(i) Two helicopter aiming points are established named 'Heli West' and Heli East'. These points are marked by a white triangle and are intended for use by helicopters conducting hover training and/or transition manoeuvres to aid separation between multiple helicopters conducting similar exercises.

(ii) A hover square is established for specific hover training. This point is not to be used as an aiming point.

(iii) Helicopters shall announce their intention to ATS to operate at one of the helicopter aiming points and must only leave the aiming point when in receipt of a positive taxi instruction.

(iv) Helicopters engaged in auto-rotations should conduct the manoeuvre into a vacant aiming point, advising ATS on each occasion prior to climbing and prior to commencement.

(v) Approaches to Runway 32 threshold are not permitted whilst the threshold of Runway 32 is used for aircraft parking.

(e) **Arrivals and Departures**

(i) All arrivals and departures should be made using procedures outlined in paragraphs a and b above.

(ii) Helicopters positioning to/from the Heliport Apron should route via D1 Hold, following the Air-Taxiway to the Heliport. The Air-Taxiway is marked by green/yellow linlaners and is not suitable for ground taxi.

4 Visual Reference Points (VRP)

(a) Visual Reference Points are established for use by aerodrome and en-route traffic as follows:

VRP	VOR/DME FIX
Irlam 532620N 0022447W	MCT 314°/7.4 nm
Swinton Interchange 533124N 0022136W	MCT 343°/11 nm
Thelwall Viaduct 532326N 0023021W	MCT 285°/9 nm
Leigh Flash 532923N 0023335W	MCT 309°/13 nm
Haydock Park Racecourse 532842N 0023720W	MCT 302°/15 nm WAL 076°/23 nm
Hulton Industrial Estate 533206.28N 0022704.56W	MCT 330°/12.7 nm
Reebok Stadium 533450N 0023208W	MCT 326°/17 nm
M60/M62/M66 Heaton Interchange 533300N 0021540W	MCT 002°/11.6 nm

EGCB AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGCB AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART – ICAO

AD 2-EGCB-2-1

Figure: MANCHESTER BARTON ATZ, HELICOPTER ENTRY/EXIT POINTS AND CIRCUITS

AD 2-EGCB-4-1

EGNT AD 2.22 FLIGHT PROCEDURES (continued)

2 Procedures for Outbound Aircraft

(a) Aircraft intending to join the airways system should flight plan via the following routes:

Outbound to	Via	Route
South and Southwest	P18 P18/P16	P18 – POL (below FL 190) P18 – GASKO – P16 (FL 190 and above)
Southeast	Y250 for L60 and UL603	P18 – GASKO – Y250 – MAMUL
	OTR VOR	FAMBO – OTR (for L90) FAMBO – OTR – OTBED (for Y70) ***Note:*** *Aircraft routeing via L90 or Y70 may alternatively route via P18 – Y250 – L60/ UL603*
North and Northeast	FIR	As directed by Newcastle ATC

(b) Datalink Departure Clearance Service (DCL) (via SITA or ARINC (623))

(i) DCL is only available to aircraft able to fly the GIRLI Standard Instrument Departure Routes.

(ii) The DCL service is available from EOBT -20 until EOBT +15 minutes.

(iii) DCL Clearances will not be issued if requested later than EOBT +15 minutes. Successful clearances must be ACCEPTED within 5 minutes of receipt or a 'Revert to voice' message will be received.

(iv) If any data errors are detected by the system or the controller a 'Revert to voice' message will be received.

(v) If the attempt to obtain a clearance is unsuccessful the aircraft should revert to voice RTF.

(vi) Further details of the DCL service may be obtained from ATC operations on +44 (0)191-214 3250.

(vii) Regardless of clearance source, departing aircraft must report their stand number, QNH and the identification letter of the received ATIS information when fully ready for pushback and start.

3 VFR Flights

(a) VFR clearance in the Newcastle CTR/CTA will be given for flights operating in VMC. Routing instructions and/or altitude restrictions may be specified in order to integrate VFR flights with other traffic. Pilots are reminded of the requirements to remain in VMC at all times and to comply with the relevant parts of SERA and the Rules of the Air Regulations 2015, and must advise ATC if at any time they are unable to comply with the clearance instructions issued.

4 VFR Routes to and from Newcastle

(a) In order to integrate VFR flights to and from Newcastle with the normal flow of IFR traffic, a number of VFR routes are established along which ATC clearances will be issued subject to the conditions specified in paragraph 3. These routes are determined by prominent ground features and are detailed in the following tables. Level instructions will be passed with the appropriate ATC VFR clearance.

(b) Requests for non-standard routes must be co-ordinated on an individual basis with ATC.

Outbound Visual Routes

Exit Point	RWY	Route	Maximum Altitude
Tyne Bridges	07	Turn right outbound to leave the CTR no more than 1 nm east of the Tyne Bridges VRP.	2500 ft
Blaydon	07	Turn right outbound to leave the CTR south of Blaydon VRP and no more than 1 nm east of the A1.	2500 ft
Stagshaw Mast	07	Turn left outbound, to cross Ponteland at 1300 ft or above or remain North of Ponteland, routing north of Ouston VRP to leave the CTR no more than 1 nm north of Stagshaw Masts VRP	2500 ft
Bolam Lake	07	Turn left outbound to remain North of Ponteland. Leave the CTR no more than 1 nm east of the A696 on track towards Bolam Lake VRP.	2500 ft
Morpeth Railway Station or Blyth Windfarm	07	Turn left outbound, to remain east of A1 from Stannington. Leave the CTR no more than 1 nm east of Morpeth Railway Station VRP.	2500 ft
Tyne Bridges	25	Turn left outbound to leave the CTR no more than 1 nm west of the Tyne Bridges VRP	2500 ft
Blaydon	25	Turn left outbound to leave the CTR south of Blaydon VRP, remaining no more than 1 nm west of the A1.	2500 ft

EGNT AD 2.22 FLIGHT PROCEDURES (continued)

Exit Point	RWY	Route	Maximum Altitude
Stagshaw Mast	25	Climb straight ahead to 1000 ft QNH, turn right to cross Ponteland at 1300 ft or above, route via Ouston VRP then no more than 1 nm south of Stagshaw VRP. **Note:** Advise ATC if unable to cross Ponteland at 1300 ft or above. Continue straight ahead until 3 DME before turning towards Ouston VRP.	2500 ft

Outbound and inbound visual routes via Bolam Lake, Derwent Reservoir and Ouston (Disused Aerodrome) VRPs are recommended for daylight use only.

Outbound Visual Routes

Exit Point	RWY	Route	Maximum Altitude
Bolam Lake	25	Climb straight ahead to 1000 ft QNH, turn right to cross Ponteland at 1300 ft QNH or above. Leave the CTR no more than 1 nm west of the A696 on track towards Bolam Lake VRP. **Note:** Advise ATC if unable to cross Ponteland at 1300 ft or above. Continue straight ahead until 3 DME before turning towards Bolam Lake VRP.	2500 ft
Morpeth Railway Station or Blyth Windfarm	25	Climb straight ahead to 800 ft QNH, turn right to pass east of Ponteland continuing climb. Route to leave the zone no more than 1 nm west of the A1.	2500 ft

Inbound Visual Routes

Entry Point	RWY	Route	Maximum Altitude
Tyne Bridges	07	Enter the CTR no more than 1 nm west of Tyne Bridges VRP, route to join right base for RWY 07.	2500 ft
Blaydon	07	Enter the CTR no more than 1 nm west of Blaydon VRP, route join to right base for RWY 07.	2500 ft
Stagshaw Mast	07	Enter the CTR not more than 1 nm south of Stagshaw Masts VRP, route via Ouston VRP to join left base RWY 07, remaining 1300 ft or above over Ponteland OR if not possible remain west of Ponteland and when cleared join final approach RWY 07 not less than 3.5 nm from touchdown	2500 ft
Bolam Lake	07	Enter the CTR not more than 1 nm west of the A696. Route to join left base RWY 07, remaining 1300 ft or above over Ponteland OR if not possible remain west of Ponteland. When cleared join final approach not less than 3.5 nm from touchdown	2500 ft
Morpeth Railway Station or Blyth Windfarm	07	Enter the CTR no more than 1 nm west of the A1, to join left base RWY 07 east of Ponteland remaining at or above 1000 ft QFE until south of Ponteland	2500 ft
Tyne Bridges	25	Enter the CTR no more than 1 nm east of Tyne Bridges VRP to join left base RWY 25.	2500 ft
Blaydon	25	Enter the CTR no more than 1 nm east of Blaydon VRP to join left base RWY 25	2500 ft
Stagshaw Mast	25	Enter the CTR no more than 1 nm north of Stagshaw Masts VRP. Route north of Ouston VRP to join downwind right hand RWY 25. Cross Ponteland at or above 1300 ft or route north of Ponteland	2500 ft
Bolam Lake	25	Enter the CTR no more than 1 nm east of the A696, route to join right base RWY 25 remaining clear of Ponteland.	2500 ft
Morpeth Railway Station or Blyth Windfarm	25	Enter the CTR no more than 1 nm east of Morpeth Railway Station VRP, route east of the A1 until east of Stannington to join right base RWY 25.	2500 ft

5 Special VFR Flight

(a) Clearance may be requested for Special VFR flight within the Newcastle CTR and will be given whenever the traffic situation permits. Special VFR flights are subject to the general conditions laid down in ENR 1.2.

Note: *Pilots holding a Private Pilots licence (Aeroplanes) are reminded of the flight visibility requirements for Special VFR flight laid down in Schedule 8 part B of the Air Navigation Order 2005.*

(b) Aircraft may be given radar vectoring whilst within the CTR if, due to the traffic situation, ATC considers it necessary. Pilots are reminded that it is their responsibility when operating on a Special VFR Clearance to remain at all times clear of cloud and in sight of the surface and in flight conditions which will enable them to determine their flight path and ensure that they comply with SERA.3105 Minimum Heights and the relevant parts of SERA.5001 VMC Visibility and Distance from Cloud Minima, SERA.5005 Visual Flight Rules and Rules of the Air Regulations 2015. Pilots must inform the radar controller if compliance with these requirements entails a change of heading or level.

EGWU AD 2.10 AERODROME OBSTACLES (continued)

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
(EGWU2039) 07/TAKE-OFF 25/APPROACH	Spire	513427.0432N 0002015.6014 W	558.28 ft		No	
(EGWU1040) 25/TAKE-OFF 07/APPROACH	Mast	513245.2656N 0002740.8750 W	282.92 ft		No	
(EGWU1057) 25/TAKE-OFF 07/APPROACH	Tree	513231.0730N 0002729.6010 W	296.14 ft		No	
(EGWU1025)	Tree	513409.7159N 0002812.4037 W	317.78 ft		No	
(EGWU1029)	Tree	513359.8865N 0002805.8373 W	316.31 ft		No	
(EGWU1019)	Tower/ Aerial	513320.3563N 0002819.6176 W	311.85 ft		No	
(EGWU2038)	Building	513317.9233N 0002020.5936 W	305.05 ft		No	
(EGWU2034)	Building	513315.1513N 0002155.4396 W	329.81 ft		No	
(EGWU1011)	Building	513247.1732N 0002837.2990 W	311.92 ft		No	
(EGWU1027)	Mast	513246.5586N 0002809.9369 W	286.00 ft		No	
(EGWU1081)	Mast	513156.3068N 0002709.5417 W	313.22 ft		No	
(EGWU1044)	Building	513132.9288N 0002741.6022 W	302.69 ft		No	
(EGWU1628)	Building	513107.8042N 0002443.1112 W	282.99 ft		No	
(EGWU2009)	Silo	513018.5556N 0002318.8634 W	414.62 ft		No	

EGWU AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE NORTHOLT.
2	Hours of service MET Office outside hours	0600 (local) until AD closes. MET Office outside hours: Defence Meteorological Centre HQ Air - H24.
3	Office responsible for TAF preparation Periods of validity	MET OFFICE NORTHOLT. 18 Hours
4	Trend forecast Interval of issuance	TREND Hourly
5	Briefing/consultation provided	Self-briefing/personal/telephone (Mil crews only).
6	Flight documentation Language(s) used	Charts abbreviated plain language text. TAFs/METARs. English
7	Charts and other information available for briefing or consultation	Actual / Forecast surface analyses & upper wind charts, rainfall radar, tephigrams, satellite Imagery, thunderstorm location.
8	Supplementary equipment available for providing information	PC Data display – Visual Weather, MOMIDS (Mil crews only).
9	ATS units provided with information	MET OFFICE NORTHOLT.
10	Additional information (limitation of service, etc.)	Nil.

EGWU AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	**2**	**3**	**4**	**5**	**6**
07	069.82°	1684 x 45 m	RWY surface: Asphalt, grooved. PCN 18/F/C/W/T	513301.42N 0002547.03W	THR 114 ft TDZ 116 ft
25	249.83°	1684 x 45 m	RWY surface: Asphalt, grooved. PCN 18/F/C/W/T	513319.16N 0002429.53W	THR 124 ft TDZ 124 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	**8**	**9**	**10**	**11**	**12**
RWY 07 0.18% Up RWY 25 -0.18% Down		174 x 150 m	1744 x 300 m		RWY 07 Threshold displaced by 92 m. Arrestor beds in the overrun of each runway. Approximately 700 m². Runway surface is predominantly Grooved Marshall Asphalt, with the following exceptions: a. Threshold Ends: Not grooved; b. 25 Threshold to intersection at Alpha 2/ Bravo 1: 8 m either side of the centre-line not grooved; c. Runway mid-point: 120 m length (full width) not grooved. Pilots should exercise caution when breaking in wet/contaminated conditions. Runway strip infringed at the South West corner by the A40 public highway. Northolt can accept aircraft 50% above PCN 18/F/D/W/T without

EGSH AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	NORWICH APPROACH	119.350 MHz DOC 40 nm/25,000 ft.	As per Aerodrome Operating Hours and by arrangement.	ATZ hours coincident with Approach hours. **VDF** 524039.63N 0011659.53E On AD
TWR	NORWICH TOWER	124.250 MHz DOC 20 nm/5000 ft.	As per Aerodrome Operating Hours and by arrangement.	**VDF** 524039.63N 0011659.53E On AD
RAD	NORWICH RADAR	119.350 MHz DOC 40 nm/25,000 ft.	Winter: 0630-Close as per Aerodrome Operating Hours and by arrangement. Summer: 0530-Close as per Aerodrome Operating Hours and by arrangement.	LARS is provided from 0900-1700 (winter); 0800-1600 (summer) to a range of 30 nm. **VDF** 524039.63N 0011659.53E On AD
	NORWICH DIRECTOR	128.325 MHz Not continuously monitored.	When Instructed by ATC	
ATIS	NORWICH INFORMATION	128.625 MHz DOC 60 nm/20,000 ft.	As per Aerodrome Operating Hours and by arrangement.	Arrivals ATIS.
Other	NORWICH FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGSH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS I 0.15°W (2017)	INH	110.900 MHz	HO	524032.87N 0011554.01E		(RWY 27) ILS, LOC and GP withdrawn 0730-1000 Mondays due to maintenance.
ILS/GP	INH	330.800 MHz	HO	524038.13N 0011731.26E		3° ILS Ref Datum Hgt 50 ft.
NDB (L)	NWI	342.500 kHz	HO	524039.15N 0011729.41E		On AD. DOC 50 nm.
DME	INH	46X 110.900 MHz	HO	524038.87N 0011659.43E	136 ft	On AD. DME freq paired with ILS I NH. Zero range indicated at THR 27 and THR 09.

EGSH AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Booking out details should be passed by telephone: 01603-420641. Calls on RTF may result in delays.

(b) All aircraft using Norwich aerodrome or its facilities, are required to have third party liability insurance cover in the sum of at least £1,000,000. Proof of this insurance should be available for inspection at any time whilst the aircraft is at Norwich aerodrome.

(c) Extension charges apply after 2130 and before 0615 (local).

(d) All persons on the manoeuvring and apron areas at Norwich Airport must wear High Visibility clothing at all times. Pilots/ Crew wearing high visibility clothing are permitted to escort passengers not wearing the required clothing. Apart from when carrying out aircraft walk round inspections, pilots/crew must keep to designated walkways and pedestrian crossings when on the terminal apron for their own safety. This also applies to passengers under pilot/crew escort. No pedestrian movement is permitted between the terminal and stand 7 parking area. Transport will be provided upon request.

(e) Norwich Airport is PPR for all visiting aircraft movements. PPR can be obtained directly from Norwich Airport ATC on 01603-420643 or your Norwich based handling agent. PPR is required a minimum of 60 minutes prior to ETA. Scheduled flights are not affected by this requirement.

2 Ground Movement

(a) Push-backs: Jet powered aircraft over 45,000 kg AUW on Stands 4, 5 or 6 will be pushed-back and pulled forward as part of the pre-taxi manoeurvre. Due to jet blast safety distances, engine start is not to commence until instructed by the ground crew. This will normally be during the pull forward phase of the procedure.

(b) Aircraft above 60, 000 kg AUW will use Taxiway Charlie only. This will require such aircraft to turn on the turning circles located at each end of Runway 09/27 on the south side.

(c) Large aircraft are to use the turning circles at either end as appropriate.

(d) The Western Apron is only to be used by resident operators and their authorised visitors. Visiting aircraft shall park under marshaller instruction. There are 3 helispots on the Western Apron. Spot 22 on the western half at the northern end of the Western Apron for use by the Air Ambulance only, D value maximum of 12.16 m. Spots 23 and 24 on the eastern half at the southern end of the Western Apron, D value maximum of 16.66 m. The north east section of the Western Apron including former Spot 21 has been permanently withdrawn from use.

(e) All visiting aircraft to Hangars 2 and 3 via the Eastern Apron should be aware there is a gate with limiting dimensions on exiting the Eastern Apron towards Hangars 2 and 3. Operators should contact the host tenant company for further details and dimensions. The gate is removable provided sufficient notice of an aircraft movement is received by the host Tenant company.

(f) Eastern Apron Access Gate - Aircraft access to non-airside tenant companies. With access gate in situ and fully open the measured clearance distances are:

- 19.75 m with no obstacle between the gates;
- from centre-line to EAST, 9.8 m; first obstacle is gate height 1.2 m;
- from centre-line to WEST, 9.95 m; first obstacle is gate height 1.0 m.

(g) Commanders of visiting Code B aircraft to the SaxonAir apron will be marshalled if entry is via E1 and the Code A Echo taxylane

(h) Aircraft taxiing to/from Holding Point Papa shall use the **MINIMUM** power necessary when entering or exiting the Eastern Apron.

(i) All Visiting Aircraft: Engine Start shall only be conducted when a qualified start crew are in attendance. All engine starts must be in compliance with current Norwich procedures.

3 CAT II/III Operations

(a) LVPs in force when MET visibility is 1500 m or less. If the RVR is 400 m or less, entry to the runway will be via A2 and C2 only and a ‘Follow- Me’ vehicle may be used.

4 Warnings

(a) Flying takes place by light aircraft and microlights from Felthorpe aerodrome (4 nm NW of ARP at *524200N 0011200E) occasionally throughout the year with increased activity during the summer months.

(b) At both ends of Runway 09/27 its width is twice that of the associated edge lights due to extra pavement at one side. Aircraft backtracking the runway and conducting a 180 degree turn, shall ensure on completion of the turn, correct alignment with the runway centre-line.

(c) During Low Visibility Procedures, one fire engine is positioned west of Hold Bravo 1 and another fire engine is positioned west of Hold Delta 1.

(d) The following bird risks have been identified within 4 km of the airfield:

EGSH AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(i) Around the Aerodrome at dawn and dusk birds are observed transiting the airspace to various feeding/roosting locations (Predominantly Gulls, Rooks and Starlings).

(ii) 2.5 km N at St. Faiths, 4 km E at Rackheath and 7 km N at Buxton. These locations are Pig Farms which attract a variety of birds up to an estimated 1500 ft agl. →

(iii) Perimeter of aerodrome up to 2 km S, Nesting Gulls on building roofs presents bird activity during the day, predominantly April – September.

(iv) 1.5 km N at St. Faiths, Rooks are known to transit between this Rookery and the aerodrome to feed/Roost.

(v) 1 km SW at Hellesdon, Racing Pigeons flying low level during the day are on occasions observed crossing the runway/flight path.

(e) Helicopter winch training is conducted on the north side of the aerodrome.

(f) If a ground taxiing aircraft requires a brake test, this shall take place only on that portion of concrete Taxiway A parallel to Runway 27/09 between Holding Point B1 and A2.

(g) Wind Shear and turbulence can occur on final approach to Runway 27 during periods of strong southerly or south westerly winds.

(h) Unlit crane 150 m south of the terminal, up to 215 ft agl.

(i) Eastern Apron: 10 floodlight stanchions up to 115 ft agl.

(j) Intensive bird activity dawn to dusk 10 km NE of aerodrome at Oxnead.

5 Helicopter Operations

(a) Light helicopters are not required to use the runways but arrivals and departures should be operated in such a way as to avoid overflying of, and to minimise the disturbance to, local residential areas.

(b) Air taxiing on the main apron is not permitted except with the approval of ATC and under the guidance of a Marshaller.

(c) Departures direct from the SaxonAir Apron and associated stands are prohibited.

6 Use of Runways

(a) Variable circuits in operation.

(b) Normally no overhead joins are permitted.

7 Training

(a) Circuit and Instrument training is only available by prior arrangement with ATC and subject to local traffic and the runway in use. Normal circuit heights are 1000 ft QFE for aircraft up to 5700 kg and 1500 ft QFE for aircraft over 5700 kg.

(b) Due to the number of aircraft using the airport for instrument training a booking system is in operation. Training periods can be booked by application to ATC Tel: 01603-420641. The filing of a flight plan does not constitute a booking to carry out instrument training at the airport. Failure to make a booking may result in the aircraft being refused use of the facilities. Pilots unable to make the booked time must inform ATC either to cancel the slot or to re-book.

EGSH AD 2.21 NOISE ABATEMENT PROCEDURES

1 General

(a) Operators of all aircraft using Norwich Aerodrome are to ensure at all times that aircraft are operated in a manner calculated to cause the least disturbance practicable in the areas surrounding the aerodrome.

(b) When taking off, aircraft shall climb as steeply as minimum engine noise settings allow and when approaching to land, without the assistance of ILS, shall follow a descent path which will not result in their being at any time lower than the normal 3° glide path.

2 Arrivals

(a) Pilots of arriving jet aircraft and turbo-prop aircraft and aircraft in excess of 5700 kg should arrange their flights to be established on final approach to a runway not below 1500 ft aal.

3 Departures

(a) On departure from any runway, all aircraft are to climb straight ahead to 1000 ft aal before turning, unless instructed otherwise by ATC.

(b) On departure aircraft less then 5700 kg AUW may be permitted to make a turn to the north of the aerodrome at 500 ft aal.

EGSH AD 2.22 FLIGHT PROCEDURES

1 Procedures for Outbound Aircraft

(a) Departures overflying the EHAA FIR via the UK North Sea are to flight plan via BODSO - L17 - MOLIX and then appropriate routes for destination. These flight are not to route via ENITO.

2 Air Tests

(a) Any aircraft requiring an air test which will be climbing to FL 190 or higher must have each individual flight approved by London Military. Pre-notification to London Military is required 24 hours prior to the flight taking place and it is the responsibility of the aircraft operator to ensure compliance with this requirement. London Military can be contacted on Tel: 01489 - 612419 or 01489 612408. If pre-notification is not completed start clearance may be delayed or withheld. All air tests must have a correctly filed flight plan which clearly and unambiguously states the nature and requirements of the flight and must include London Military as one of the addressees. A GAT Flight Plan into and routing along airways for the sole purpose of a flight test IS NOT acceptable. Norwich ATC can provide further information if required.

3 Visual Reference Points (VRP)

(a) The following VRP's have been established to facilitate VFR flight in and around the Norwich CTR/CTA as follows:

VRP	VOR/DME Fix (T)
Attlebridge 524136N 0010631E	CLN 358°/50.8 nm
Aylsham 524704N 0011519E	CLN 004°/56.4 nm
Brundall 523704N 0012600E	CLN 013°/47.4 nm
Coltishall Disused 524511N 0012119E	CLN 008°/54.9 nm
Hethel Disused 523345N 0011030E	CLN 001°/42.9 nm
Keswick Roundabout 523517N 0011630E	CLN 006°/44.7 nm
Lenwade Lakes 524307N 0010609E	CLN 358°/52.3 nm
Norfolk Showground 523901N 0011107E	CLN 002°/48.2 nm
Stoke Holy Cross 523430N 0011953E	CLN 009°/44.2 nm
Thorpe 523737N 0012242E	CLN 010°/47.5 nm

4 Special VFR Flight

(a) Clearance may be requested for Special VFR flight in IMC or at night within the Norwich Control Zone and will be given whenever the traffic situation permits. These flights are subject to the general conditions laid down for Special VFR flights (ENR 1.2 refers).

(b) Special VFR clearance will include routing and maximum altitude instructions. Pilots holding a Private Pilots Licence (Aeroplanes) are reminded of the visibility requirements of Special VFR flights laid down in Schedule 7 of the Air Navigation Order 2009 and in the related notification at ENR 1.4, paragraph 2.4.1.1, note 3.

(c) Pilots are reminded that they must at all times when operating on Special VFR clearance, remain clear of cloud and in sight of the surface and in flight conditions which will enable them to determine their flight path and keep clear of obstacles. Radar vectoring will not normally be applied to aircraft operating on Special VFR clearance.

(d) Pilots are reminded that a Special VFR clearance applies only to flight within the CTR and does not extend to flight within the surrounding airspace.

(e) Special VFR clearance will not normally be granted for flights operating in VMC or for flights by aircraft exceeding 5700 kg MTWA.

5 VFR Flights

(a) VFR flights in the CTR/CTAs will be given routing instructions and/or altitude restrictions in order to integrate VFR flights with other traffic.

(b) Pilots should anticipate routing instructions in relation to the Visual Reference Points (VRPs) detailed in paragraph 3

(c) Pilots of VFR flights are reminded of the requirement to remain in VMC at all times and to advise ATC if at any time they are unable to comply with the clearances as issued.

EGFP AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	
2	Hours of service MET Office outside hours	
3	Office responsible for TAF preparation Periods of validity	
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	
6	Flight documentation Language(s) used	
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	
10	Additional information (limitation of service, etc.)	

EGFP AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
04	032.07°	797 x 30 m	RWY surface: Concrete.	514241.00N 0041853.50W	THR 15 ft
22	212.07°	797 x 30 m	RWY surface: Concrete.	514301.05N 0041833.19W	THR 14 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					RWY 04 Threshold displaced by 66 m.
					RWY 22

EGFP AD 2.13 DECLARED DISTANCES

Runway designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
04	797 m	797 m	797 m	731 m	
22	731 m	797 m	767 m	767 m	

EGFP AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
22			APAPI Left/3° 30 ft						
04			PAPI Left/3° 30 ft						

EGFP AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	
5	Remarks	

EGFP AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	TLOF : 514251N 0041838W
2	TLOF and/ or FATO elevation	TLOF : 15 ft
3	TLOF and FATO area dimensions, surface, strength, marking	TLOF : Surface: Macadam. Tarmac over concrete. Standard H
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	Approach and FATO lighting: Not installed.

EGFP AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
PEMBREY ATZ A circle, 2 nm radius centred at 514250N 0041844W on longest notified runway (04/22)	Upper limit: 2000 ft Lower limit: SFC	G	PEMBREY RADIO English	3000 ft	

EGFP AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
Other	PEMBREY RADIO	124.400 MHz A/G frequency	Winter: Sat-Sun 0900-1730. Summer: Sat-Sun 0900-1730.	ATZ hours coincident with A/G hours.

EGPK AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(b) At ATC discretion, the thresholds of Runways 12/30 and 03/21 may also be used as aiming points.

(c) Helicopters may 'air' or 'ground' taxi between the aiming point and the designated parking area, including the military parking circles. Due to the surface condition of Apron C, only marked designated taxiway routes should be used.

6 Use of Runways

(a) During winter conditions when the runway is contaminated, estimated braking action will be provided in accordance with the CAA Estimated Braking Action Table.

7 Training

(a) Aircraft training slots are to be requested from ATC: 01292-511107.

(b) The use of the airport for circuit and instrument training purposes is subject to the prior arrangement with ATC operations, Tel: 01292-511107.

(c) ATC must be advised of any cancellations. Any training slot delayed by 30 minutes or more will be deemed to have been cancelled and the slot re-negotiated.

(d) Failure to cancel a booked slot may result in cancellation charges.

(e) The filing of a flight plan for a training slot does not imply acceptance.

(f) Asymmetric flight must not be carred out without ATC permission.

EGPK AD 2.21 NOISE ABATEMENT PROCEDURES

1 Noise Preferential Procedures

(a) Operators of all aircraft using the airport should ensure that at all times their aircraft conform to the noise abatement techniques laid down for that type of aircraft and that operations are conducted in a manner calculated to cause the least disturbance practicable in areas surrounding the aerodrome.

(b) These requirements may at any time be departed from, to the extent necessary, for avoiding immediate danger and for complying with the instructions of ATC.

(c) All aircraft using the aerodrome shall maintain as high an altitude as practicable.

(d) Aircraft using the ILS in IMC or VMC shall not descend below 2000 ft before intercepting the glidepath unless directed by radar, nor thereafter fly below it. An Aircraft approaching without assistance from ILS or radar shall follow a descent path which will not result in its being lower than the approach path which would be followed by an aircraft using the ILS glidepath.

(e) All airline crew training circuits shall be flown at a height of at least 1500 ft aal. In other respects training aircraft shall comply with the procedures and routeings detailed in this notice together with procedures laid down by GPA Ltd with regard to training circuits.

(f) Noise from ground running of aircraft engines is controlled in accordance with instructions issued by GPA Ltd.

2 Noise Preferential Routes

(a) The Noise Preferential Routes (NPR) specified below are compatible with ATC requirements and shall apply in both IMC and VMC.

(b) The tracks are to be flown by all departing jet aircraft and by all other aircraft of more than 12,500 kg MTWA unless otherwise instructed by ATC or unless deviations are required in the interests of safety.

Departure Runway	NPR
12	Climb straight ahead until passing DME I-PP or I-KK 4, or until passing 3000 ft ALT.
30	Climb straight ahead and after passing DME I PP or I KK 1.0 turn left onto track not North of 289°M until passing 3000 ft ALT.

(c) The following NPR's will apply to circuit training as follows:

Departure Runway	NPR
12	Climb straight ahead until 1500 ft HGT / 1600 ft ALT before turning left or right into the circuit.
30	Climb straight ahead and after passing DME I-PP or I-KK 1.0 turn left onto track 289°M until 1500 ft HGT or 1600 ft ALT before turning left or right into the circuit.

EGPK AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

3 Visual Circuits

(a) Aircraft carrying out right hand visual circuits on Runway 30 should avoid overflying Troon.

EGPK AD 2.22 FLIGHT PROCEDURES

1 Procedures for Inbound Aircraft

(a) The Standard Arrival Routes for arrivals from the ATS route system are as follows, and are detailed at AD 2-EGPK-7-1

Approach from	Via	Route
Southeast and South	N601/UN601, UN590	ASLIB - ENIPI - direct TRN For Runway 30 arrivals, tactical routing to SUMIN may be given.
Southwest	P600	BLACA - P600 -TRN

(b) Arrival routes from all other directions are as follows:

Approach from	Via	Route
North and Northeast	P600	Direct to TRN VOR or SUMIN REP by Scottish ACC, or transferred to Glasgow Approach for transit of the Glasgow CTR/CTA and/or Scottish TMA.
East	Y96, L983	Tactical routing to TRN or SUMIN by Scottish ACC.
West and Northwest	N562	Routed direct to TRN VOR by Scottish ACC.

(c) Inbound aircraft other than from the Airways Route Structure:

(i) Aircraft wishing to enter the CTR or CTA under IFR direct from the FIR must observe the normal procedure for joining Controlled Airspace.

(ii) Pilots inbound to Prestwick under VFR must contact Prestwick Approach Control and request clearance to enter the Prestwick CTR/CTA at least 10 minutes before reaching the CTR/CTA boundary. VFR and Special VFR aircraft will usually be instructed to route either via one of the designated VFR routes or via Visual Reference Points (see paragraphs 5 to 8).

(d) Aircraft routing inbound from other Scottish TMA airfields will be cleared the PIK NDB not below the MSA.

(e) Approach Procedures with Radar Control

(i) When Prestwick inbound traffic is being sequenced by radar, the Approach Procedures will be flown under directions from the Approach Radar Controller and will consist of that part of the approach between the Terminal Holding Fix and the Final Approach Path. When holding procedures are not in use, radar sequencing may commence before the Terminal Holding Fix.

(ii) Pilots should plan their flight profile in such a manner as to be able to achieve the Minimum Holding Level at the appropriate holding point if so required.

(iii) When an aircraft is under Approach Radar Control, changes of heading or Flight Level/Altitude will be made only on instructions from the Radar Controller except in the case of radio communication failure in the aircraft or at the Radar Unit.

(iv) Headings and Flight Levels/Altitudes at which to leave the holding areas will be passed by ATC. Radar vectors will be given and descent clearance will include an estimate of track distance to touchdown. Further distance information will be given between the initial descent clearance and intercept heading to the ILS.

(v) Speed Control may be applied on a tactical basis to aircraft whilst radar sequencing is in progress. Aircraft unable to comply with requested speeds should inform the radar controller immediately and state what speeds will be used. In the interests of accurate spacing, pilots are requested to comply with speed adjustments as promptly as is feasible within their own operational constraints, and should advise ATC if circumstances necessitate a change of speed for aircraft performance reasons.

(vi) In the event of a radar failure, new instructions will be issued to aircraft under Radar Control and the procedures as defined for approach without Radar Control will be put in effect.

(f) Approach Procedures without Radar Control

When inbound traffic is not being sequenced by radar, aircraft will normally be cleared to either TRN VOR, SUMIN REP or PIK NDB in order to carry out an Instrument Approach Procedure appropriate to the landing direction.

2 Radio Communications Failure Procedures

(a) In the event of complete radio communication failure, pilots are to adopt the appropriate national basic procedures notified at ENR 1.1.3.

EGPK AD 2.22 FLIGHT PROCEDURES (continued)

(b) When leaving the CTR in accordance with national basic procedures, aircraft are to track 180° TRUE from the PIK NDB at 4000 ft ALT until clear of the Prestwick CTR Boundary.

3 Procedures for Outbound Aircraft

(a) Standard Instrument Departures from Prestwick via TRN VOR and NGY NDB are as follows (see AD2-EGPK-6-1/2):

- P600 via TRN
- N560 via TRN to GOW
- L602 via TRN to GOW
- UL612 North via TRN to GOW
- T256/UT256 South via NGY
- Y96 via NGY to TLA
- L983 via NGY to SAB →

(b) Aircraft outbound from Prestwick using the following routes should flight plan via the REP shown:

- N562 via HERON;
- FIR West via HERON.

(c) North Atlantic Departures.

(i) Due to the proximity of the Shanwick Oceanic boundary to Prestwick, pilots of jet aircraft planned to enter Shanwick airspace at GOMUP and ETILO should contact Ocean Delivery prior to departure. On all other oceanic routes this clearance can be obtained after the aircraft is airborne. ENR 2.2, paragraph 3.8.2 refers.

(ii) Pilots are reminded that the Oceanic clearance (including level allocation) is valid only from the OCA Entry Point. **Domestic ATC clearance to the OCA Entry Point is issued separately.**

(iii) When TRA 008 (ENR 5.2 and ENR 6-1-6-5) is active, aircraft entering Shanwick/Reykjavik airspace at ETILO, ERAKA, ADODO, BALIX, ORTAV, ATSIX, LUSEN or RATSU should file via TRN GOW.

4 Speed Limit

(a) A speed limitation of 250 kt applies to all departures whilst flying below FL 100 except when a request has been approved and exceptional circumstances require its removal.

5 VFR Flights

(a) VFR flights in the Control Zone will be given routing instructions and/or altitude restrictions in order to integrate VFR flights with other traffic.

(b) Pilots should anticipate routing instructions via the routes detailed in paragraph 7 or the Visual Reference Points detailed in paragraph 9.

(c) Pilots of VFR flights are required to remain in VMC at all times and to comply with the relevant Rules of the Air Regulations 2015, and must advise ATC if at any times they are unable to comply with the instructions given.

6 Special VFR Flights

(a) Clearance may be requested for Special VFR flight in IMC or at night within the Prestwick Control Zone and will be given whenever the traffic situation permits. These flights are subject to the general provisions laid down for Special VFR flights.

(b) Special VFR clearances will include routing and maximum altitude instructions and may not necessarily be confined to the entry/exit lanes detailed at paragraph 7. Pilots holding a Private Pilots Licence (Aeroplanes) are reminded of the visibility requirements of Special VFR flights laid down in Schedule 7 of the Air Navigation Order 2009 and the related notification at ENR 1-4-6 note 4, which may require them to request routing via the notified Entry/Exit Lanes.

(c) Pilots are reminded that they must at all times, when operating on a Special VFR clearance, remain clear of cloud and in sight of the surface and in flight conditions which will enable them to determine their flight path and keep clear of obstacles. Due to the nature of the terrain in the vicinity of Prestwick Airport, radar vectoring will not normally be applied to aircraft operating in accordance with a Special VFR clearance.

(d) Pilots are reminded that a Special VFR clearance applies only to flight within the Prestwick Control Zone and does not extend to flight within the surrounding airspace of the Prestwick Control Area or Scottish Terminal Control Area.

(e) Special VFR clearances will not normally be granted for flights operating in VMC or for flights by aircraft exceeding 5700 kg MTWA.

EGPK AD 2.22 FLIGHT PROCEDURES (continued)

7 Entry/Exit Lanes

(a) The following entry/exit lanes are notified for the purposes of Schedule 7 of the Air Navigation Order 2009, Part A, Private Pilots Licence (Aeroplanes), sub-para 2 (c) (ii) to permit aircraft to operate to and from Prestwick Airport in IMC under the conditions stated, as follows:

(i) (1) A lane 3 nm wide, with centreline from Irvine Harbour 553639N 0044155W (a point on the northern Prestwick CTR boundary), thence southeast along the coast to Barassie, then along the railway line to the point at which it joins the Prestwick Aerodrome Traffic Zone;

(2) A lane 3 nm wide, with centre-line from Doonfoot 552625N 0043903W (a point on the southern Prestwick CTR boundary), thence northeast along the coast to the point at which it joins the Prestwick Aerodrome Traffic Zone.

(ii) Use of the lanes is subject to clearance by Prestwick ATC and the carriage of the Prestwick Approach Control frequency

(iii) Aircraft using the lanes must remain clear of cloud and in sight of the surface, not above 3000 ft (Prestwick QNH), and in flight visibility of not less than 3 km

(iv) An aircraft using a lane shall keep the centre-line on its left, unless otherwise instructed by ATC for separation purposes. In these circumstances ATC will pass traffic information to the aircraft concerned.

(v) Pilots of aircraft are responsible for maintaining adequate clearance from the surface or other obstacles.

(b) Additionally, to permit the effective integration of traffic, flights operating under VFR may be required by ATC to follow these routes as detailed in paragraph 5.

8 Microlight and Model Aircraft Operations in the Prestwick Control Zone

(a) Model aircraft operations take place at Auchens, 553455N 0043650W and Tarbolton, 55158.81N 0042900.98W, up to 400 ft during daylight hours. Operations above 400 ft will be advised by ATC.

9 Visual Reference Points (VRP)

(a) Visual Reference Points are established for use by aerodrome and en-route traffic as follows:

VRP	VOR/DME FIX/NOTES
Culzean Bay/Castle 552210N 0044605W	Culzean Bay/Castle follow coastline to Ayr Harbour to ATZ Boundary.
Cumnock 552720N 0041527W	
Dalmellington 551924N 0042350W	TRN 090°/13.3 nm
Dalrymple 552350N 0043533W	TRN 055°/8.3 nm
Doonfoot 552625N 0043903W	
Heads of Ayr 552558N 0044247W	
Irvine Harbour 553639N 0044155W	
Kilmarnock 553645N 0042954W	
Mauchline 553057N 0042245W	TRN 051°/18.4 nm
Pladda 552535N 0050704W	
West Kilbride 554108N 0045205W	West Kilbride follow coastline to Barassie to ATZ Boundary.

EGKA AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	SHOREHAM APPROACH	123.150 MHz DOC 25 nm/10,000 ft	Winter: Mon-Sat 0900-2000; Sun 0900-1900. Summer: Mon-Sat 0800-1900; Sun 0800-1800.	**VDF 505009.73N 0001736.59W On AD.** ATZ hours coincident with Approach/Tower/A/G hours. Approach Service subject to staff availability.
TWR	SHOREHAM TOWER	123.150 MHz	Winter: Mon-Sat 0900-2000; Sun 0900-1900 Summer: Mon-Sat 0800-1900; Sun 0800-1800	**VDF 505009.73N 0001736.59W On AD.**
	SHOREHAM TOWER	125.400 MHz DOC 25 nm/4000 ft.	As directed by ATC	
Other	SHOREHAM RADIO	123.150 MHz A/G frequency DOC 10 nm/3000 ft.	Winter: Mon-Fri 0800-0900. Summer: Mon-Fri 0700-0800.	**VDF 505009.73N 0001736.59W On AD.**
ATIS	SHOREHAM INFORMATION	130.975 MHz DOC 25 nm/10,000 ft.	Winter: 0800-2000 Summer: 0700-1900	

EGKA AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DME	SRH	36Y 109.950 MHz		505009.96N 0001736.54W	44 ft	On AD. DME DOC 10 nm/5000 ft. Any ILS indications should be ignored. DME related freq 109.950 MHz. Normally radiates H24. Zero range indicated at THR of Runway 20. 0.1 nm indicated at THR of Runway 02. DME range errors in excess of 0.03 nm may be experienced between R293 clockwise to R302.
NDB (L)	SHM	332.000 kHz	Winter: 0800-2000 Summer: 0700-1900	505007.84N 0001743.39W		On AD. Range 10 nm. Normally radiates H24.

EGKA AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Use of this airport by aircraft not able to communicate with ATC by radio subject to prior permission.

(b) Standard light signals should be followed.

(c) High visibility clothing is mandatory airside. Groups of two or more people can be escorted by one wearer of high-visibility clothing (tabard/jacket) if kept together.

(d) Local council by-laws prohibit dogs airside. Pilots wishing to fly in/out with dogs to call Fire Crew to arrange transport to/from aircraft prior to flight. Dogs will be expected to be in suitable dog-carriers or carried by handler/owner.

(e) While airside, each aircraft commander is responsible for the safety of their passengers and other crew members. Passengers are at all times to be escorted by a person who is known to be competent to ensure both his/her and the passenger's safety.

EGKA AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(f) The parking rows numbered 70, 71, etc, must only be accessed by persons attending the aircraft for flight purposes. No visitors or sightseers are permitted.

(g) When taxiing on the grass, keep to cut grass taxiways. The longer (uncut) grass areas are not inspected and are unfit for manoeuvring of any type.

(h) Maintenance is prohibited in all parking areas and main concrete apron without the express prior permission of ATS.

(i) Out of hours movements (fixed-wing and rotary) are strictly prohibited without an agreed extension to services. All prior agreements, authorizations and permits are withdrawn and are void.

(j) All visiting aircraft report to the Airport RFFS office 'C'.

(k) The carriage of dangerous goods into or out of EGKA, as specified by the Air Navigation (Dangerous Goods) Regulations 2002, is strictly prohibited.

(l) Use of this aerodrome is subject to the published schedule of fees, charges, terms and conditions. Copies are available from Airport administration.

2 Ground Movement

Not applicable

3 CAT II/III Operations

Not applicable

4 Warnings

(a) Aircraft approaching Runway 02 are reminded of displaced threshold and should NOT attempt to touch down on the numbers or the threshold line. Pilots to follow PAPIs (MEHT 16 ft) in order to safely overfly trains and railway line embankment on very short final.

(b) Caution soft ground either side of Taxiway Kilo. Enter and exit on marked points only.

(c) Caution should be used when taxiing on Taxiway A to ensure adequate wing-tip separation from aircraft holding at Hold C.

(d) After heavy rain, standing water may persist on grass areas.

(e) Caution, model aircraft fly adjacent to Runway 20 approach on the hills at approximately 1 nm from the threshold up to 700 ft amsl.

(f) Caution, kite flying along the coast and on other areas within the ATZ up to 100 ft agl.

(g) Caution, turbulence may be encountered on final approach Runway 24 over the river, especially when the tide is out.

(h) Runway 06/24 is uneven and bumpy in areas.

(i) HT Cables to the north east of aerodrome, running north east – south west, 585 ft amsl at 2 nm.
South Downs to the north of the aerodrome, rising to 783 ft amsl at 4 nm.

(j) Caution, reduced wing tip clearance between taxiing and parked aircraft on main concrete apron. Marshalling guidance can be provided via ATC/RFFS.

(k) Caution, flocks of birds can descend on the aerodrome quickly. Pilots may face delays if birds are difficult to disperse.

(l) Grass cutting will take place on the aerodrome daily between April and October. Large grass bales will be present during major cutting operations in July/August.

(m) Restrictions to operations may be applied for any special event taking place on the aerodrome. See NOTAM as issued.

(n) Restrictions to operations will be applied during LVPs. Only the hard runway and Taxiway Alpha will be in use.

(o) Wind information passed by ATS is given as Degrees True. Pilots are to allow for current magnetic variation.

5 Helicopter Operations

(a) Helicopter circuits from HTAs 'W' and 'X' are frequently active below the fixed-wing 'dead-side' and 'live-side' circuit patterns subject to the runway(s) in use. All helicopter circuits shall be not above 600 ft QNH (unless otherwise authorised) and negative RTF but maintaining a listening watch:

(i) HTA 'W' - Runway 02 in use - Left hand circuit, remain west of 02/20 runway strip.

(ii) HTA 'W' - Runway 20 in use - Right hand circuit, remain west of 02/20 runway strip.

(iii) HTA 'X' - Runway 06 in use - Left hand circuit, remain north of Runway 06/24 strip and cross Runway 02/20 strip as required.

(iv) HTA 'X' - Runway 24 in use - Right hand circuit, remain north of Runway 06/24 strip and cross Runway 02/20 strip as required.

EGKA AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(b) A sloping ground training area is situated adjacent to the northern windsock on the northwestern side of the aerodrome.

(c) All helicopter arrivals and departures shall enter/depart the ATZ not above 600 ft QNH unless otherwise authorised and request specific clearance to cross any runway strip.

(d) Helicopters should avoid overflying built up areas that are adjacent to the arrival/departure routes and should not fly along the river from the harbour entrance, but shall remain on the coast to the southeastern corner entry route of the aerodrome.

(e) Confined helicopter training area (HTA 'Q') is situated NNW of HTA 'W'. Not to be used by solo/student pilots.

6 Use of Runways

(a) More than one runway may be in use at any one time.

(b) Runway 02/20 will always be preferred subject to operational limitations. Aircraft departing Runway 20 should avoid overflying as much of the built up areas to the south as is practical.

(c) Circuit heights are 1100 ft aal for all runways.

(d) Variable circuits at discretion of ATC.

(e) Unless otherwise instructed aircraft joining the circuit will overfly the aerodrome maintaining 2000 ft aal, until instructed to descend to circuit height on the inactive (dead) side of the runway in use and join the circuit by crossing the upwind end. Pilots should note that there would frequently be helicopters operating both ‘liveside’ and ‘deadside’ in the ATZ up to 600 ft.

(f) Aircraft joining direct to the crosswind leg should arrange their flight to track over the upwind end of the runway-in-use, ie in the same position as if approaching it from the ‘deadside’. Unless otherwise instructed, this should be at circuit height.

(g) Departing aircraft shall not turn on course below 600 ft QNH unless approved by ATC.

(h) All fixed wing aircraft should be aware of helicopters operating live side and dead side beneath the fixed wing circuit patterns.

(i) Departing aircraft, and aircraft going around, should be aware of the possibility of aircraft on the crosswind leg at 1100 ft QFE.

(j) PAPIs are to be used for Runway 02/20 asphalt only, not for grass 02/20.

(k) The Runways 02/20 asphalt and 02/20 grass are operated as a single runway strip. No simultaneous parallel approaches or departures are permitted.

7 Training

(a) Circuit training (fixed-wing and rotary) is not permitted Sundays. It is permitted Mondays 1000-Closing time (local) and Tuesday-Saturday 1000-1800 (local).

(b) Runway 13/31 is not available for touch and go landing.

(c) Only Runways 02 and 31 may be used for practice engine failure after take-off.

(d) Instrument training for residents and visitors is strictly PPR.

(e) Qualifying cross country flights are strictly PPR.

EGKA AD 2.21 NOISE ABATEMENT PROCEDURES

(a) Noise abatement techniques should be practiced at all times, the area to the east and west being particularly sensitive.

(b) Aircraft departing Runway 20 should make a 10 degree turn to the right on reaching the railway line. This track should be maintained until reaching the coast before turning left or right on course.

(c) Runway 02/20 will be the preferred runway for noise abatement purposes.

(d) Aircraft engines should not be run outside notified operating hours without prior management approval via ATS or Fire Crew.

(e) Ground engine runs should not be performed adjacent to buildings, re-fuelling areas or on the concrete apron. These will normally be performed on Taxiway B, 'C' Loop or the Northern Loop. All ground runs are logged for noise abatement purposes by ATS.

(f) Extensive helicopter tracking details should not be completed adjacent to buildings.

(g) Extended helicopter operations at Runway 24 numbers and HTA 'E' are to be avoided unless a strong easterly wind prevails.

EGKA AD 2.22 FLIGHT PROCEDURES

1 Radio Communication Failure Procedures

(a) In the event of an aircraft experiencing a radio failure during daytime, an aircraft should join overhead the aerodrome, fit into the traffic pattern and overfly the runway in use at 500 ft before positioning for landing.

2 Instrument Approach Procedures

(a) Instrument Approach Procedures (IAP) for this aerodrome are established outside controlled airspace. See ENR 1.5.

3 ATS Services

(a) Approach service may not be available every day.

4 Visual Reference Points (VRP)

(a) Visual Reference Points are established for use by aerodrome and enroute traffic as follows:

VRP	Co-ordinates
Brighton Marina	504839N 0000603W
Lewes Intersection (A27(T)/A26)	505152N 0000127E
Littlehampton	504846N 0003247W
Washington Intersection (A24/A283)	505434N 0002428W

EGKA AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGKA AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGKA-2-1

Figure: HELICOPTER ROUTES AND CIRCUIT PATTERNS

AD 2-EGKA-4-1

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 02 (ACFT CAT A,B) - ICAO

AD 2-EGKA-8-1

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 02 (ACFT CAT A,B) - ICAO

AD 2-EGKA-8-2

Figure: INSTRUMENT APPROACH CHART VDF RWY 02 (ACFT CAT A,B) - ICAO

AD 2-EGKA-8-3

Figure: INSTRUMENT APPROACH CHART RNAV (GNSS) RWY 20 (ACFT CAT A,B) - ICAO

AD 2-EGKA-8-4

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 20 (ACFT CAT A,B) - ICAO

AD 2-EGKA-8-5

Figure: RNAV (GNSS) INSTRUMENT APPROACH PROCEDURE CODING TABLES RWY 02

AD 2-EGKA-8-7

Figure: RNAV (GNSS) INSTRUMENT APPROACH PROCEDURE CODING TABLES RWY 20

AD 2-EGKA-8-8

EGHI AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

(g) The NPR specified at f may be varied by ATC except for aircraft that do not conform to the provisions of ICAO Annex 16, Vol 1, Chapter 3. If an ATC clearance requires a departure heading other than that specified at f, the ATC specified heading supersedes that required by the appropriate NPR.

EGHI AD 2.22 FLIGHT PROCEDURES

1 Circuits

(a) Unless flying a circling approach procedure, circuits shall normally be flown during daylight hours by propeller driven aircraft and helicopters at 1000 ft ALT and turbojet aircraft at 1500 ft ALT. All circuits flown at night shall be flown at 1500 ft ALT.

2 Procedures for Inbound Aircraft

(a) Standard Inbound Routes

The standard routes for inbound aircraft are shown below; these may be varied, however, at the discretion of ATC (eg to permit straight-in approaches when the situation allows). Aircraft inbound to Southampton from airways will be routed on the designated Standard Arrival Routes. The Standard Arrival Routes are shown at AD 2-EGHI-7-1/4.

Approach from	Via	Route
N (FL 80 and below)	Q41	HON - WCO - PEPIS - SAM
NE	L980 L179 L610	TRIPO - TERKO - UMBUR - OCK - PEPIS - SAM TERKO - UMBUR - OCK - PEPIS - SAM NILON - UMBUR - OCK - PEPIS - SAM
S	Q41	THRED - NEDUL
SE (Paris FIR)	N20	KUNAV - ELDAX - NOTGI - GIVUN - RUDMO - MIVLA - SAM
SE (France UIR)	M8	SUBIP - ELDAX - NOTGI - GIVUN - RUDMO - MIVLA - SAM
SE (Via DVR)	Y8	DVR - LYD - WAFFU - GWC - SAM
W	—	Direct to SAM
NW FL 90 to FL 140 FL 150 and above (B-RNAV)	N859/L151 L151 UL9/L9	KIDLI - DIGUT - CPT - PEPIS - SAM HON - BAMBO - EVSEM - RISIN - NUBRI - PEPIS - SAM KENET - CPT - PEPIS - SAM

Note: *Due to airspace constraints, aircraft inbound to Southampton may experience a stepped descent profile.*

(b) Holding Procedures

Holding patterns are as follows:

Main Stacks	Holding
Southampton NDB(L) EAS (Lowest level 2000 ft ALT)	Holding axis 018° MAG turning right at the facility.
Southampton VOR SAM (Lowest level 2000 ft ALT)	Holding axis 032° MAG turning right at the facility.
SIERRA (Lowest level 2000 ft ALT)	Holding fix SAM VOR/DME RDL 212°/D8 on an axis of 032° MAG, Turning right at fix, limiting DME SAM D11.
NOVEMBER (Lowest level 2000 ft ALT)	Holding fix SAM VOR/DME RDL 005°/D7.2 on an axis of 185° MAG, Turning left at fix, limiting DME SAM D11.
NEDUL (Lowest level 4000 ft ALT)	Holding fix SAM VOR/DME 207°/19 nm limiting DME SAM D24 on an axis of 027° MAG, turning right at the fix.

EGHI AD 2.22 FLIGHT PROCEDURES (continued)

3 Procedures for Outbound Aircraft

(a) The Standard Routes for outbound aircraft are shown in the tables below. These routes may be varied at the discretion of ATC (eg to offer more direct routeing when the traffic situation permits). **Pilots must adhere to the Noise Preferential Routes detailed at EGHI AD AD 2.21 (Southampton) before turning onto the specified route.**

Departing to	Runway	Airway Route	Route
North	02, 20	Q41	Intercept Q41 **(Note 3)** to NORRY - WCO
Northeast **(Note 1)**	02, 20	M185	GWC - OCK
East or Southeast **(Note 2)**	02, 20	N859 Y803 L612 L151 M605 L9/L10 N16/L9/L10	GWC GWC - SFD GWC - GWC RDL 131° - BENBO GWC - N859 - DRAKE GWC - GWC RDL 117° - BOGNA - HARDY SAM - Y8 - GWC - SFD - Y803 - DVR **(Note 6)** SAM - Y8 - GWC - OTSID - BIG - DVR **(Note 7)**
South	02 20	Q41/N866	NEDUL - Q41 **(Note 4)** NEDUL - Q41
West **(Note 5)** Northwest	02, 20 02, 20	FIR Q41/L9 Q41/UL9	As directed by ATC Intercept Q41 **(Note 3)** - TABEN - KENET - L9 Intercept Q41 **(Note 3)** - TABEN - KENET - UL9

Note 1: *Aircraft inbound to London Heathrow or Northolt will be cleared to SAM VOR to hold, with a nominal onward clearance time of SAM +10 minutes, to join OCK 1C STAR*

Note 2: *Aircraft inbound to London Gatwick will be cleared to SAM VOR to hold, with nominal onward clearance time of SAM + 10 minutes , to join WILLO 2A/ASTRA 1A STAR.*

Note 3: *Right turn from end of NPR Runway 20.*

Note 4: *Left turn from end of NPR Runway 02.*

Note 5: *There is no contiguous Class A Airspace to the west of the Solent CTA. Departing aircraft intending to join ATS Route R8/UR8, UN20 or UM140 will leave controlled airspace at the Solent CTA boundary or on passing 5500 ft ALT, whichever is sooner. Unless prior arrangements have been made by the aircraft operator with another ATS provider, the aircraft commander is responsible for obtaining a joining clearance to provide radar service outside controlled airspace.*

Note 6: *Traffic with a filed cruising level of FL 160-*

Note 7: *Traffic with a filed cruising level of FL 165+*

4 Radio Comminications failure Procedures

(a) In the event of complete radio communication failure in an aircraft, the pilot will adopt the appropriate procedure notified at ENR 1.1 paragraph 3.4.

(b) The routes to be used when leaving the CTR in accordance with the procedures at ENR 1.1 paragraph 3.4 are shown in the table below; the route to be followed is dependent on the position of the aircraft at the time the decision to leave the Airspace is made.

Position at time of decision	Route
Southampton VOR/DME SAM	Track 295°(T)
Southampton NDB(L) EAS	Track 295°(T)

5 Flights Engaged in Instrument Route training - Flow Management Requirements

(a) See EGHH AD 2.22, paragraph 4.

EGHI AD 2.22 FLIGHT PROCEDURES (continued)

6 Visual Reference Points (VRP)

(a) For the benefit of pilots on VFR flights who prefer to determine their position by radio navigation aids, rather than by visual pin-points, suitably defined VRPs for Southampton are shown in the following table:

VRP	VOR/NDB	VOR/DME FIX
Southampton (See Note)		
Beaulieu Disused Aerodrome 504815N 0013014W		SAM 214°/10.9 nm
Butser Hill Mast 505836N 0005856W		SAM 085°/13.8 nm
Bishops Waltham 505717N 0011235W	SAM RDL 091° EAS 091° MAG	SAM 091°/5 nm
Bullington Cross 511030.61N 0012021.49W	SAM RDL 002° EAS 004° MAG	SAM 002°/13.2 nm
Calshot 504904N 0011945W	SAM RDL 176° BIA 084° MAG	SAM 176°/8 nm
Cowes 504541.27N 0011735.13W	SAM RDL 171° EAS 169° MAG	SAM 171°/11.8 nm
M27 Juntion 2 (Ower) 505645.12N 0013146.65W	SAM RDL 266° EAS 266° MAG	SAM 266°/7.0 nm
Needles Lighthouse 503945N 0013529W		SAM 209°/19.9 nm
New Alresford 510519.70N 0010859.10W	SAM RDL 043° EAS 045° MAG	SAM 043°/10.9 nm
Romsey 505927N 0012945W	SAM RDL 291° EAS 293° MAG	SAM 291°/6 nm
Spinnaker Tower 504744N 0010631W		SAM 137°/13.1 nm
St Catherine's Point 503435N 0011753W		SAM 176°/22.9 nm
West Meon Cross Roads 510152.90N 0010430.22W	SAM RDL 066° EAS 067° MAG	SAM 066°/11.2 nm
Wickham 505400.03N 0011114.80W	SAM RDL 120° EAS 118° MAG	SAM 120°/6.8 nm

Note: *VFR traffic requesting transit of the Southampton CTR routeing west-east or east-west can expect clearance subject to traffic as follows:*

West Route:	Bishops Waltham VRP - VOR SAM -Romsey VRP;
East Route:	Romsey VRP - VOR SAM - Bishops Waltham VRP.

Transit will be subject to ATC clearance.

EGHI AD 2.23 ADDITIONAL INFORMATION

(a) Solent/Southampton Radar and Southampton Tower may be provided as a combined function. Periods when active will be notified by ATIS. SRA not available.

EGHI AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGHI-2-1

Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO

AD 2-EGHI-2-2

EGHI AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: CONTROL ZONE AND CONTROL AREA CHART

AD 2-EGHI-4-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

AD 2-EGHI-5-1

Figure: STANDARD ARRIVAL CHART - INSTRUMENT SAM 2A 1B 1C 1F - ICAO

AD 2-EGHI-7-1

Figure: B-RNAV STAR SAM 1E 1G

AD 2-EGHI-7-2

Figure: RNAV5 (DME/DME or GNSS) STANDARD ARRIVAL CHART - INSTRUMENT SAM 2D - ICAO

AD 2-EGHI-7-3

Figure: STANDARD ARRIVAL CHART - INSTRUMENT NEDUL 1A - ICAO

AD 2-EGHI-7-4

Figure: STANDARD INSTRUMENT ARRIVAL AND RNAV HOLD CODING TABLES SAM 2D, RUDMO HOLD, SAM HOLD

AD 2-EGHI-7-5

Figure: INSTRUMENT APPROACH CHART SRA RTR 2 NM RWY 02 (CAT A, B, C) - ICAO

AD 2-EGHI-8-1

Figure: INTENTIONALLY BLANK

AD 2-EGHI-8-2

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 02 (CAT A, B, C) - ICAO

AD 2-EGHI-8-3

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 02 (CAT A, B, C) - ICAO

AD 2-EGHI-8-4

Figure: INSTRUMENT APPROACH CHART (IAF VOR SAM) ILS/DME RWY 20 (CAT A, B, C) - ICAO

AD 2-EGHI-8-5

Figure: INSTRUMENT APPROACH CHART (IAF VOR SAM) LOC/DME RWY 20 (CAT A, B, C) - ICAO

AD 2-EGHI-8-6

Figure: INSTRUMENT APPROACH CHART (IAF NDB(L) EAS) ILS/DME RWY 20 (CAT A, B, C) - ICAO

AD 2-EGHI-8-7

Figure: INSTRUMENT APPROACH CHART (IAF NDB(L) EAS) LOC/DME RWY 20 (CAT A, B, C) - ICAO

AD 2-EGHI-8-8

Figure: INSTRUMENT APPROACH CHART SRA RTR 2NM RWY 20 (CAT A, B, C) - ICAO

AD 2-EGHI-8-9

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 20 (CAT A, B) - ICAO

AD 2-EGHI-8-10

Figure: INSTRUMENT APPROACH CHART NDB(L)/DME RWY 20 (CAT A, B, C) - ICAO

AD 2-EGHI-8-11

Figure: INSTRUMENT APPROACH CHART VOR/DME 183° TO AERODROME (CAT C) - ICAO

AD 2-EGHI-8-12

EGMC AD 2.22 FLIGHT PROCEDURES (continued)

(i) Arrivals and Overflights are to establish communications with ATC at least 5 minutes prior to the boundary of Southend CTA/CTR whenever possible, stating what type of ATC service they request whilst outside CAS. Pilots should be aware that IFR clearances to enter Southend CAS may be lower than the published upper levels due to the interface with LTMA traffic.

(ii) IFR Departures planning to leave Southend CAS that have not filed a flight plan are required to book out either with the FBO in person or via telephone, or with ATC via telephone. Pilots will be expected to supply their initial track or routing and the service they may require outside CAS.

2 Radio Communications Failure Procedures - IFR Flights

In the event of complete radio communication failure in an aircraft, the pilot is to adopt the appropriate procedure described at ENR 1.1 sub-section 3.4, then:

(a) Inbound aircraft – follow the Southend STARs and proceed as below:

(i) SPEAR arrivals from the north and northwest:

Leave MAYLA direct SND descending to 3000 ft level by the SND and carry out an ILS approach to Southend.

(ii) GEGMU arrivals from the east and south - Runway 23: Leave GEGMU and carry out an ILS approach to Runway 23.

(iii) GEGMU arrivals from the east and south - Runway 05: Leave GEGMU direct SND descending to 3000 ft level by the SND and carry out an ILS approach to Runway 05.

(iv) Unless advised by ATC, pilots shall regard Danger Areas D136/D138/D138A/D138B as active and shall avoid them accordingly.

(b) Outbound aircraft

(i) For the purposes of radio failure, the climb to flight planned level should be commenced after the last position shown in the Preferred Departure Routes where an altitude is specified.

3 IFR Holding

(a) The holding pattern 'SND' is located overhead the airport NDB. Below 3000 ft it is only available for Category A to C aircraft. The lowest available hold for Category D aircraft at the SND is 3000 ft.

(b) London Control may instruct use of alternative holding facilities for traffic inbound to Southend – this will usually be at reporting points SANDY (from the south), LOGAN (from the east or north) or LOREL (from the northwest).

4 Procedures for VFR Flights

(a) VFR flight in the CTR/CTAs will be given a routing, and where necessary, altitude instructions in order to integrate with other flights.

(b) Pilots should anticipate routing instructions in relation to the Visual Reference Points (VRPs) detailed in paragraph 6.

(c) Pilots of VFR flights are reminded of the requirement to remain in VMC at all times and to advise ATC if at any time they are unable to comply with the level or routing clearance as issued.

(d) **VFR Arrivals and Overflights**

(i) Arrivals and overflights are advised to establish communications with Southend Approach at least 5 minutes prior to ETA for the Southend CTA/CTR boundary.

(ii) Pilots wishing to make a Standard Overhead Join are to request this on initial contact.

(iii) Pilots are advised that instrument approaches and departures may on occasion be flown that do not conform to the runway in use.

(e) **VFR Departures**

(i) If a flight plan has not been filed pilots are required to book out either with the FBO in person or via telephone, or with ATC via telephone. Pilots will be expected to supply their initial track or routing.

5 Special VFR Flight

(a) Clearance may be requested for Special VFR flight in IMC or at night within the Southend Control Zone and will be given whenever the traffic situation permits. These flights are subject to the general conditions laid down for Special VFR flights (ENR 1.2 refers).

(b) Special VFR clearance will include routing and maximum altitude instructions. Pilots holding a Private Pilots Licence (Aeroplanes) are reminded of the visibility requirements of Special VFR flights laid down in Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 (Standardised European Rules of the Air, SERA.5010) and in the related notification at ENR 1.4 paragraph 2.4.1.1, note 3.

(c) Pilots are reminded that when operating on Special VFR clearance, they must at all times remain clear of cloud and with the surface in sight and in flight conditions which will enable them to determine their flight path and keep clear of obstacles.

EGMC AD 2.22 FLIGHT PROCEDURES (continued)

(d) Radar vectoring will not normally be applied to aircraft operating on a Special VFR clearance. Pilots are reminded that a Special VFR clearance applies only to flights within the CTR and does not extend to flight within the surrounding airspace.

(e) Special VFR clearance will not normally be granted for flights operating in VMC, nor to flights operating at a speed of greater than 140 kts IAS.

(f) Pilots operating under SVFR should be aware that aircraft may be flying VFR within the Stoke LFZ (see 7(a)). Pilots will be provided with generic traffic information.

6 Visual Reference Points (VRP)

(a) Visual Reference Points are established for use by aerodrome and en-route traffic as follows:

VRP Name	Lat/Long	VOR/DME Fix	Description
Billericay	513800N 0002500E	LAM 094°/9.9 nm	Lake Meadows Park
South Woodham Ferrers	513841N 0003606E	LAM 090°/16.8 nm	Sewage Works
Northey Island	514320N 0004319E	CLN 245°/17.6 nm	East of Maldon, in river Black-water
Southminster	513928.00N 0004949.00E	CLN 226°/16.5 nm	Lakes
Whitstable Harbour	512148N 0010136E	DVR 314°/17.4 nm	
Southend Pier	513054N 0004319E	DET 021°/13.51 nm	Seaward end, Cultural Centre
Sheerness	512649N 0004441E	DET 033°/10.2 nm	Docks
Gateway Port	513017N 0003011E	DET 344°/12.6 nm	London Gateway Port

7 Fixed Wing, Hang-Gliding, Paragliding and Microlight Activity - Southend CTR/CTA

(a) **Stoke LFZ** Microlight and fixed wing activity takes place under VFR during daylight hours at an unlicensed aerodrome at Middle Stoke. Use of the Stoke LFZ is strictly controlled by a Letter of Agreement (LOA) between Southend and Medway Microlights. The Stoke Local Flying Zone (LFZ) is defined as the airspace from the surface up to 1500 ft amsl (based on Southend QNH or Stoke QFE) including that portion of the Southend CTR defined by straight lines between the following co-ordinates:
512853.8068N 0003829.4708E - 512840.8108N 0004044.2613E - 512820.4312N 0004212.9641E - 512718.6516N 0003955.1293E - 512700.6588N 0003629.8230E thence clockwise by the arc of a circle radius 7.5 nm centred on 513357.327N 0004059.963E to 512730.17N 0003454.14E - 512852.75N 0003756.66E - 512853.8068N 0003829.4708E. The Stoke LFZ is Class D airspace.

Pilots operating to or from Stoke must be fully briefed by Medway Microlights and must comply with the Stoke LFZ LOA.

Generic traffic information will be provided to aircraft in communication with Southend as appropriate.

(b) Para-motors and powered para-gliders sometimes operate during daylight hours under VFR in an area to the west of Canewdon from the surface to 800 ft amsl. This area is within the Southend CTR and is defined by straight lines between the co-ordinates: 514053N 0004239E (CTR boundary) - 513659N 0004218.50E - 513658N 0004207E - 513852.50N 0003811E (CTR boundary). Traffic information will be provided when necessary. Contact Southend Airport ATC for further information.

(c) Sports and Recreational Aviation activity sometimes operate during daylight hours under VFR at the following unlicensed private sites located within the Southend CTR:

Barling - 513407N 0004742E
Burnham - 513734N 0005059E
St. Lawrence - 514124N 0004914E
Tillingham - 514133N 0005222E

Entry clearance to the Southend CTR must be obtained from Southend Approach/Radar via RTF.

EGMC AD 2.23 ADDITIONAL INFORMATION

1 Mode S Barometric Pressure Setting Data

(a) London Terminal Control has the ability to downlink Mode S Barometric Pressure Setting (BPS) data. Therefore, if the downlinked pressure data is at variance with the BPS expected by Air Traffic Control, pilots can expect additional challenge. When Air Traffic Control pass a reminder of the appropriate BPS, it is anticipated that the aircrew will cross check the altimeter settings and confirm set.

EGPB — SUMBURGH

EGPB AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGPB — SUMBURGH

EGPB AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 595253N Long: 0011738W Mid-point of 09/27.
2	Direction and distance from city	17 nm S of Lerwick.
3	Elevation / Reference temperature	21 ft / 14 C
4	Geoid undulation at AD ELEV PSN	161 FT
5	Magnetic Variation/ Annual Change	2.13°W (2017) / 0.19°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	HIGHLANDS AND ISLANDS AIRPORTS LTD. Post: Sumburgh Airport, Virkie Shetland, ZE3 9JP. Phone: 01950-461000 (HIAL) Phone: 01950-461008 (ATC) Fax: 01950-460218 (HIAL) Fax: 01950-460718 (ATC) Email: sumbatc@hial.co.uk URL: www.hial.co.uk/sumburgh-airport/
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	

EGPB AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	Winter: Mon-Fri 0730-2015; Sat 0800-1630; Sun 1045-1945. Summer: Mon-Fri 0630-1915; Sat 0700-1515; Sun 1000-1900.
2	Customs and Immigration	By arrangement with ATC or by request from Loganair.
3	Health and sanitation	On request.
4	AIS Briefing Office	As aerodrome hours.
5	ATS Reporting Office (ARO)	As aerodrome hours.
6	MET Briefing Office	As aerodrome hours.
7	Air Traffic Service	See AD 2.18.
8	Fuelling	Winter: Mon-Fri 0700-2000; Sat 0730-1630; Sun 1030-1700. Summer: Mon-Fri 0600-1900; Sat 0630-1500; Sun 0930-1600.
9	Handling	By arrangement.
10	Security	Winter: Mon-Fri 0630-2030; Sat 0730-1645; Sun 1000-2000. Summer: Mon-Fri 0530-1930; Sat 0630-1515; Sun 0915-1915.
11	De-icing	
12	Remarks	Request for extension of hours should be made to Sumburgh ATC 01950-461008.

EGPB AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	Limited.
2	Fuel and oil types	AVTUR JET A-1 AVGAS 100LL
3	Fuelling facilities/capacity	
4	De-icing facilities	Available through Loganair.
5	Hangar space for visiting aircraft	Limited and only by arrangement with HIAL.
6	Repair facilities for visiting aircraft	
7	Remarks	Pilots not using a resident handling agent must ensure that all relevant airport documentation is completed upon initial arrival. Such documentation may be obtained from security or HIAL administration staff. Fuel supplied by North Air. Tel: 01950-460367, Fax: 01950-460182.

EGPB AD 2.5 PASSENGER FACILITIES

1	Hotels	Hotels in Sumburgh and Lerwick.
2	Restaurants	Buffet, bar.
3	Transportation	Buses, Taxis and Car Hire.
4	Medical facilities	Limited first aid.
5	Bank and Post Office	
6	Tourist Office	Lerwick.
7	Remarks	

EGPB AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A5
2	Rescue equipment	Water rescue facilities are available for Runway 09/27 and Helicopter Runway 06/24 during published opening hours. Special and on call openings subject to serviceability of equipment and times when the weather conditions and sea state are conducive to such rescue operations.
3	Capability for removal of disabled aircraft	Nil at Airport. MTWA: 30,000 kg using external sources available on the main island.
4	Remarks	**RFF Category 6** available at other times on request.

EGPB AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical, Chemical de-icing, Sanding/Gritting
2	Clearance priorities	Runways, taxiways, Aprons.
3	Remarks	Latest information from: ATC 01950-461008.

EGPB AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	TERMINAL EAST Surface: Concrete. PCN 29/R/B/W/T TERMINAL WEST Surface: Concrete. PCN 16/R/B/W/T
2	Taxiway width, surface and strength	Taxiway NORTH: 18 m. Surface: Asphalt. PCN 20/F/B/X/T Taxiway SOUTH: 15 m. Surface: Concrete and asphalt. PCN 31/F/B/X/T Taxiway EAST: 15 m. Surface: Concrete. PCN 29/R/B/W/T Taxiway CHARLIE: 18 m. Surface: Asphalt. PCN 20/F/B/X/T
3	Altimeter checkpoint location and elevation	Apron 19 FT
4	VOR checkpoints	
5	INS checkpoints	
6	Remarks	

EGPB AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
RAD	SUMBURGH RADAR	131.300 MHz Radar services for both Approach Radar and offshore sectors.	Winter: 0700-2130 Summer: 0600-2030	CTR/CTA/ATZ hours coincident with Tower hours, but **not** by arrangement. This service is provided by NATS Aberdeen.
		123.150 MHz Standby frequency not continuously monitored	Winter: 0700-2130 Summer: 0600-2030	
TWR	SUMBURGH TOWER	118.250 MHz DOC 30 nm/10,000 ft.	Winter: Mon-Fri 0730-2015; Sat 0800-1630; Sun 1045-1945; and by arrangement. Summer: Mon-Fri 0630-1915; Sat 0700-1515; Sun 1000-1900; and by arrangement.	
ATIS	SUMBURGH INFORMATION	125.850 MHz	Winter: Mon-Fri 0730-2015; Sat 0800-1630; Sun 1045-1945; and by arrangement. Summer: Mon-Fri 0630-1915; Sat 0700-1515; Sun 1000-1900; and by arrangement.	
Other	SUMBURGH FIRE CHIEF	121.600 MHz Non-ATS Frequency	Available when Fire vehicle attending aircraft on the ground in an emergency.	

EGPB AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS/DME NOCAT 2.13°W (2017)	SUB	108.500 MHz	HO	595257.13N 0011721.99W		(RWY 09) Ignore any glidepath indications observed. The Localizer is offset 2.2° south of the extended RCL and intercepts at 1400 m from THR 09. Localizer only
ILS/DME I 2.13°W (2017)	ISG	108.500 MHz	HO	595248.41N 0011812.41W		(RWY 27) The Localizer is offset 2.6° north of the extended RCL and intercepts at 723 m from THR 27.
ILS/DME/GP	ISG	329.900 MHz	HO	595256.78N 0011721.21W		3° ILS Ref Datum Hgt 54 ft.
DME	SUB	22X 108.500 MHz	HO	595256.71N 0011738.05W	27 ft	SUB (RWY 09) On AD. DME freq paired with ILS I SG and SUB. Zero range indicated at THR of Runway 09 and 27.
NDB (L)	SBH	351.000 kHz	HO	595256.55N 0011741.40W		On AD. Range 25 nm.
DME	ISG	22X 108.500 MHz	HO	595256.71N 0011738.05W	27 ft	I SG (RWY 27) On AD. DME freq paired with ILS I SG and SUB. Zero range indicated at THR of Runway 09 and 27.
DME/VOR	SUM	120Y	H24	595243.52N 0011711.52W	84 ft	See ENR 4.1.

EGPB AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) All aircraft are required to request start up from ATC.

(b) Pilots are reminded that all flights wishing to depart Sumburgh must, in accordance with the requirements of Class D airspace, notify ATC. This may be in the form of a filed flight plan or contact with Sumburgh ATS via landline prior to departure.

2 Ground Movement

(a) The centre-line of the northern taxiway is diverted to the south side of the 46m wide pavement. The edge of the usable taxiway (width 18 m) is marked by blue edge lights and blue reflective markers. Green reflective studs mark the centre-line. Pilots are reminded to adhere to the marked centre-line. A separate vehicle route is marked on the north side of part of the northern taxiway.

(b) No ground signals except light signals.

(c) Aircraft Parking

(i) Sumburgh operates a parking policy which considers: customs requirements, duration of stay and type of flight. Aircraft may be marshalled or required to reposition due to operational requirements.

(ii) Helicopters will be allocated spots by ATC. Helicopters that require to shutdown should inform Sumburgh Tower at the earliest opportunity, they may be required to reposition to a remote part of the apron.

(d) Use of Sumburgh aerodrome is subject to standard Terms and Conditions of Use, which can be requested from the aerodrome.

(e) Full ATC clearance is available from EOBT - 15 minutes.

3 CAT II/III Operations

Not applicable

4 Warnings

(a) During strong wind conditions turbulence may be expected on approach to, or climb out from, any runway.

(b) Bird colonies are active throughout the year, particularly during the nesting season. Concentrations of birds may be encountered in the vicinity of cliffs and beaches and over the sea.

(c) A coastguard and support helicopter operates from Sumburgh and will be given appropriate priority over other traffic when operating on search and rescue duties. These operations may take place throughout the 24 hour period using the call sign 'Coastguard Rescue'.

(d) Unlit mast erected on Scousburgh Hill, 5 nm north of the aerodrome approx imate height 220 ft agl, 1085 ft amsl.

(e) Pilots will observe that a main road crosses the Runway 09 undershoot immediately before the painted threshold. A barrier system closes the public road. These barriers must be closed before any fixed wing aircraft can land or depart.

5 Helicopter Operations

(a) Helicopters are treated as fixed-wing traffic and should normally ground taxi, unless skid equipped between the runways and parking areas. In adverse weather conditions and during snow clearing operations, air taxiing may be permitted by ATC. Only one helicopter at any one time may air taxi on any one apron. Pilots may request an air taxi if required.

(b) Rotors running refuelling of helicopters with passengers on board is only permitted during exceptionally severe wind conditions, and with the permission of ATC. Rotors-running refuelling is only permitted on helicopter spots 4, 5, 6, 7, 8. Spot 4 may only be used by S92s for rotors-running refuelling in exceptional circumstances.

6 Use of Runways

(a) With the exception of helicopters, night landings are not permitted on Runways 15 and 33 except in an emergency. Night take-offs from Runways 15 and 33 are restricted to operators with procedures accepted by the Civil Aviation Authority.

(b) The helicopter Runway 06/24 is not to be used by fixed-wing aircraft.

(c) More than one runway may be lighted, and in use, at any one time.

(d) Except for locally based SAR helicopters, out of hours indemnity is not permitted.

(e) The thresholds of Runways 09 and 27 are positioned 135 and 120 m respectively from concrete sea-defenses and the open sea.

(f) RVR Conditions

(i) Runway 09/27. Except where an AOC holder has a less restrictive State authorised take-off minima, departures in RVR conditions of less than 400 m are not permitted.

EGBC AD 3.11 METEOROLOGICAL INFORMATION PROVIDED (continued)

2	Hours of service MET Office outside hours	
3	Office responsible for TAF preparation Periods of validity	
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	
6	Flight documentation Language(s) used	
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	
10	Additional information (limitation of service, etc.)	

EGBC AD 3.12 HELIPORT DATA

1	Heliport type	Level surface.
2	TLOF dimensions	
3	FATO, GEO bearing	32: 318.00° 14: 138.00°
4	FATO dimensions and surface type	14/32: 230 x 30 m Surface: Grass. Undulating surface.
5	TLOF surface and bearing strength	Surface: Grass. all stands are short grass.
6	Co-ordinates of geometric centre TLOF or threshold of FATO	TLOF 515533.00N 0020315.70W FATO 32: FATO 14:
7	TLOF and/ or FATO elevation and slope	TLOF 200 ft.
8	Safety area dimensions	5 x 0 m.
9	Helicopter clearway dimensions	32: Clearway 400 x 40 m. 14: Clearway 400 x 40 m.
10	Obstacle-free sector	
11	Remarks	**TLOF Dimensions:** 5 grass stands, 16 m diameter. Application is normally made for this heliport to be licensed for the Cheltenham Festival Meeting held in mid March. Details of any licensed operations carried out from this heliport will be advised by NOTAM.

EGBC AD 3.13 DECLARED DISTANCES

Declared distance	TODAH	RTODAH	LDAH	Remarks
1	**2**	**3**	**4**	**5**
14	230 m	230 m	230 m	
32	230 m	230 m	230 m	

EGBC AD 3.14 APPROACH AND FATO LIGHTING

1	Approach lighting system type, length, intensity	
2	Type of visual approach slope indicator system	

EGBC AD 3.14 APPROACH AND FATO LIGHTING (continued)

3	FATO area lighting characteristics and location	32: Edge Low intensity amber edge lights. 14: Edge Low intensity amber edge lights.
4	Aiming point lighting characteristics and location	32: Aiming point Low intensity green. 14: Aiming point Low intensity green.
5	TLOF lighting system characteristics and location	TLOF: Low intensity red stop bars.
6	Remarks	

EGBC AD 3.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	Heliport BCN location, characteristics and hours of operation	
2	WDI location and lighting	
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	
5	Remarks	

EGBC AD 3.16 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	**2**	**3**	**4**	**5**	**6**
					Restricted Airspace (Temporary), radius 3 nm SFC - 2500 ft amsl, is established for the duration of the Cheltenham Gold Cup Meeting. Details are published in an AIC. At other times Nil.

EGBC AD 3.17 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	**2**	**3**	**4**	**5**
				0945 - 2015 hours. After 2015 hours by arrangement. ATC is provided for the annual Cheltenham Festival Meeting (March). Other times Nil

EGBC AD 3.18 RADIO NAVIGATION AND LANDING AIDS

EGBC AD 3.19 LOCAL TRAFFIC REGULATIONS

1 Heliport Regulations

(a) All operators will be required to provide an insurance indemnity in advance of landing at this helicopter aerodrome. This indemnity is in standard form and is available from Helicopter and Aviation Services Ltd.

(b) Heliport not available to helicopters unable to communicate by radio.

(c) Prior to using the Heliport pilots must obtain a briefing from Helicopter and Aviation Services Limited.

(d) ATC permission is required for engine start.

EGKG AD 3.12 HELIPORT DATA

1	Heliport type	Level Surface.
2	TLOF dimensions	
3	FATO, GEO bearing	05: 050.00° 13: 130.00°
4	FATO dimensions and surface type	05/23: 240 x 30 m 13/31: 360 x 30 m
5	TLOF surface and bearing strength	
6	Co-ordinates of geometric centre TLOF or threshold of FATO	
7	TLOF and/ or FATO elevation and slope	
8	Safety area dimensions	
9	Helicopter clearway dimensions	
10	Obstacle-free sector	
11	Remarks	Application is normally made for this heliport to be licensed for the main Goodwood racecourse meeting held in July/August. Details of any licensed operations carried out from this heliport will be advised by Supplement/NOTAM.

EGKG AD 3.13 DECLARED DISTANCES

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EGKG AD 3.14 APPROACH AND FATO LIGHTING

1	Approach lighting system type, length, intensity	
2	Type of visual approach slope indicator system	
3	FATO area lighting characteristics and location	
4	Aiming point lighting characteristics and location	
5	TLOF lighting system characteristics and location	
6	Remarks	

EGKG AD 3.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	Heliport BCN location, characteristics and hours of operation	
2	WDI location and lighting	
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	
5	Remarks	

EGKG AD 3.16 AIR TRAFFIC SERVICES AIRSPACE

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EGKG AD 3.17 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

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EGKG AD 3.18 RADIO NAVIGATION AND LANDING AIDS

EGKG AD 3.19 LOCAL TRAFFIC REGULATIONS

1 Heliport Regulations

(a) All operators will be required to provide an insurance indemnity in advance of landing at this helicopter aerodrome. This indemnity is in standard form and is available from Goodwood Road Racing Company Ltd.

2 Ground Movement

Not applicable

3 Warnings

(a) A 12 m high observation platform is located in the Northwest segment of the aerodrome well clear of the designated runway areas.

(b) Trees 5 m in height are just outside the site boundaries on the North and East sides and the site is enclosed by 1.3 m high fences.

4 Training

Not applicable

EGKG AD 3.20 NOISE ABATEMENT PROCEDURES

Not applicable

EGKG AD 3.21 FLIGHT PROCEDURES

1 Arriving/Departing Helicopters

(a) Pilots approaching/departing should avoid overflying the Course, Grandstand, Caravan Park, Paddock and Stable areas.

(b) Pilots are advised that Chichester/Goodwood aerodrome (EGHR) will be active with a high level of circuit activity. Helicopters are to avoid this ATZ and should adhere to the routeing instructions given.

EGKG AD 3.22 ADDITIONAL INFORMATION

Not applicable

EGKG AD 3.23 CHARTS RELATED TO A HELIPORT

EGNP — LEEDS HELIPORT

EGNP AD 3.1 HELIPORT LOCATION INDICATOR AND NAME

EGNP — LEEDS HELIPORT

EGNP AD 3.2 HELIPORT GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	Heliport reference point coordinates and site at AD	Lat: 535241N Long: 0013944W
2	Direction and distance from city	6.5 nm NW of Leeds.
3	Elevation / Reference temperature	673 ft / 18 C
4	Geoid undulation at AD ELEV PSN	163 FT
5	Magnetic Variation/ Annual Change	1.37°W (2017) / 0.16°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	HELIJET AVIATION Post: Leeds Heliport, Coney Park, Harrogate Road, Leeds LS19 7XS. Phone: 0113-2500588 Fax: 0113-2508161
7	Type of Traffic permitted (IFR/VFR)	VFR
8	Remarks	

EGNP AD 3.3 OPERATIONAL HOURS

1	Heliport Operator	Winter: Mon - Sun 0900-1700 out of hours by prior arrangement only. Summer: Mon - Sun 0800-1600 out of hours by prior arrangement only.
2	Customs and Immigration	
3	Health and sanitation	
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	
7	Air Traffic Service	24 hours service from Leeds Bradford (EGNM) Leeds Radar 134.575 MHz, Leeds Tower 120.300 MHz, ATIS 118.025 MHz.
8	Fuelling	Winter: Mon - Sun 0900-1700 out of hours and 'Rotors Running Re-fuelling' by prior arrangement only. Summer: Mon - Sun 0800-1600 out of hours and 'Rotors Running Re-fuelling' by prior arrangement only.
9	Handling	
10	Security	
11	De-icing	
12	Remarks	Strictly **PPR** only.

EGNP AD 3.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	
2	Fuel and oil types	AVGAS 100LL JET A-1 15w/50 (Aero DM) Turbine 254
3	Fuelling facilities/capacity	AVGAS 100LL: Static Bowser 4,500 lt, Mobile Bowser 2,200 lt AVTUR JET A-1 Static Bowser 11,000 lt, Mobile Bowser 2,200 lt
4	De-icing facilities	
5	Hangar space for visiting helicopter	
6	Repair facilities for visiting helicopter	
7	Remarks	Any operator believing they will uplift 1000+ lt of AVTUR JET A-1 during re-fuelling are to advise staff when booking in with Heli-Jet.

EGNP AD 3.5 PASSENGER FACILITIES

1	Hotels	In the vicinity
2	Restaurants	In the vicinity
3	Transportation	Bus and Taxi services, train station 3 miles
4	Medical facilities	First Aid
5	Bank and Post Office	In the vicinity
6	Tourist Office	In the vicinity
7	Remarks	Tea, coffee and other light refreshments available at the heliport between 0900 - 1700

EGNP AD 3.6 RESCUE AND FIRE FIGHTING SERVICES

1	Heliport category for fire fighting	
2	Rescue equipment	As required to meet Category Special H.
3	Capability for removal of disabled helicopter	Nil.
4	Remarks	**RFF Category H Special.** RFF coverage for visiting training aircraft by arrangement only.

EGNP AD 3.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Limited.
2	Clearance priorities	
3	Remarks	White Initial Aiming Point (IAP) Triangle.

EGNP AD 3.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron/ helicopter stands surface and strength	Helicopter Stands; H1 short grass with reinforced plastic grating, H2 and H3 short grass over firm soil Surface. H4 short grass with reinforced plastic grating (for R22/R44 re-fuelling only). H5 concrete square pad for Jet A-1 re-fuelling.
2	Ground taxiway width, surface and designation	
3	Air taxiway width and designation	
4	Altimeter checkpoint location and elevation	673 ft amsl at IAP Triangle.
5	VOR checkpoints	
6	INS checkpoints	
7	Remarks	

EGNP AD 3.9 MARKINGS AND MARKERS

1	Final approach and take-off markings	FATO : White Initial Aiming Point (IAP) Triangle.
2	Taxiway, air taxiway and air transit route markers	
3	Remarks	4 White and Orange Marker boards depicting uneven/unsafe terrain

EGNP AD 3.10 HELIPORT OBSTACLES

EGNP AD 3.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	

EGNP AD 3.11 METEOROLOGICAL INFORMATION PROVIDED (continued)

2	Hours of service MET Office outside hours	
3	Office responsible for TAF preparation Periods of validity	
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	
6	Flight documentation Language(s) used	
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	
10	Additional information (limitation of service, etc.)	

EGNP AD 3.12 HELIPORT DATA

1	Heliport type	Civilian Onshore Heliport.
2	TLOF dimensions	H1: H2: H3: H4: 4 x 4 m H5: 13 x 13 m
3	FATO, GEO bearing	
4	FATO dimensions and surface type	The heliport consists of a grass field with approximate dimensions of 155 x 250 m, with an IAP positioned at its centre, as such the whole field constitutes a FATO of dimensions of 135 x 225 m with a 13 m clearway in all directions.
5	TLOF surface and bearing strength	H1: Surface: Grass. With re-enforced plastic grating. H2: Surface: Grass. Over firm soil. H3: Surface: Grass. Over firm soil. H4: Surface: Grass. With re-enforced plastic grating (AVGAS refuelling pad) H5: Surface: Concrete. (Jet A1 re-fuelling pad)
6	Co-ordinates of geometric centre TLOF or threshold of FATO	FATO 535241N 0013944W
7	TLOF and/ or FATO elevation and slope	2 degree gradient West to East over entire FATO.
8	Safety area dimensions	
9	Helicopter clearway dimensions	Clearway 13 m clearway in all directions.
10	Obstacle-free sector	
11	Remarks	Departure and arrivals are purely at pilots discretion, taking into consideration wind direction, proximity of Leeds Bradford Aerodrome and noise sensitive areas **TLOF dimensions**: H1, H2, H3 10 m diameter. **Obstacle free sector**: 135 x 225m

EGNP AD 3.13 DECLARED DISTANCES

Declared distance	TODAH	RTODAH	LDAH	Remarks
1	**2**	**3**	**4**	**5**
				See AD 3.12.4

EGNP AD 3.14 APPROACH AND FATO LIGHTING

1	Approach lighting system type, length, intensity	
2	Type of visual approach slope indicator system	
3	FATO area lighting characteristics and location	
4	Aiming point lighting characteristics and location	Aiming point White IAP triangle lit with 6 medium intensity white lights.
5	TLOF lighting system characteristics and location	
6	Remarks	

EGNP AD 3.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	Heliport BCN location, characteristics and hours of operation	
2	WDI location and lighting	
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	
5	Remarks	

EGNP AD 3.16 AIR TRAFFIC SERVICES AIRSPACE

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EGNP AD 3.17 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

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EGNP AD 3.18 RADIO NAVIGATION AND LANDING AIDS

EGNP AD 3.19 LOCAL TRAFFIC REGULATIONS

1 Heliport Regulations

Not applicable

2 Ground Movement

Not applicable

3 Warnings

(a) Leeds Heliport is situated within the Leeds Bradford (EGNM) CTZ Class D Airspace.

(b) Trees to an elevation of 50ft at West South-West perimeter/boundary line. Dry stone wall to an elevation of 4ft at Northern perimeter/boundary line. Hedges to an elevation of 5ft at Eastern perimeter/boundary line.

(c) Trees to an elevation of 50ft at West South-West perimeter/boundary line.

(d) Dry stone wall to an elevation of 4ft at Northern perimeter/boundary line.

(e) Hedges to an elevation of 5ft at Eastern perimeter/boundary line.

4 Helicopter Operations

Not applicable

5 Training

Not applicable

EGNP AD 3.20 NOISE ABATEMENT PROCEDURES

(a) Avoid over flying large green warehouse structure 150m east south-east of Leeds Heliport.

(b) Avoid over flying East Carlton village, situated 500m North North-West of Leeds Heliport.

(c) Avoid over flying the stables and kennels 500m North of Leeds Heliport.

(d) Avoid over flying the cattery and caravan site 650m East of Leeds Heliport.

EGNP AD 3.21 FLIGHT PROCEDURES

1 Arrivals

(a) Leeds Heliport is situated within the Leeds Bradford (EGNM) CTZ Class D Airspace. Contact MUST be made with Leeds Bradford Radar on 134.575 MHz prior to entering the CTA to obtain clearance to enter the zone stating Leeds Heliport (Coney Park) as destination. Radar will issue a zone entry clearance and will hand over to Tower once you are visual with the heliport.

EGNP AD 3.22 ADDITIONAL INFORMATION

Not applicable

EGNP AD 3.23 CHARTS RELATED TO A HELIPORT

Figure: Helicopter Chart - ICAO

AD 3-EGNP-2-1

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EGLW AD 3.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	
2	Hours of service MET Office outside hours	
3	Office responsible for TAF preparation Periods of validity	
4	Trend forecast Interval of issuance	
5	Briefing/consultation provided	
6	Flight documentation Language(s) used	
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	
10	Additional information (limitation of service, etc.)	

EGLW AD 3.12 HELIPORT DATA

1	Heliport type	Surface Level or Elevated depending on tidal state of River Thames (see AD 3.12.11 Remarks below).
2	TLOF dimensions	38 x 16 m
3	FATO, GEO bearing	023.31°
4	FATO dimensions and surface type	Surface: Concrete. 11.4 m diameter.
5	TLOF surface and bearing strength	Surface: Concrete. Platform. 16330 kg.
6	Co-ordinates of geometric centre TLOF or threshold of FATO	TLOF 512811.75N 0001046.34W
7	TLOF and/ or FATO elevation and slope	TLOF 17.90 ft.
8	Safety area dimensions	
9	Helicopter clearway dimensions	Clearway River Thames.
10	Obstacle-free sector	Other River Thames.
11	Remarks	Tidal range of River Thames up to 7 m means heliport is 'elevated' for the majority of permitted operational hours (see Port of London Authority website (www.pla.co.uk) for Tide Tables and refer to entry for 'Chelsea' for local predicted tide states). Operators should ensure that they comply with the requirements for operating to an elevated heliport and, where appropriate, have been granted an approval by the competent aviation authority to do so.

EGLW AD 3.13 DECLARED DISTANCES

Declared distance	TODAH	RTODAH	LDAH	Remarks
1	**2**	**3**	**4**	**5**
02	38 m	38 m	38 m	
20	38 m	38 m	38 m	

EGLW AD 3.14 APPROACH AND FATO LIGHTING

1	Approach lighting system type, length, intensity	
2	Type of visual approach slope indicator system	
3	FATO area lighting characteristics and location	Other Yellow variable intensity perimeter lights. (4 stage intensity).
4	Aiming point lighting characteristics and location	Aiming point Soft sodium floodlighting.
5	TLOF lighting system characteristics and location	TLOF: Soft sodium floodlighting.
6	Remarks	

EGLW AD 3.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	Heliport BCN location, characteristics and hours of operation	
2	WDI location and lighting	Anemometer: 512812.06N 0001044.76W. Anemometer/Windsock: 512810.14N 0001046.05W (Illuminated Windsock with continuous red omni-directional obstruction light to mast)
3	TWY edge and centre line lighting	
4	Secondary power supply/switch-over time	
5	Remarks	

EGLW AD 3.16 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	**2**	**3**	**4**	**5**	**6**
LONDON HELIPORT ATZ A circle, 2 nm radius centred at 512812N 0001046W	Upper limit: 2000 ft Lower limit: SFC	D	BATTERSEA TOWER English		Local Flying Area see EGLW AD 3.21, paragraph 5. Within the London CTR. **Vertical limits:** See AD 3-EGLW-4-1 for maximum operating heights.

EGLW AD 3.17 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	**2**	**3**	**4**	**5**
TWR	BATTERSEA TOWER	134.275 MHz DOC 10 nm/3,000 ft	Winter: Mon-Fri 0730-1930 by arrangement 0700-0730, 1930-2300; Sat, Sun and PH 0800-1800; by arrangement 0700-0800, 1800-2300. Summer: Mon-Fri 0630-1830 by arrangement 0600-0630, 1830-2200; Sat, Sun and PH 0700-1700; by arrangement 0600-0700, 1700-2200.	ATZ hours co-incident with TWR hours.

EGLW AD 3.18 RADIO NAVIGATION AND LANDING AIDS

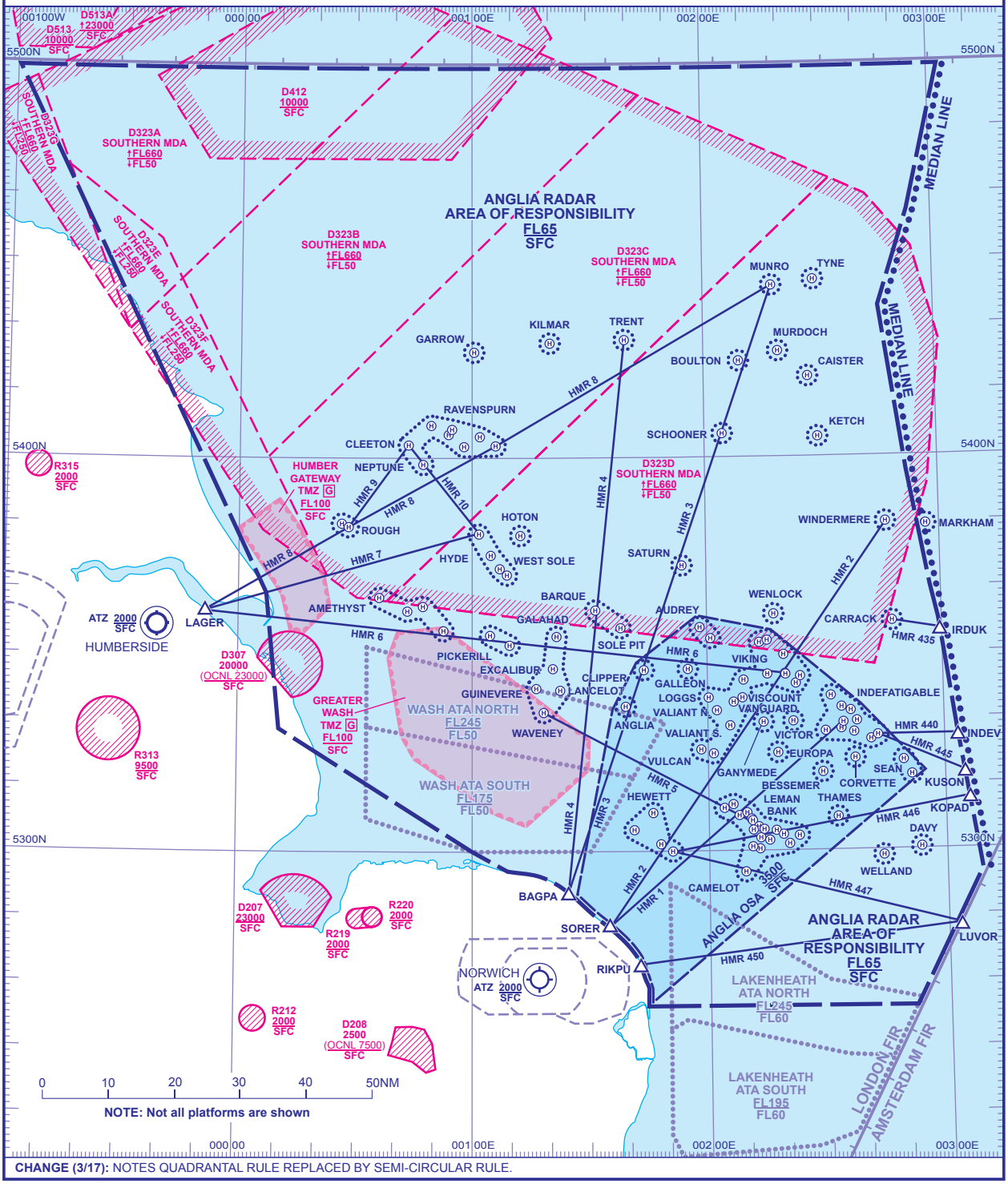
SOUTHERN NORTH SEA - ABERDEEN ATSU (ANGLIA RADAR) AREA OF RESPONSIBILITY AND ANGLIA OFFSHORE SAFETY AREA (OSA)

NOTES

1. All HMRs beneath EGD323C, EGD323D, EGD323F and the Lakenheath ATA North are restricted to FL40 unless cleared by Anglia Radar.
2. Helicopters will normally plan to fly at the following en-route altitudes:-

Outbound (land to sea)	Inbound (sea to land)
2000'ALT & 3000'ALT	1500'ALT & 2500'ALT

Above Transition Altitude (3000'ALT) aircraft should conform to Semi-circular Rule.

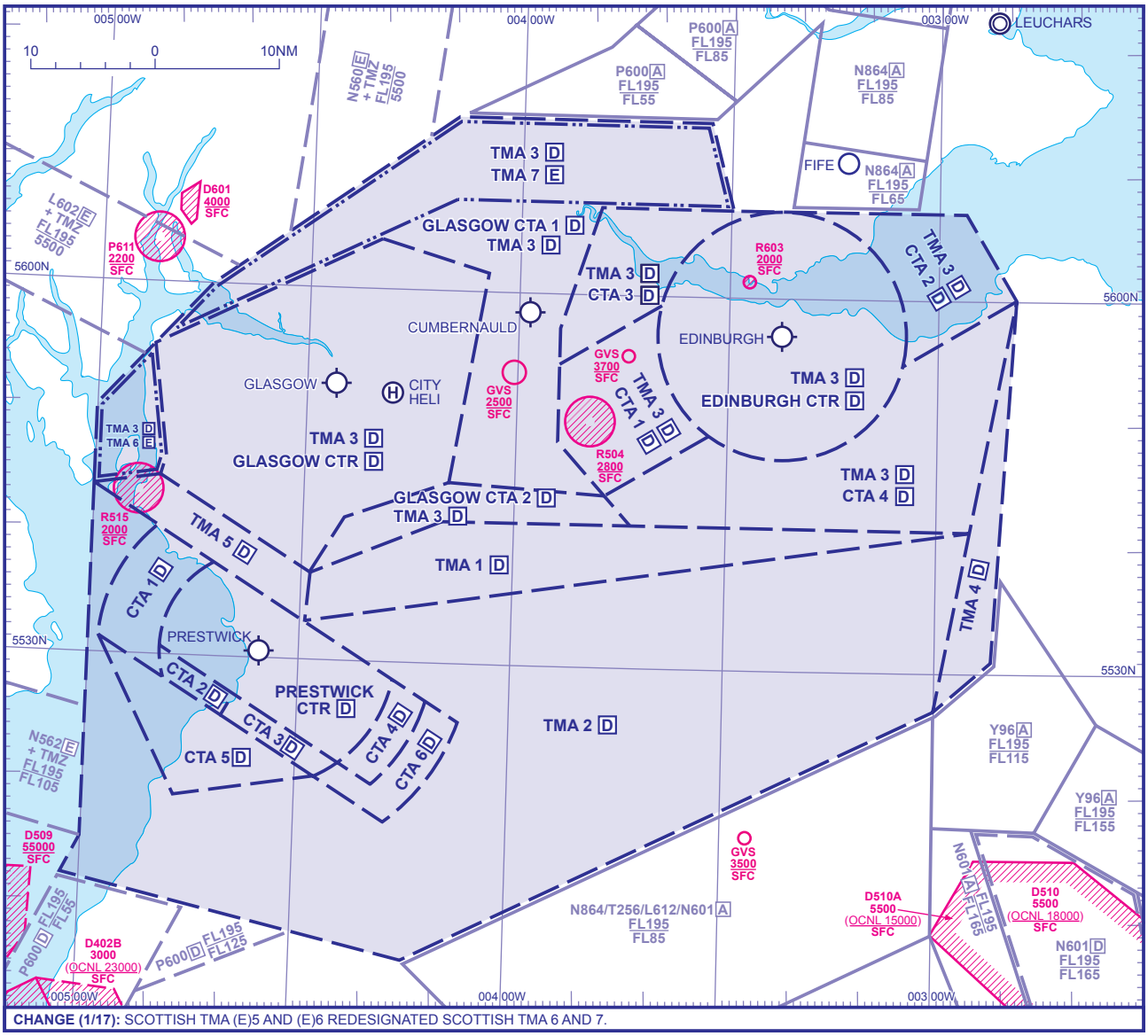


CHANGE (3/17): NOTES QUADRANTAL RULE REPLACED BY SEMI-CIRCULAR RULE.

AERO INFO DATE 30 NOV 16

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SCOTTISH TMA



CHANGE (1/17): SCOTTISH TMA (E)5 AND (E)6 REDESIGNATED SCOTTISH TMA 6 AND 7.

AERO INFO DATE 25 OCT 16

ATS AIRSPACE VERTICAL LIMITS Controlled airspace with an upper vertical limit of FL195 and above is not shown.

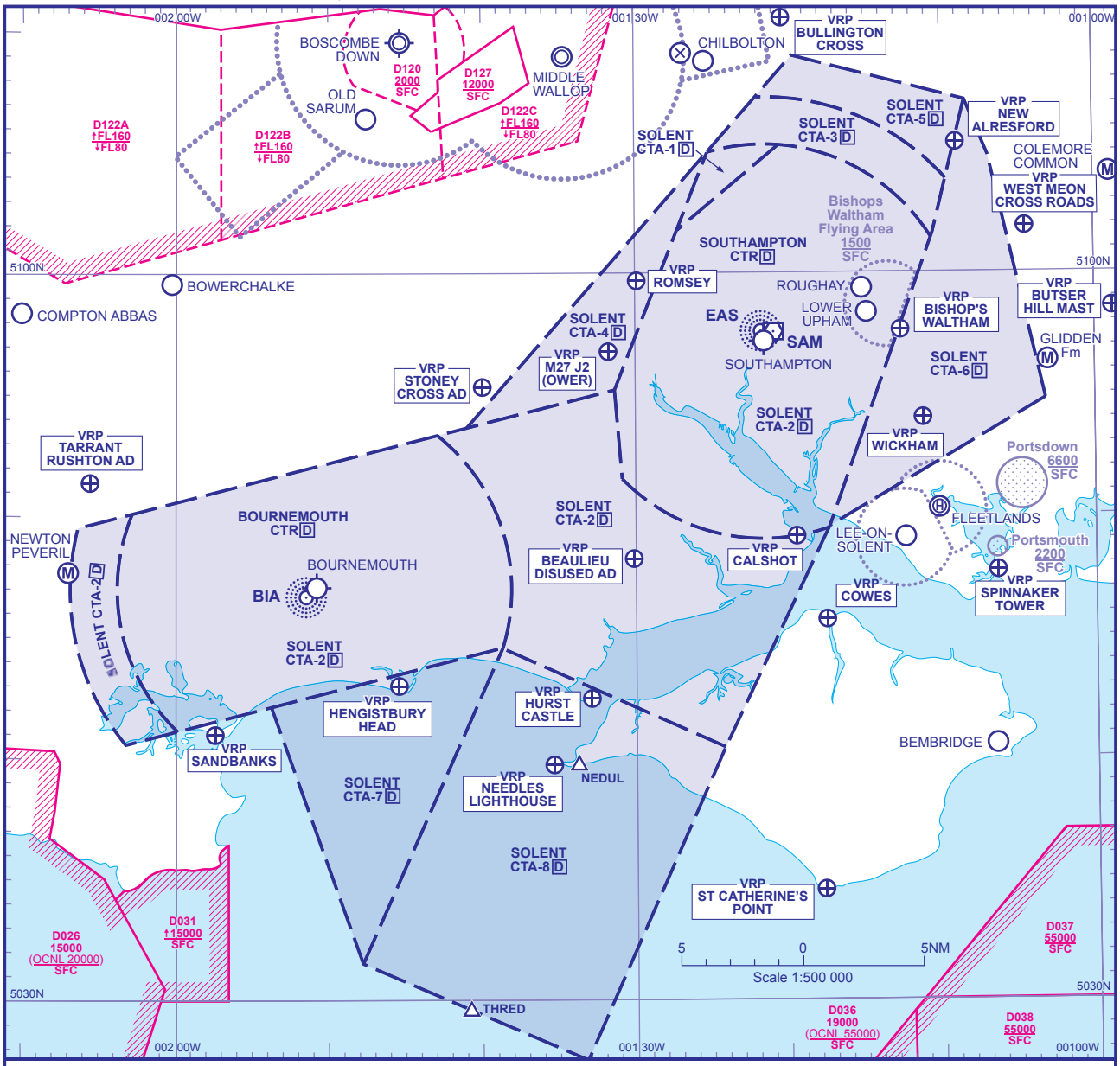
SCOTTISH			EDINBURGH			PRESTWICK			GLASGOW		
TMA-1	D	FL195 / 4500	CTR	D	6000 SFC	CTR	D	5500 SFC	CTR	D	6000 SFC
TMA-2	D	FL195 / 5500	CTA-1	D	6000 2500	CTA-1	D	5500 1500	CTA-1	D	6000 3000
TMA-3	D	FL195 / 6000	CTA-2	D	6000 2500	CTA-2	D	5500 2000	CTA-2	D	6000 3500
TMA-4	D	FL195 / 5500	CTA-3	D	6000 3500	CTA-3	D	5500 3000			
TMA-5	D	FL195 / 3500	CTA-4	D	6000 3500	CTA-4	D	5500 3000			
TMA-6	E	6000 / 3000				CTA-5	D	5500 3500			
TMA-7	E	6000 / 4000				CTA-6	D	5500 4000			

LATERAL LIMITS

See Scottish TMA ENR 2.1	See AD 2-EGPH 2.17	See AD 2-EGPK 2.17	See AD 2-EGPF 2.17

AIRWAYS Class A/D/E except within TMA.

SOLENT CTA, BOURNEMOUTH CTR & SOUTHAMPTON CTR



ATS AIRSPACE VERTICAL LIMITS Controlled airspace with a base in excess of **5500**ALT is not shown.

BOURNEMOUTH			SOUTHAMPTON			SOLENT					
CTR	D	2000 SFC	CTR	D	2000 SFC	CTA-1	D	5500 1500	CTA-6	D	5500 3000
						CTA-2	D	5500 2000	CTA-7	D	5500 3500
						CTA-3	D	5500 2000	CTA-8	D	5500 3500
						CTA-4	D	5500 2500			
						CTA-5	D	5500 2500			

LATERAL LIMITS

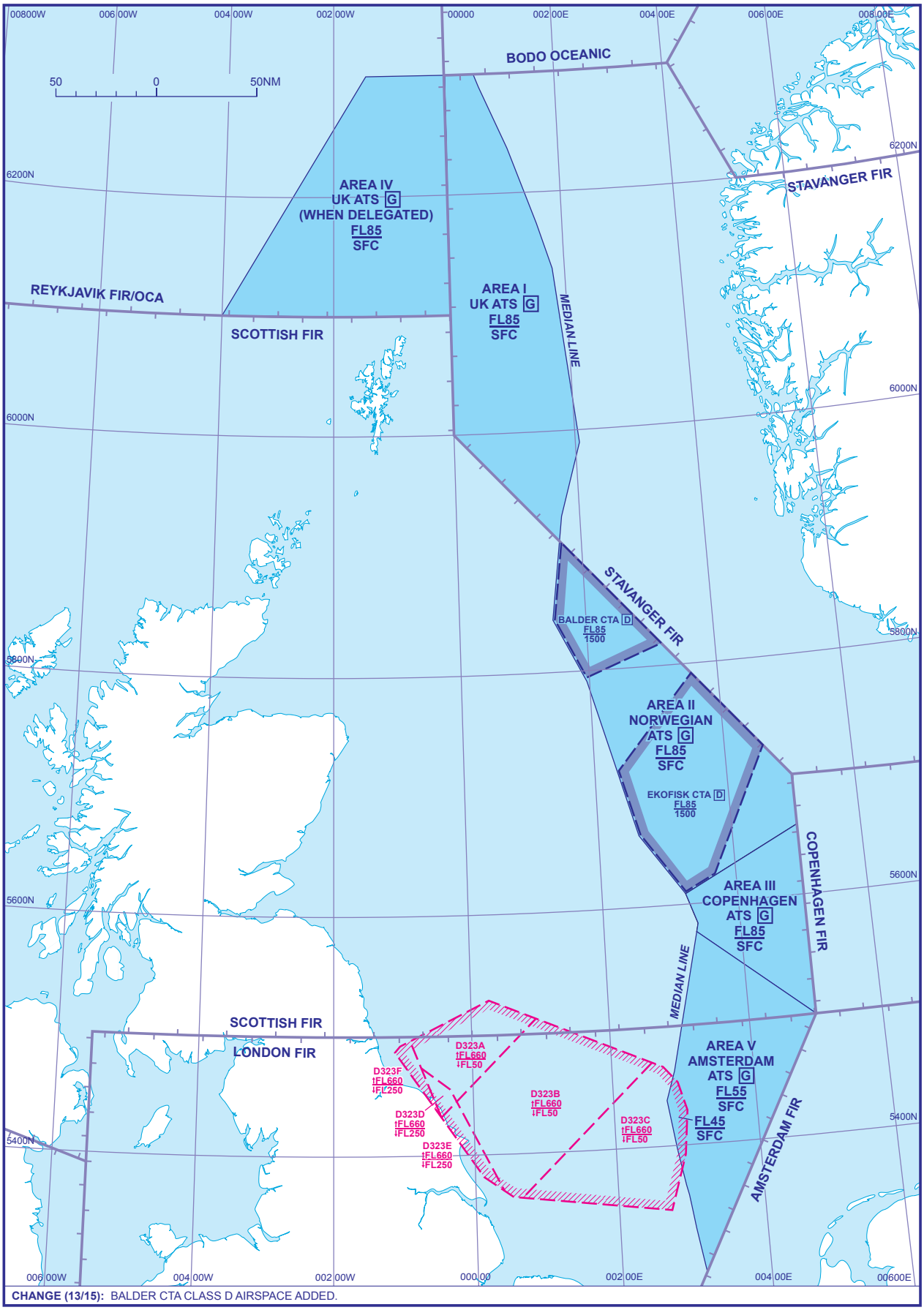
See AD 2-EGHH 2.17	See AD 2-EGHI 2.17	See Solent CTA ENR 2.1

For hours of operation see UK AIP ENR 2-1-9.

CHANGE (3/17): VISUAL REFERENCE POINTS AMENDED. LEE-ON-SOLENT & FLEETLANDS ATZs ADDED.

AERO INFO DATE 15 DEC 16

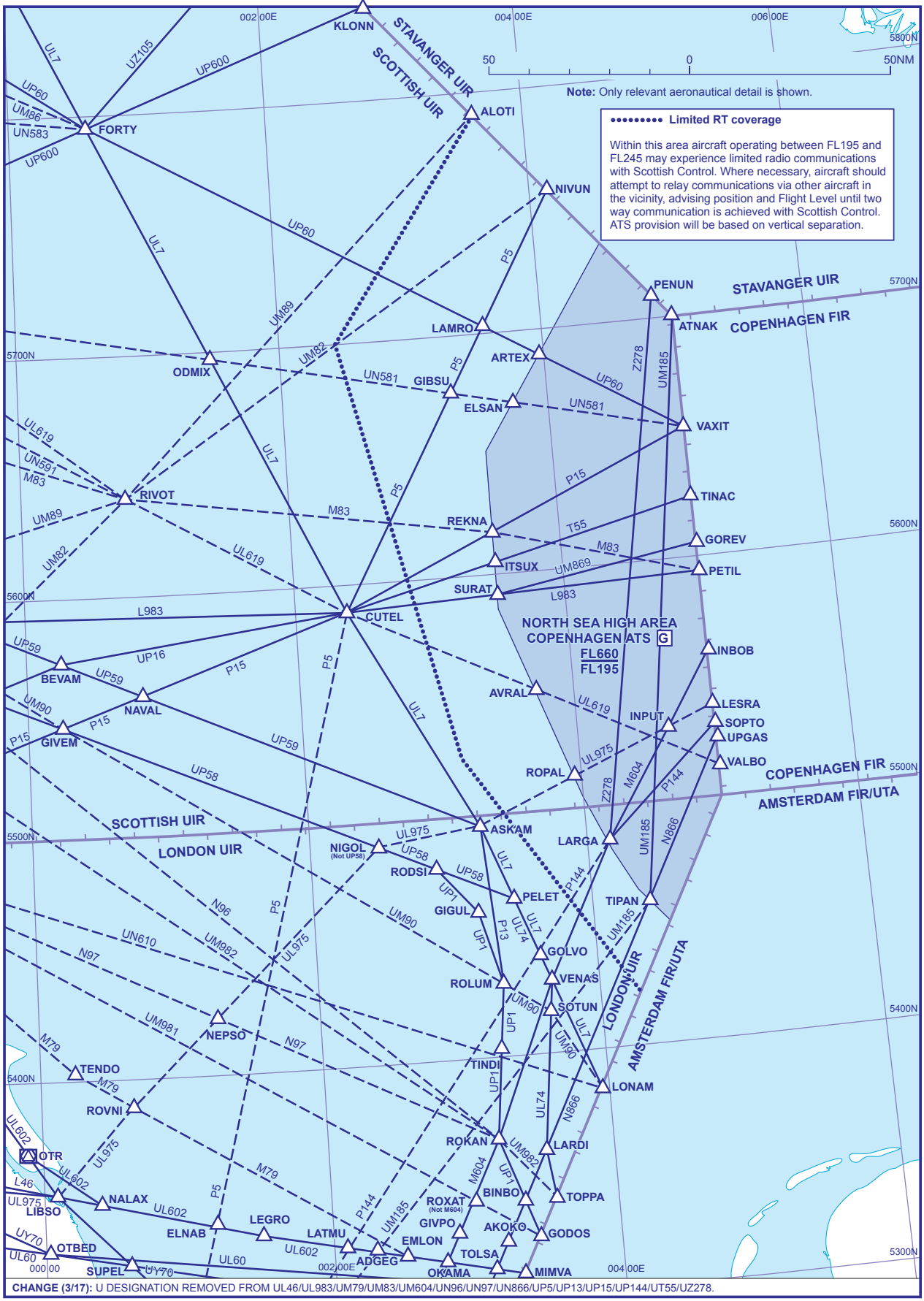
DELEGATION OF ATS RESPONSIBILITIES - WITHIN NORTH ATLANTIC AND NORTH SEA LOWER AIRSPACE



CHANGE (13/15): BALDER CTA CLASS D AIRSPACE ADDED.

AERO INFO DATE 9 SEP 15

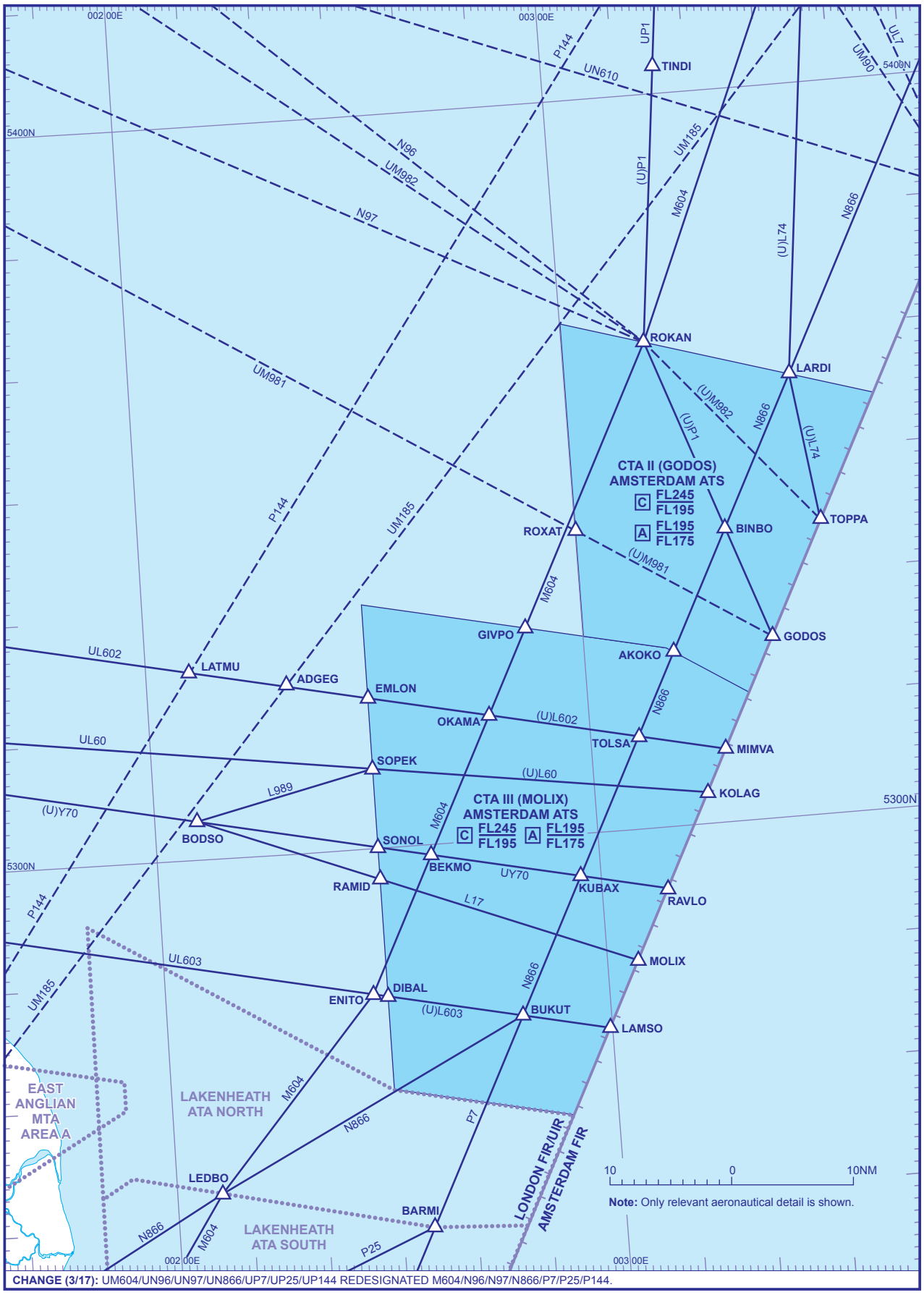
DELEGATION OF ATS RESPONSIBILITIES - WITHIN NORTH SEA UPPER AIRSPACE



CHANGE (3/17): U DESIGNATION REMOVED FROM UL46/UL983/UM79/UM83/UM604/UN96/UN97/UN866/UP5/UP13/UP15/UP144/UT55/UZ278.

AERO INFO DATE 14 DEC 16

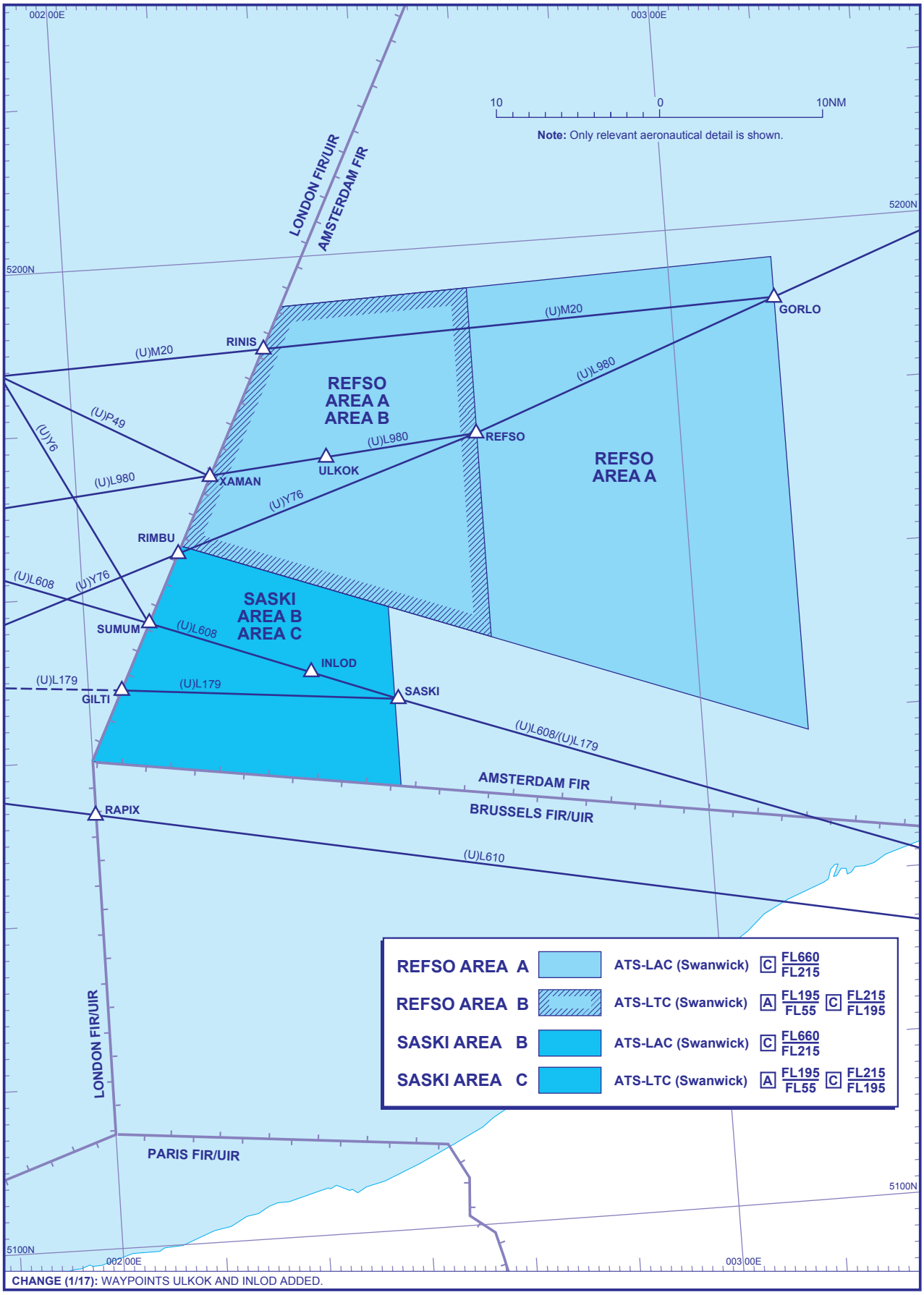
DELEGATION OF ATS RESPONSIBILITIES - WITHIN SOUTHERN NORTH SEA



CHANGE (3/17): UM604/UN96/UN97/UN866/UP7/UP25/UP144 REDESIGNATED M604/N96/N97/N866/P7/P25/P144.

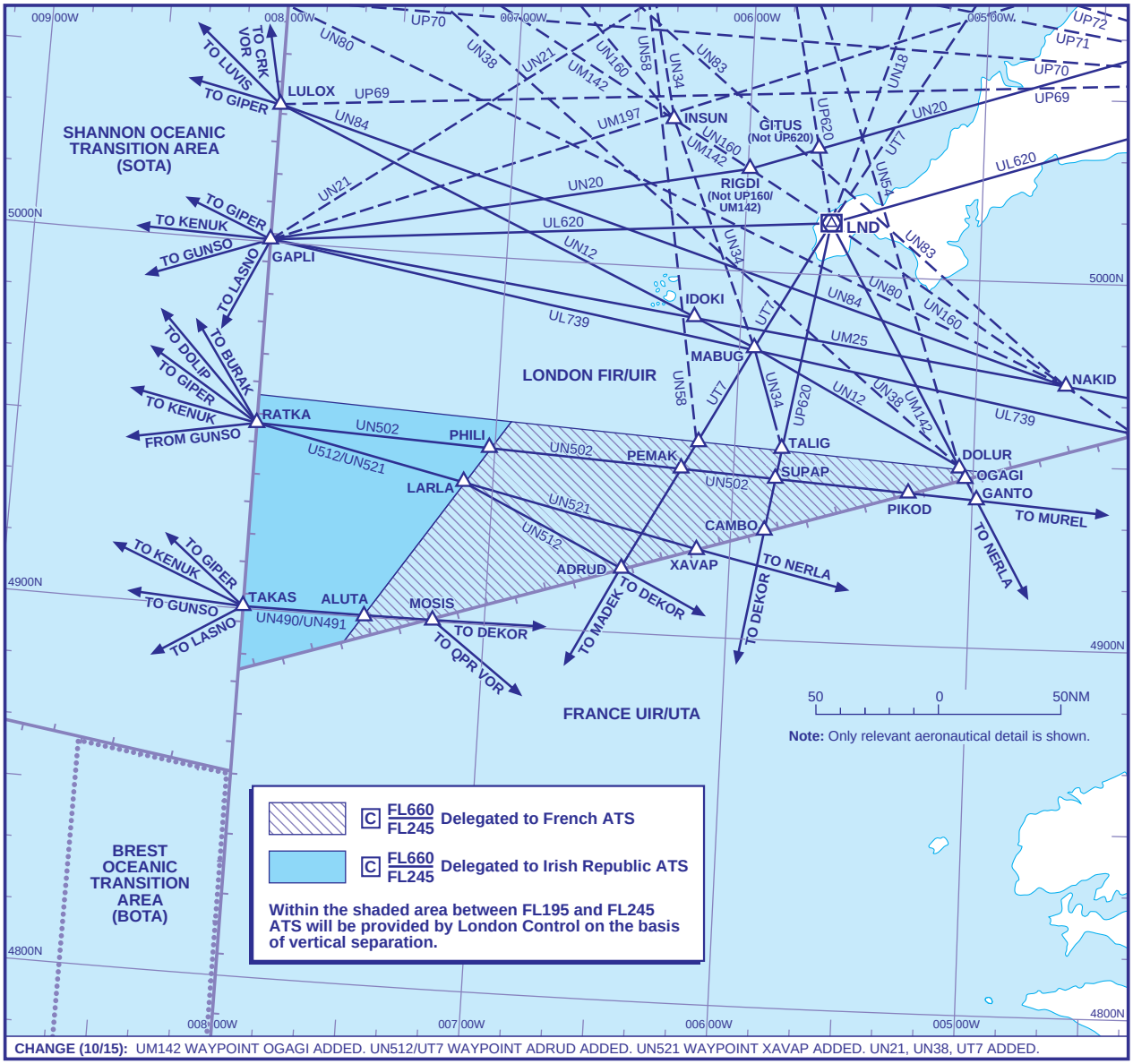
AERO INFO DATE 14 DEC 16

DELEGATION OF ATS RESPONSIBILITIES - WITHIN AREAS OF AMSTERDAM FIR



AERO INFO DATE 17 OCT 16

DELEGATION OF ATS RESPONSIBILITIES - WITHIN THE SOUTHWESTERN CORNER OF THE LONDON UIR



CHANGE (10/15): UM142 WAYPOINT OGAGI ADDED. UN512/UT7 WAYPOINT ADRUD ADDED. UN521 WAYPOINT XAVAP ADDED. UN21, UN38, UT7 ADDED.

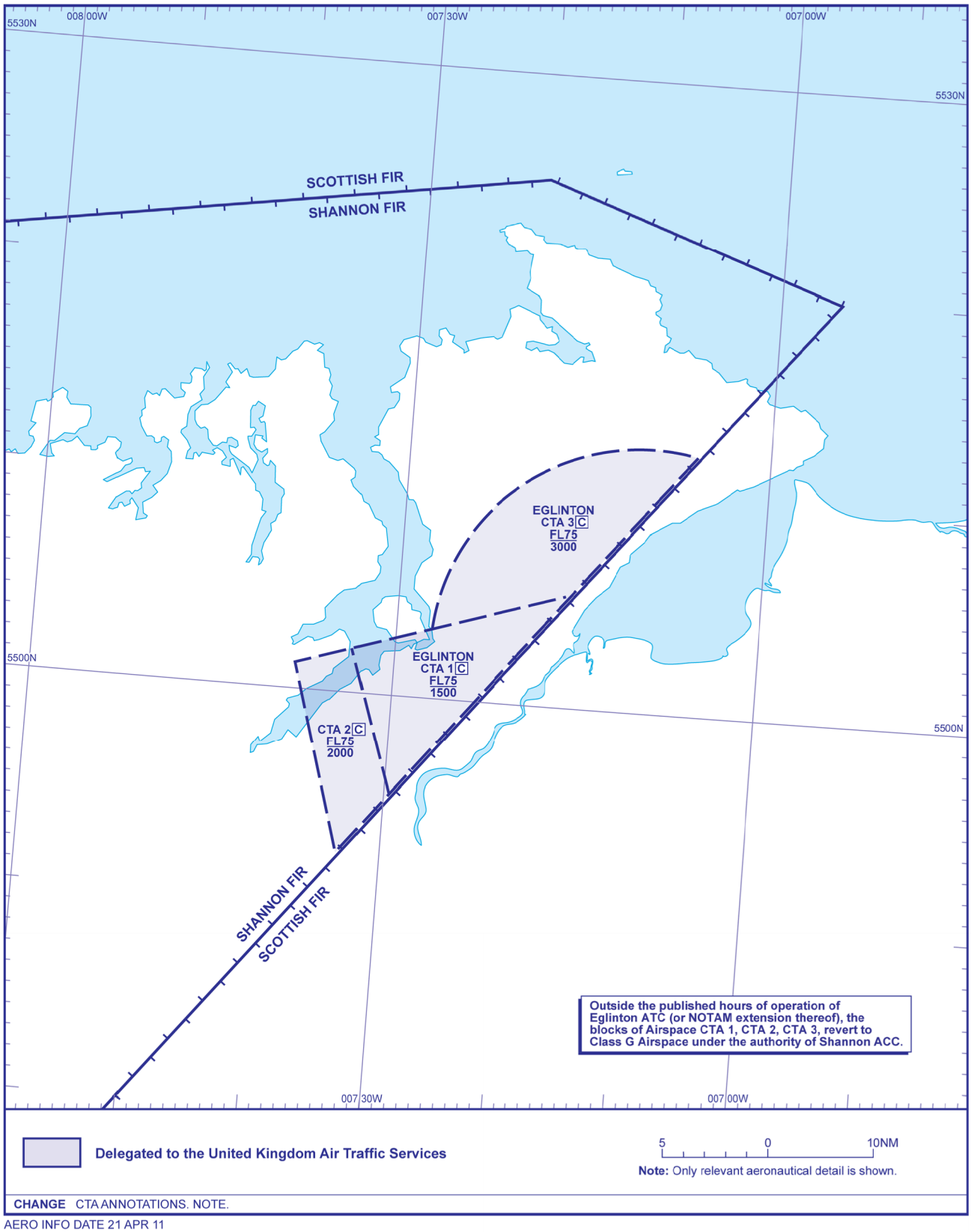
AERO INFO DATE 24 JUN 15

DELEGATION OF ATS RESPONSIBILITIES - WITHIN THE SHANNON UIR



AERO INFO DATE 14 DEC 16

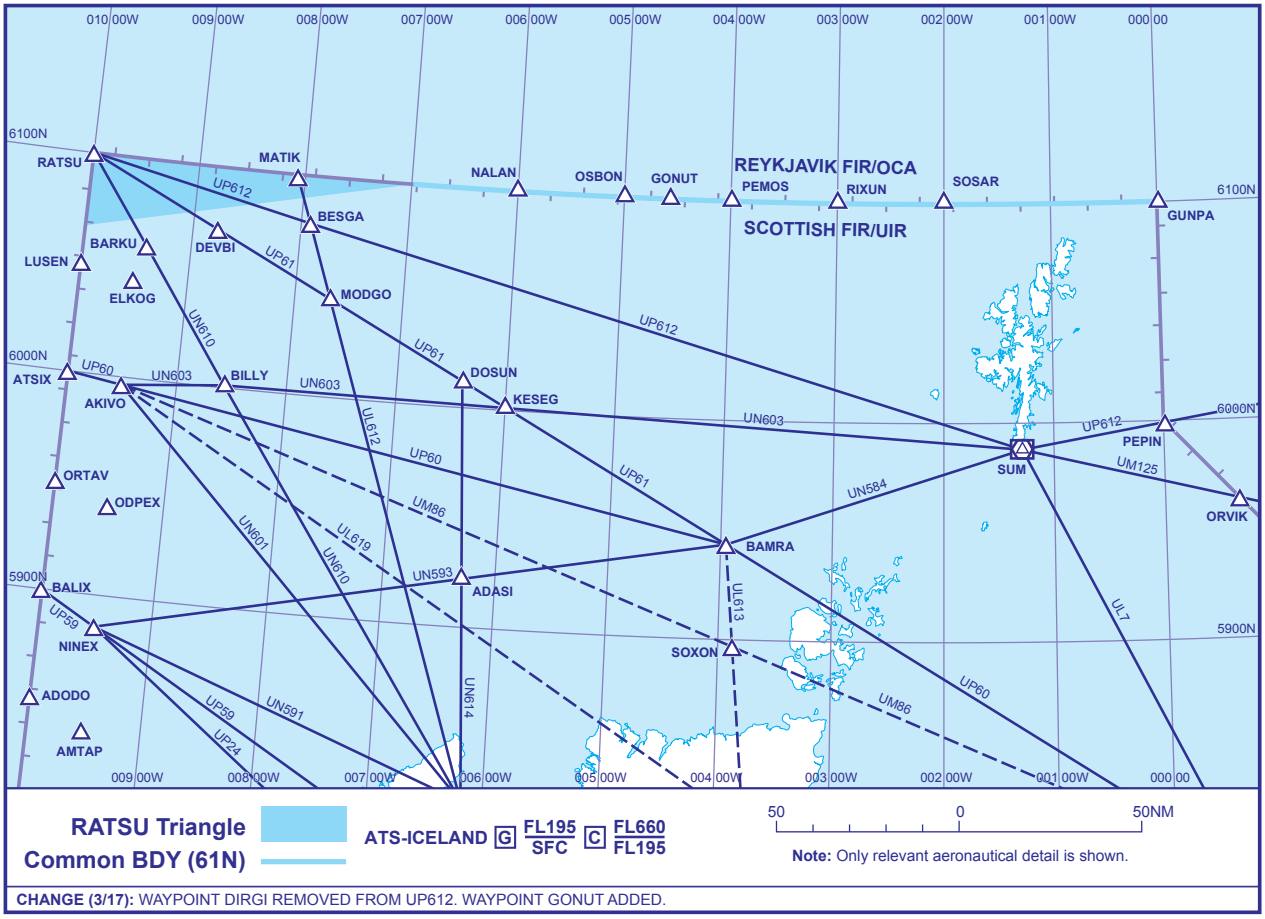
DELEGATION OF ATS RESPONSIBILITIES - WITHIN THE SHANNON FIR - EGLINTON CTA AREAS



CHANGE CTA ANNOTATIONS. NOTE.

AERO INFO DATE 21 APR 11

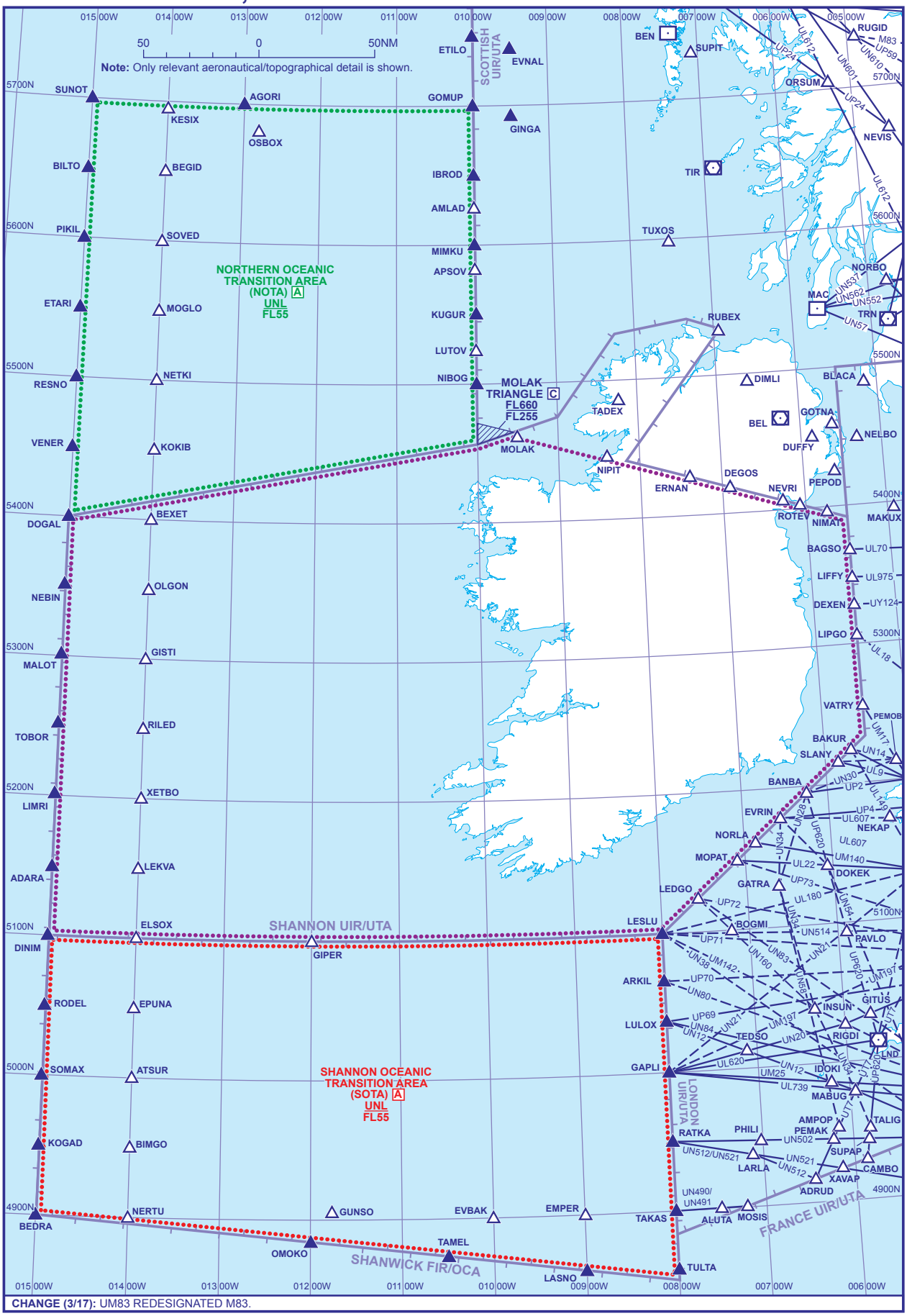
DELEGATION OF ATS RESPONSIBILITIES - WITHIN THE NORTHWESTERN CORNER OF THE SCOTTISH FIR/UIR AND ALONG THE COMMON SCOTTISH AND REYKJAVIK FIR/UIR BOUNDARY



CHANGE (3/17): WAYPOINT DIRGI REMOVED FROM UP612. WAYPOINT GONUT ADDED.

AERO INFO DATE 30 NOV 16

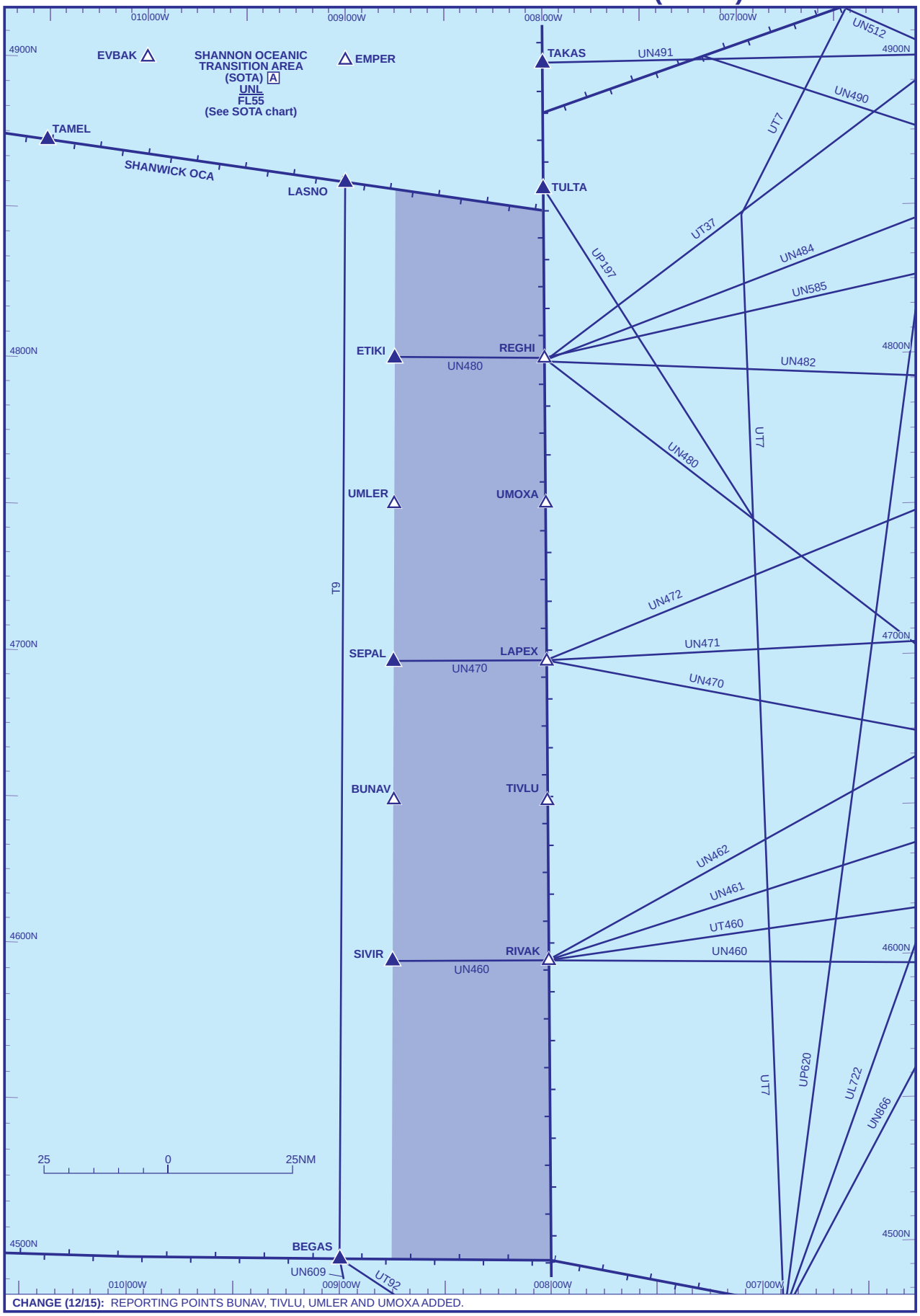
NOTA, SOTA AND SHANNON UPPER AIRSPACE



CHANGE (3/17): UM83 REDESIGNATED M83.

AERO INFO DATE 21 NOV 16

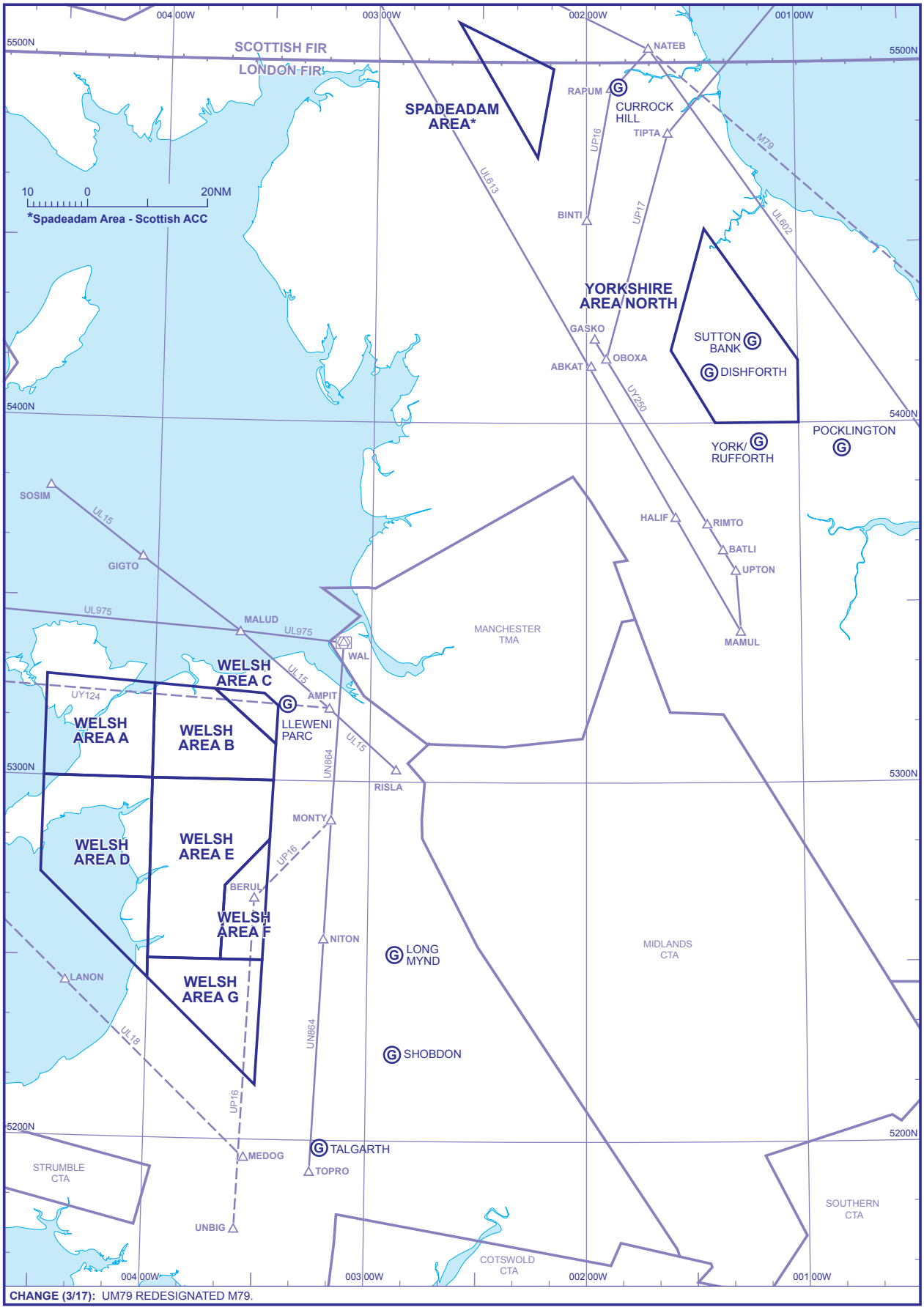
BREST OCEANIC TRANSITION AREA (BOTA)



CHANGE (12/15): REPORTING POINTS BUNAV, TIVLU, UMLER AND UMOXA ADDED.

AERO INFO DATE 27 AUG 15

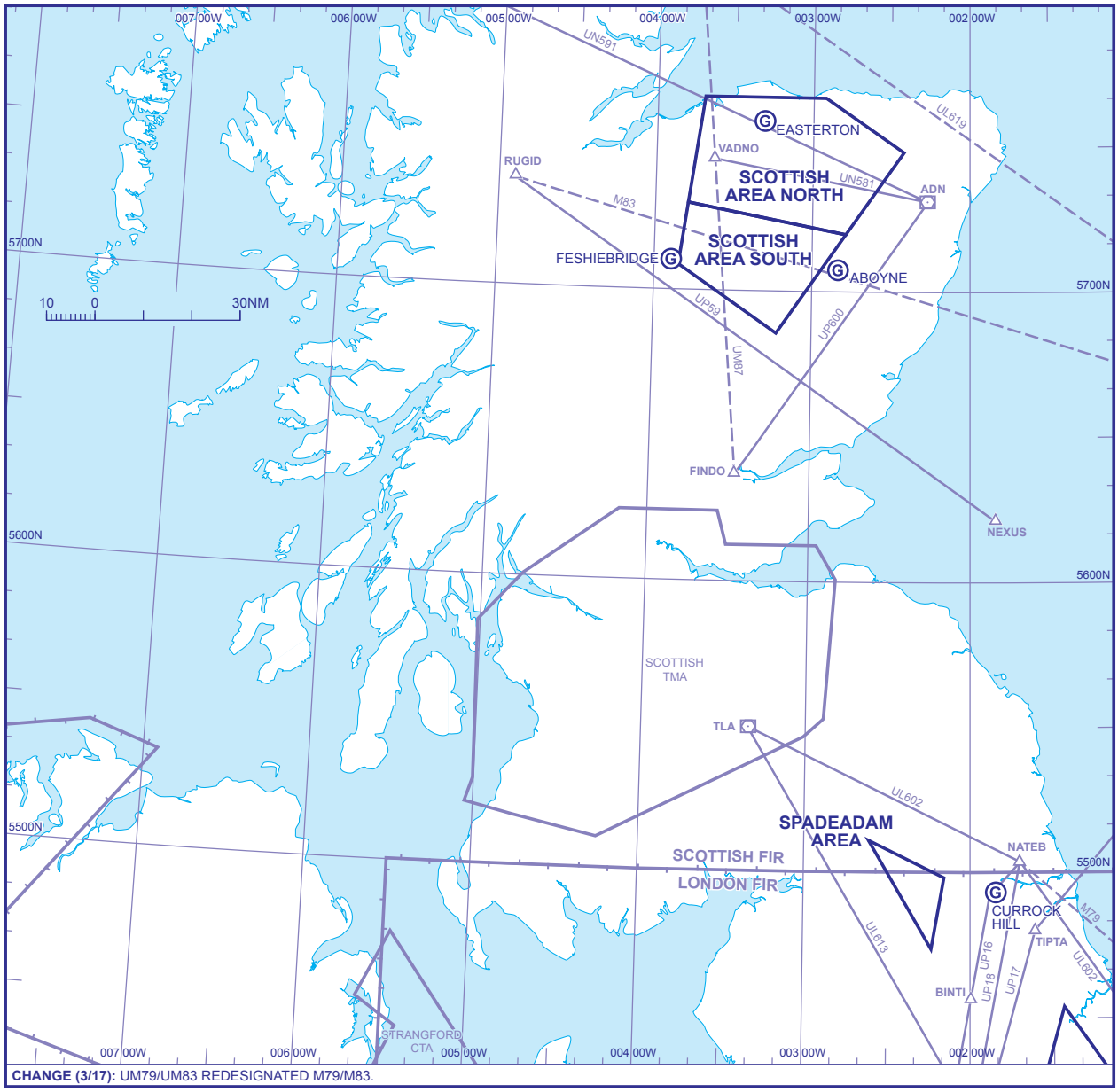
TEMPORARY RESERVED AREAS (GLIDING) IN CLASS C AIRSPACE ABOVE FL240 IN LONDON AREA CONTROL SWANWICK



CHANGE (3/17): UM79 REDESIGNATED M79.

AERO INFO DATE 21 NOV 16

TEMPORARY RESERVED AREAS (GLIDING) IN CLASS C AIRSPACE ABOVE FL240 IN THE SCOTTISH ACC AREA



AERO INFO DATE 14 DEC 16

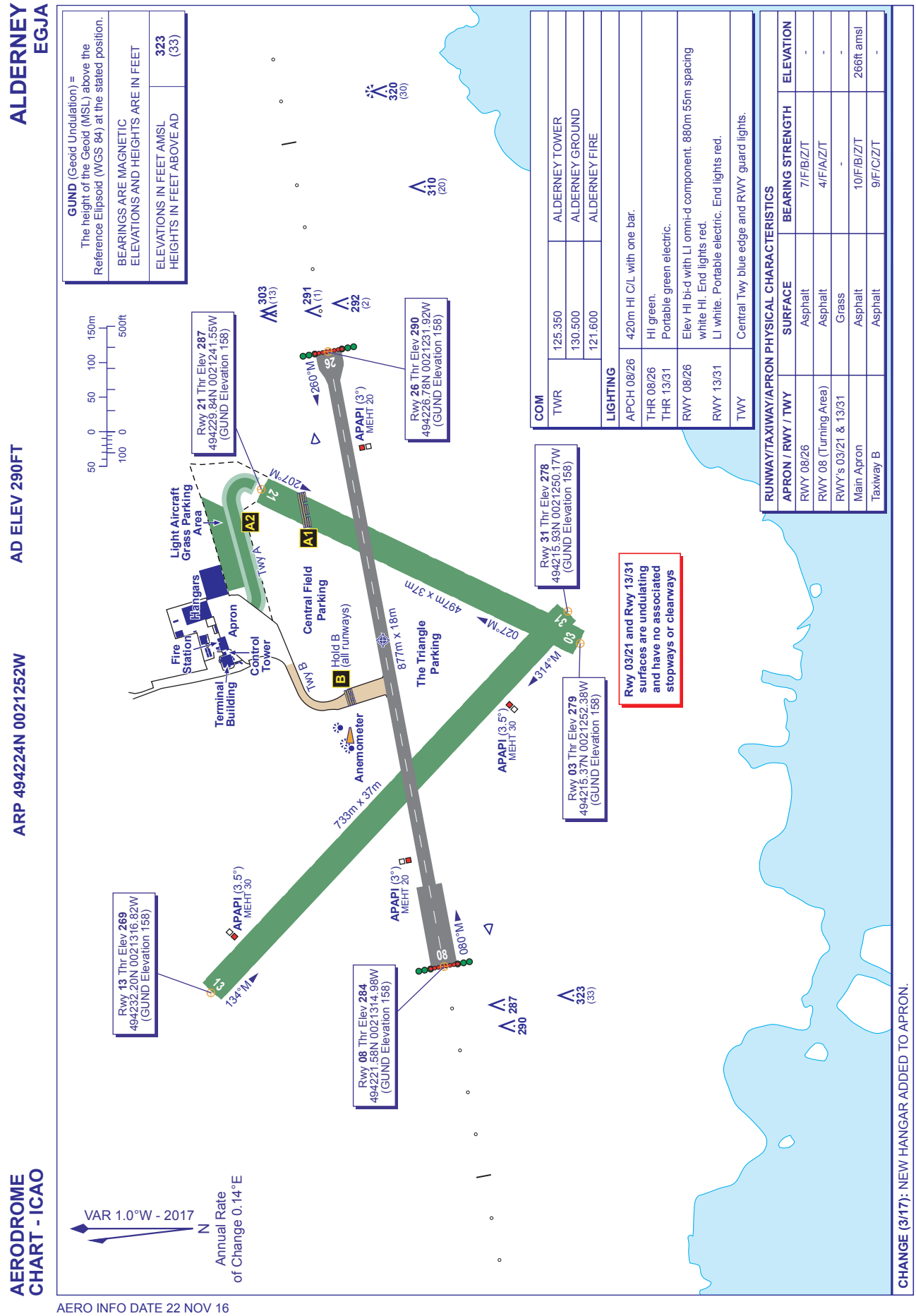
THE HEBRIDES RANGE EG D701 AND DIRECT ROUTE AIRSPACE (DRA)



CHANGE (3/17): WAYPOINT DIRGI REMOVED.

AERO INFO DATE 16 NOV 16

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ALDERNEY
EGJA
AERODROME CHART - ICAO
ARP 494224N 0021252W
AD ELEV 290FT
GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Ellipsoid (WGS 84) at the stated position.
BEARINGS ARE MAGNETIC
ELEVATIONS AND HEIGHTS ARE IN FEET
ELEVATIONS IN FEET AMSL 323 (33)
HEIGHTS IN FEET ABOVE AD
VAR 1.0°W - 2017
Annual Rate of Change 0.14°E
AERO INFO DATE 22 NOV 16
Rwy 13 Thr Elev 269 494232.20N 0021316.82W (GUND Elevation 158)
Rwy 21 Thr Elev 287 494229.84N 0021241.55W (GUND Elevation 158)
Rwy 26 Thr Elev 290 494226.78N 0021231.92W (GUND Elevation 158)
Rwy 31 Thr Elev 278 494215.93N 0021250.17W (GUND Elevation 158)
Rwy 03 Thr Elev 279 494215.37N 0021252.38W (GUND Elevation 158)
Rwy 08 Thr Elev 284 494221.58N 0021314.98W (GUND Elevation 158)
733m x 37m
877m x 18m
497m x 37m
APAPI (3.5°) MEHT 30
APAPI (3°) MEHT 20
Light Aircraft Grass Parking Area
Hangars
Fire Station
Apron
Terminal Building
Control Tower
Anemometer
Central Field Parking
Hold B (all runways)
The Triangle Parking
Twy A
Twy B
A1
A2
B
Rwy 03/21 and Rwy 13/31 surfaces are undulating and have no associated stopways or clearways
COM
TWR 125.350 ALDERNEY TOWER
130.500 ALDERNEY GROUND
121.600 ALDERNEY FIRE
LIGHTING
APCH 08/26 420m HI C/L with one bar.
THR 08/26 THR 13/31 HI green. Portable green electric.
RWY 08/26 RWY 13/31 Elev HI bi-d with LI omni-d component. 880m 55m spacing white HI. End lights red. LI white. Portable electric. End lights red.
TWY Central Twy blue edge and RWY guard lights.
RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS
APRON / RWY / TWY | SURFACE | BEARING STRENGTH | ELEVATION
RWY 08/26 | Asphalt | 7/F/B/Z/T | -
RWY 08 (Turning Area) | Asphalt | 4/F/A/Z/T | -
RWY's 03/21 & 13/31 | Grass | - | -
Main Apron | Asphalt | 10/F/B/Z/T | 266ft amsl
Taxiway B | Asphalt | 9/F/C/Z/T | -
CHANGE (3/17): NEW HANGAR ADDED TO APRON.

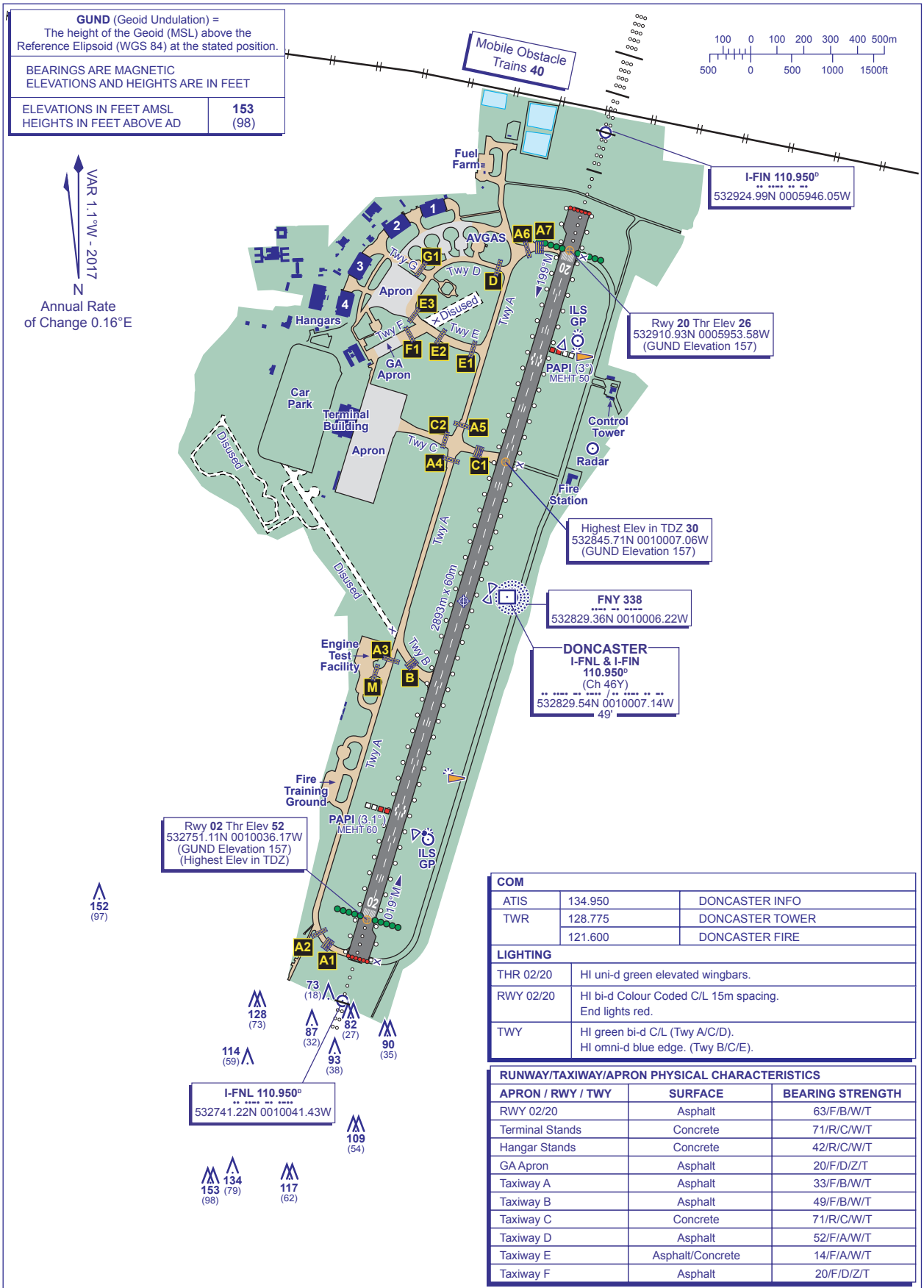
INTENTIONALLY BLANK

AERODROME CHART - ICAO

ARP 532831N 0010015W

AD ELEV 55FT

DONCASTER SHEFFIELD
EGCN



COM		
ATIS	134.950	DONCASTER INFO
TWR	128.775	DONCASTER TOWER
	121.600	DONCASTER FIRE

LIGHTING	
THR 02/20	HI uni-d green elevated wingbars.
RWY 02/20	HI bi-d Colour Coded C/L 15m spacing. End lights red.
TWY	HI green bi-d C/L (Twy A/C/D). HI omni-d blue edge. (Twy B/C/E).

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS

APRON / RWY / TWY	SURFACE	BEARING STRENGTH
RWY 02/20	Asphalt	63/F/B/W/T
Terminal Stands	Concrete	71/R/C/W/T
Hangar Stands	Concrete	42/R/C/W/T
GA Apron	Asphalt	20/F/D/Z/T
Taxiway A	Asphalt	33/F/B/W/T
Taxiway B	Asphalt	49/F/B/W/T
Taxiway C	Concrete	71/R/C/W/T
Taxiway D	Asphalt	52/F/A/W/T
Taxiway E	Asphalt/Concrete	14/F/A/W/T
Taxiway F	Asphalt	20/F/D/Z/T

CHANGE (3/17): TAXIWAY E SURFACE (CHARACTERISTICS BOX) AMENDED.

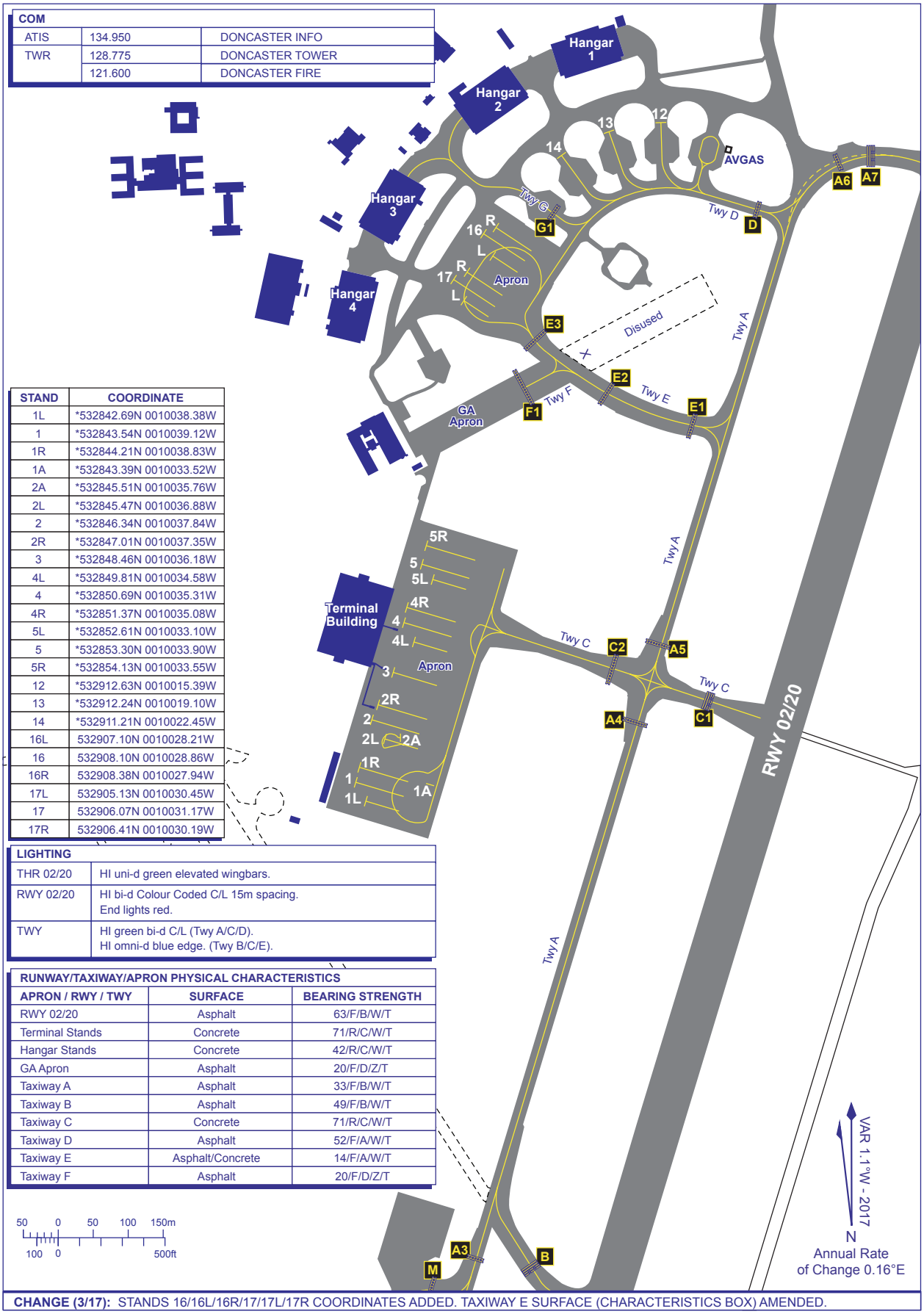
AERO INFO DATE 07 DEC 16

AIRCRAFT PARKING/DOCKING CHART - ICAO

ARP 532831N 0010015W AD ELEV 55FT

DONCASTER SHEFFIELD
EGCN

COM		
ATIS	134.950	DONCASTER INFO
TWR	128.775	DONCASTER TOWER
	121.600	DONCASTER FIRE



STAND	COORDINATE
1L	*532842.69N 0010038.38W
1	*532843.54N 0010039.12W
1R	*532844.21N 0010038.83W
1A	*532843.39N 0010033.52W
2A	*532845.51N 0010035.76W
2L	*532845.47N 0010036.88W
2	*532846.34N 0010037.84W
2R	*532847.01N 0010037.35W
3	*532848.46N 0010036.18W
4L	*532849.81N 0010034.58W
4	*532850.69N 0010035.31W
4R	*532851.37N 0010035.08W
5L	*532852.61N 0010033.10W
5	*532853.30N 0010033.90W
5R	*532854.13N 0010033.55W
12	*532912.63N 0010015.39W
13	*532912.24N 0010019.10W
14	*532911.21N 0010022.45W
16L	532907.10N 0010028.21W
16	532908.10N 0010028.86W
16R	532908.38N 0010027.94W
17L	532905.13N 0010030.45W
17	532906.07N 0010031.17W
17R	532906.41N 0010030.19W

LIGHTING	
THR 02/20	HI uni-d green elevated wingbars.
RWY 02/20	HI bi-d Colour Coded C/L 15m spacing. End lights red.
TWY	HI green bi-d C/L (Twy A/C/D). HI omni-d blue edge. (Twy B/C/E).

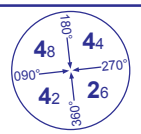
RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS		
APRON / RWY / TWY	SURFACE	BEARING STRENGTH
RWY 02/20	Asphalt	63/F/B/W/T
Terminal Stands	Concrete	71/R/C/W/T
Hangar Stands	Concrete	42/R/C/W/T
GA Apron	Asphalt	20/F/D/Z/T
Taxiway A	Asphalt	33/F/B/W/T
Taxiway B	Asphalt	49/F/B/W/T
Taxiway C	Concrete	71/R/C/W/T
Taxiway D	Asphalt	52/F/A/W/T
Taxiway E	Asphalt/Concrete	14/F/A/W/T
Taxiway F	Asphalt	20/F/D/Z/T

CHANGE (3/17): STANDS 16/16L/16R/17/17L/17R COORDINATES ADDED. TAXIWAY E SURFACE (CHARACTERISTICS BOX) AMENDED.

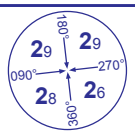
AERO INFO DATE 07 DEC 16

INSTRUMENT APPROACH CHART - ICAO

DUNDEE ILS/DME RWY 09
(ACFT CAT A,B,C)

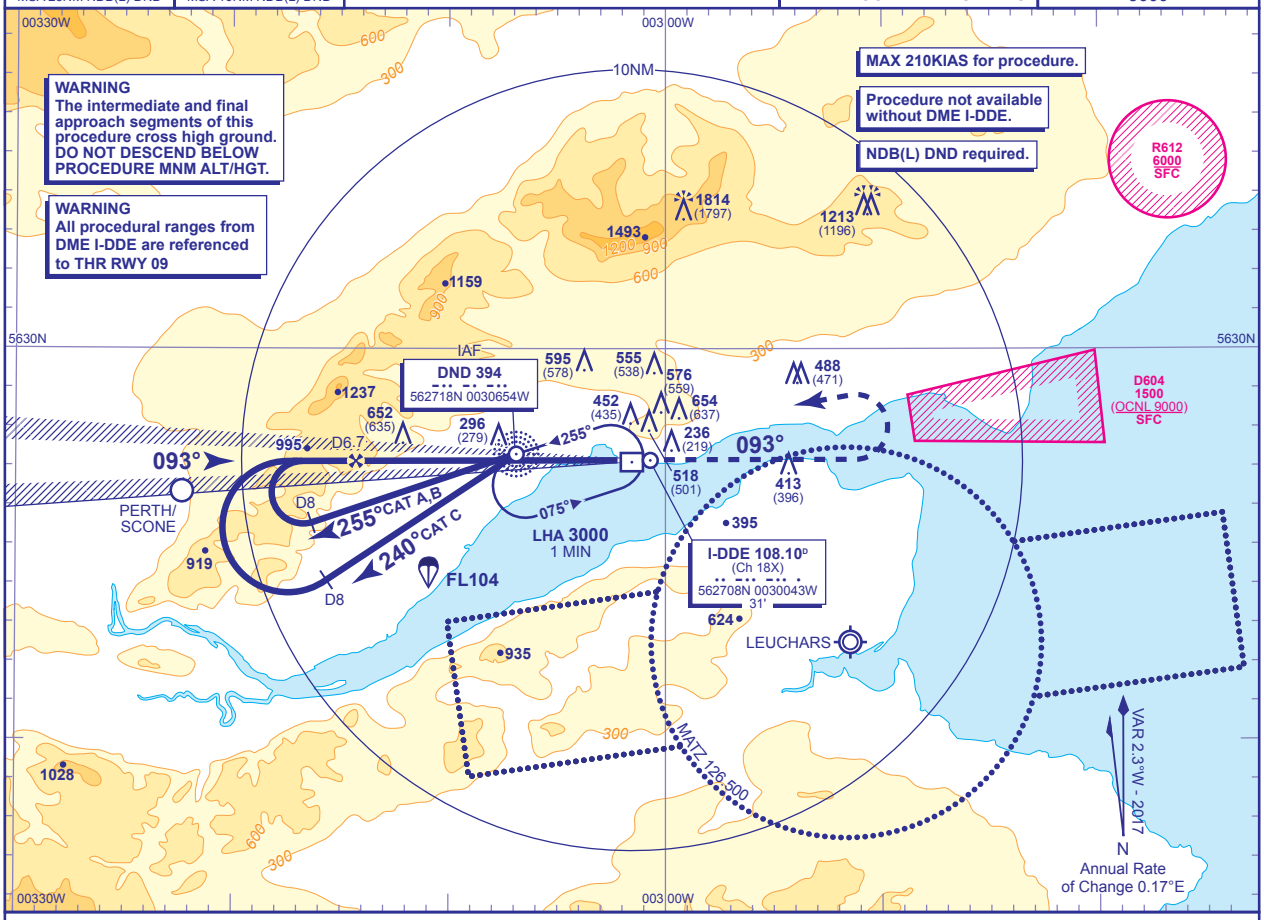


MSA 25NM NDB(L) DND



MSA 10NM NDB(L) DND

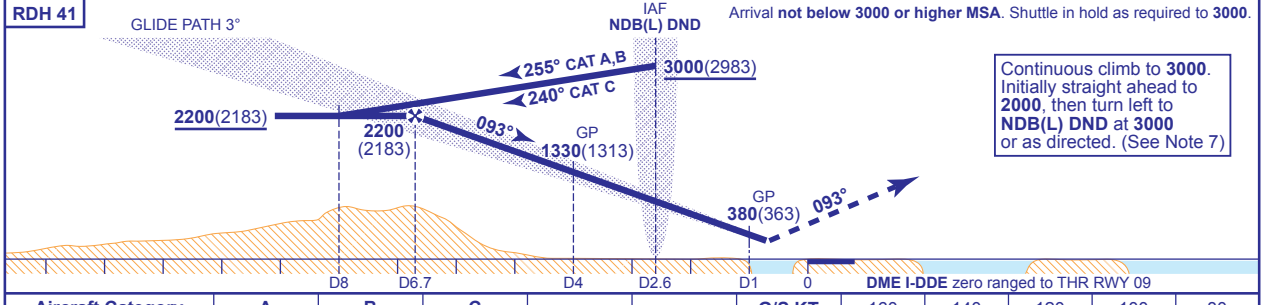
APP	122.900	DUNDEE APPROACH	AD ELEVATION	17	TRANSITION ALTITUDE 3000
TWR	122.900	DUNDEE TOWER	THR ELEVATION	17	
			OBSTACLE ELEVATION 1814 AMSL (1797) (ABOVE THR)		
			BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE GLIDE PATH 3°, 318FT/NM

DME I-DDE	6	5	4	3	2	1
ALT(HGT)	**1970**(1953)	**1650**(1633)	**1330**(1313)	**1010**(993)	**690**(673)	**380**(363)

RDH 41



Aircraft Category		A	B	C
OCA (OCH)	CAT I	**297**(280)	**307**(290)	**317**(300)
VM(C)OCA (OCH AAL)	Total Area	**970**(953)	**970**(953)	**1170**(1153)
	South of RWY 09/27	**540**(523)	**750**(733)	**1080**(1063)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

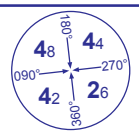
NOTE 1 Subject to ATC approval, when inbound to NDB(L) DND and within I-DDE DME 10, aircraft may descend to **3000**.
2 NDB(L) DND is 2.6NM from THR RWY 09 and is offset 230m north of LOC C/L.
3 The Category C Instrument Approach Procedure infringes the Perth ATZ at 1800ft above Perth aerodrome elevation. Pilots must notify ATC of their intention to conduct a Category C approach on first contact.
4 The eastern edge of the perth ATZ lies 9.5NM west of THR RWY 09. To prevent confliction with possible VFR traffic in the Perth ATZ, pilots should not extend the outbound leg of the base turn beyond the prescribed procedural distances.
5 Due to terrain, LOC and glidepath flag alarms may be experienced at northern edge of coverage when below glidepath sector.
6 Quality of glidepath guidance is not suitable for coupled approaches below 200FT.
7 EG D604 is 7NM east of Dundee ARP. If it appears likely that during the standard missed approach above, low performance aircraft will infringe EG D604 then such aircraft should turn right at I-DDE DME 4 onto track 137°M and climb to **2000**(1983) before turning right to return to NDB(L) DND at **3000**. Pilots should advise ATC on turning onto 137°M and expect to change to Leuchars Approach when instructed for radar assistance.

CHANGE (3/17): MSA VALUES. PARACHUTE DROP AREA ERROL ADDED.

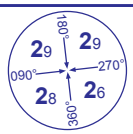
AERO INFO DATE 12 DEC 16

INSTRUMENT APPROACH CHART - ICAO

DUNDEE LOC/DME RWY 09
(ACFT CAT A,B,C)

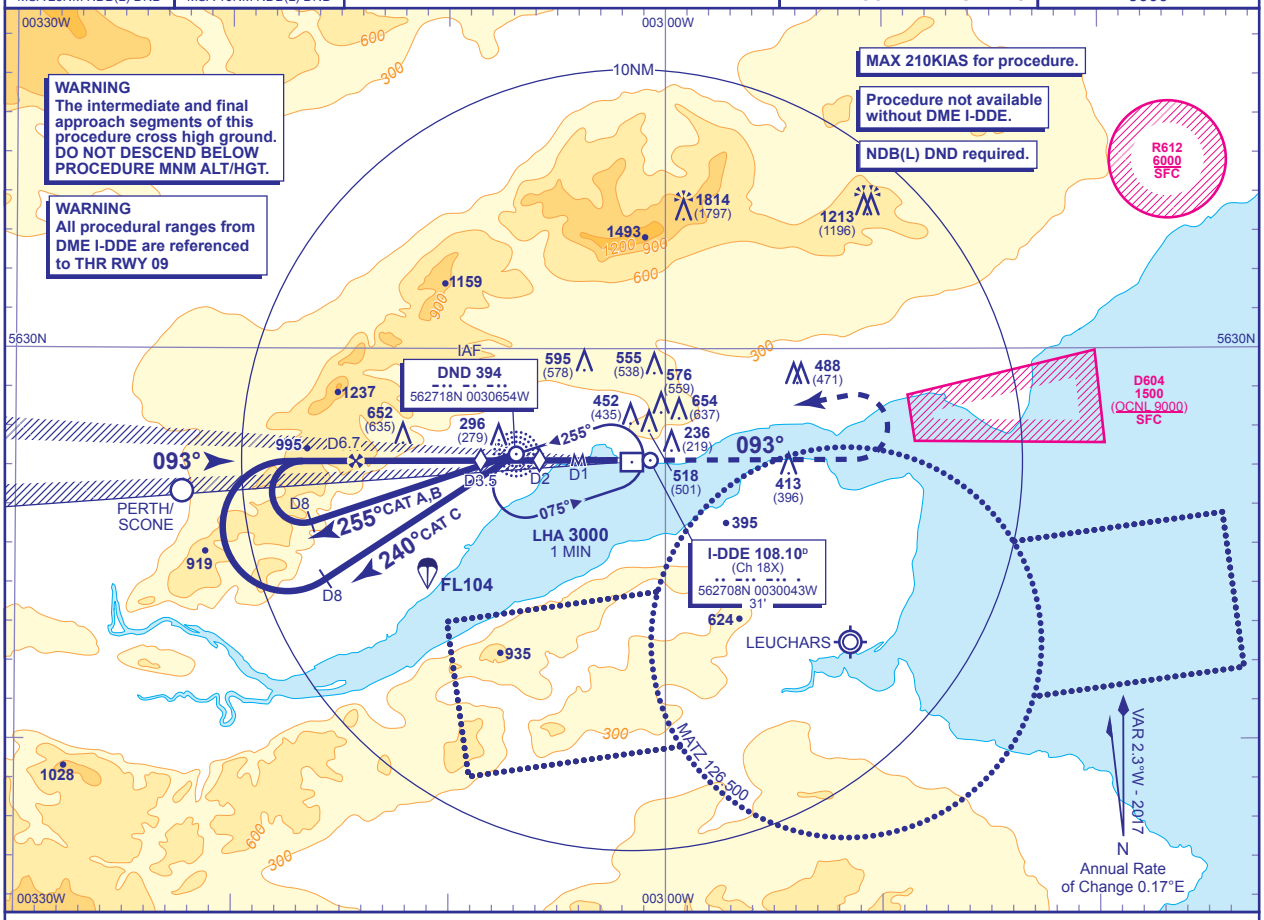


MSA 25NM NDB(L) DND



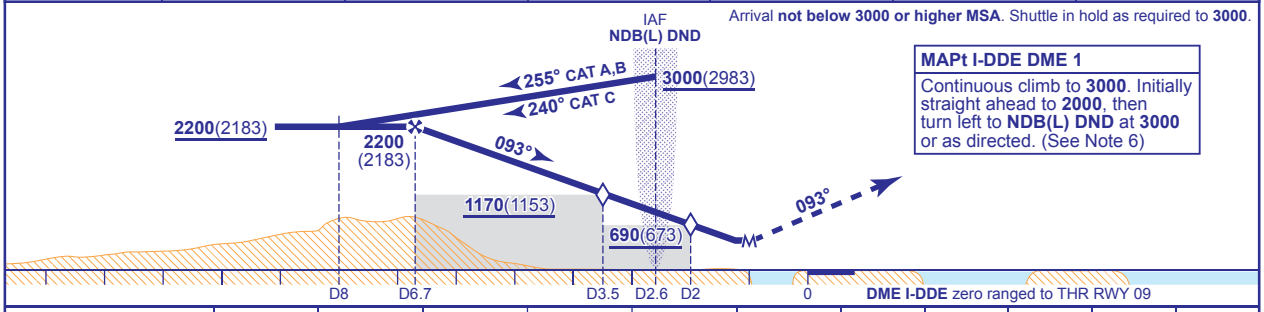
MSA 10NM NDB(L) DND

APP	122.900	DUNDEE APPROACH	AD ELEVATION	17	TRANSITION ALTITUDE 3000
TWR	122.900	DUNDEE TOWER	THR ELEVATION	17	
			OBSTACLE ELEVATION 1814 AMSL (1797) (ABOVE THR)		
			BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 5.24%, 318FT/NM

DME I-DDE	6	5	4	3.5 (SDF)	3	2 (SDF)
ALT(HGT)	1970(1953)	1650(1633)	1330(1313)	1170(1153)	1010(993)	690(673)



Aircraft Category		A	B	C
OCA (OCH)	Procedure	480(463)	480(463)	480(463)
VM(C)OCA (OCH AAL)	Total Area	970(953)	970(953)	1170(1153)
	South of RWY 09/27	540(523)	750(733)	1080(1063)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

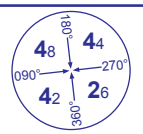
NOTE 1 Subject to ATC approval, when inbound to NDB(L) DND and within I-DDE DME 10, aircraft may descend to **3000**.
2 NDB(L) DND is 2.6NM from THR RWY 09 and is offset 230m north of LOC C/L.
3 The Category C Instrument Approach Procedure infringes the Perth ATZ at 1800ft above Perth aerodrome elevation. Pilots must notify ATC of their intention to conduct a Category C approach on first contact.
4 The eastern edge of the perth ATZ lies 9.5NM west of THR RWY 09. To prevent confliction with possible VFR traffic in the Perth ATZ, pilots should not extend the outbound leg of the base turn beyond the prescribed procedural distances.
5 Due to terrain, LOC and glidepath flag alarms may be experienced at northern edge of coverage when below glidepath sector.
6 EG D604 is 7NM east of Dundee ARP. If it appears likely that during the standard missed approach above, low performance aircraft will infringe EG D604 then such aircraft should turn right at I-DDE DME 4 onto track 137°M and climb to **2000**(1983) before turning right to return to NDB(L) DND at **3000**. Pilots should advise ATC on turning onto 137°M and expect to change to Leuchars Approach when instructed for radar assistance.

CHANGE (3/17): MSA VALUES. PARACHUTE DROP AREA ERROL ADDED.

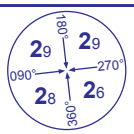
AERO INFO DATE 12 DEC 16

INSTRUMENT APPROACH CHART - ICAO

DUNDEE
RNAV (GNSS)
RWY 09
(ACFT CAT A,B,C)



MSA 25NM NDB(L) DND

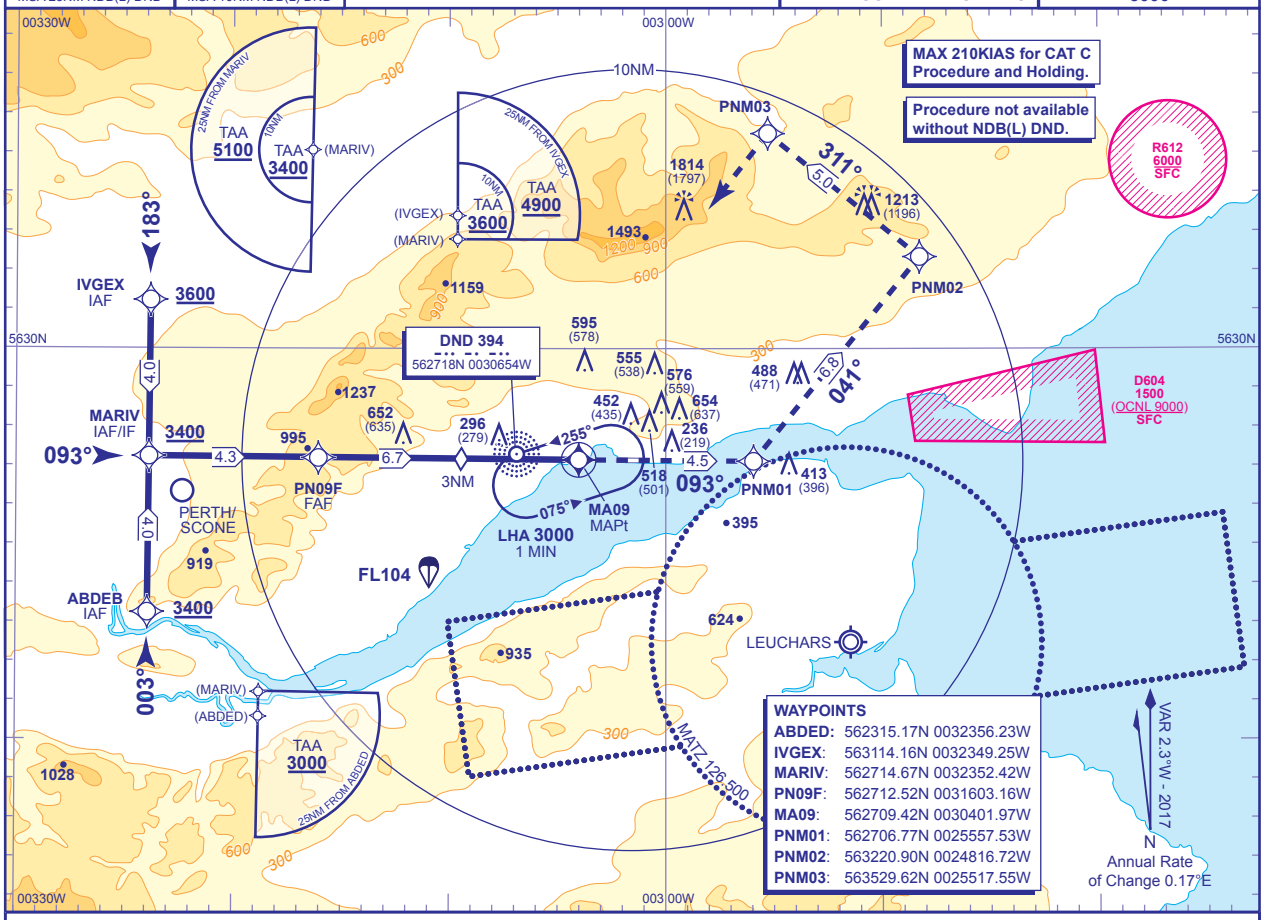


MSA 10NM NDB(L) DND

APP	122.900	DUNDEE APPROACH	
TWR	122.900	DUNDEE TOWER	

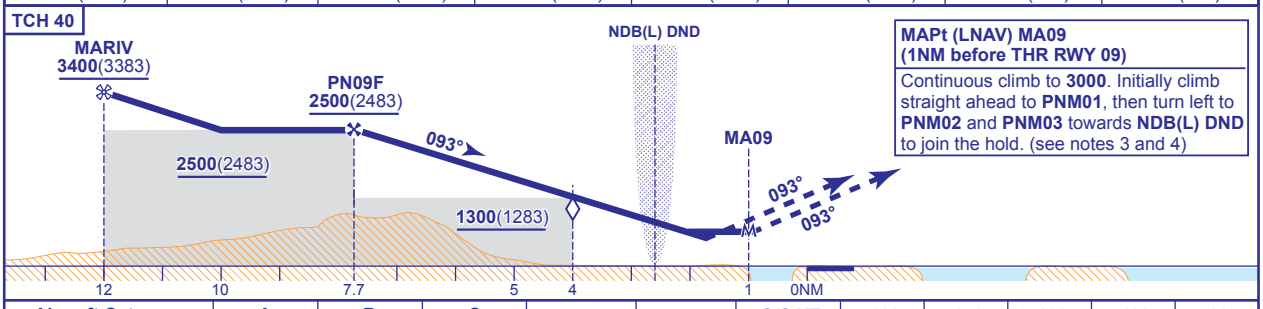
AD ELEVATION	17
THR ELEVATION	17
OBSTACLE ELEVATION	**1814 AMSL** (1797) (ABOVE THR)
BEARINGS ARE MAGNETIC	

EGNOS	**CH 79436 E09A**
TRANSITION ALTITUDE	**3000**



RECOMMENDED PROFILE LPV - Vertical Path Angle 3° (LNAV 5.24%), 318FT/NM

NM to MAPt (MA09)	7	6	5	4	3 (SDF)	2	1
ALT(HGT)	**2600**(2583)	**2290**(2273)	**1970**(1953)	**1650**(1633)	**1330**(1313)	**1010**(993)	**690**(673)



MAPt (LNAV) MA09
(1NM before THR RWY 09)
Continuous climb to **3000**. Initially climb straight ahead to **PNM01**, then turn left to **PNM02** and **PNM03** towards **NDB(L) DND** to join the hold. (see notes 3 and 4)

Aircraft Category		A	B	C
OCA (OCH) Climb Gradient	LPV 2.5%	**629**(612)	**639**(622)	**649**(632)
	LPV 3%	**444**(427)	**453**(436)	**463**(446)
	LNAV 2.5%	**690**(673)	**690**(673)	**690**(673)
	LNAV 3%	**550**(533)	**550**(533)	**550**(533)
VM(C)OCA (OCH AAL)	Total Area	**970**(953)	**970**(953)	**1170**(1153)
	South of RWY 09/27	**540**(523)	**750**(733)	**1080**(1063)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

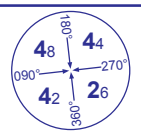
NOTE 1 Use of this RNAV procedure is strictly PPR from the aerodrome operator.
2 NDB(L) DND is 2.6NM from THR RWY 09 and is offset 230m north of extended RWY C/L.
3 Missed approach MAX 185KIAS.
4 Missed approach reverts to conventional navigation at PNM03.

CHANGE (3/17): NEW CHART.

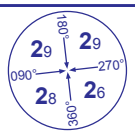
AERO INFO DATE 15 DEC 16

INSTRUMENT APPROACH CHART - ICAO

DUNDEE NDB(L)/DME RWY 09
(ACFT CAT A,B,C)



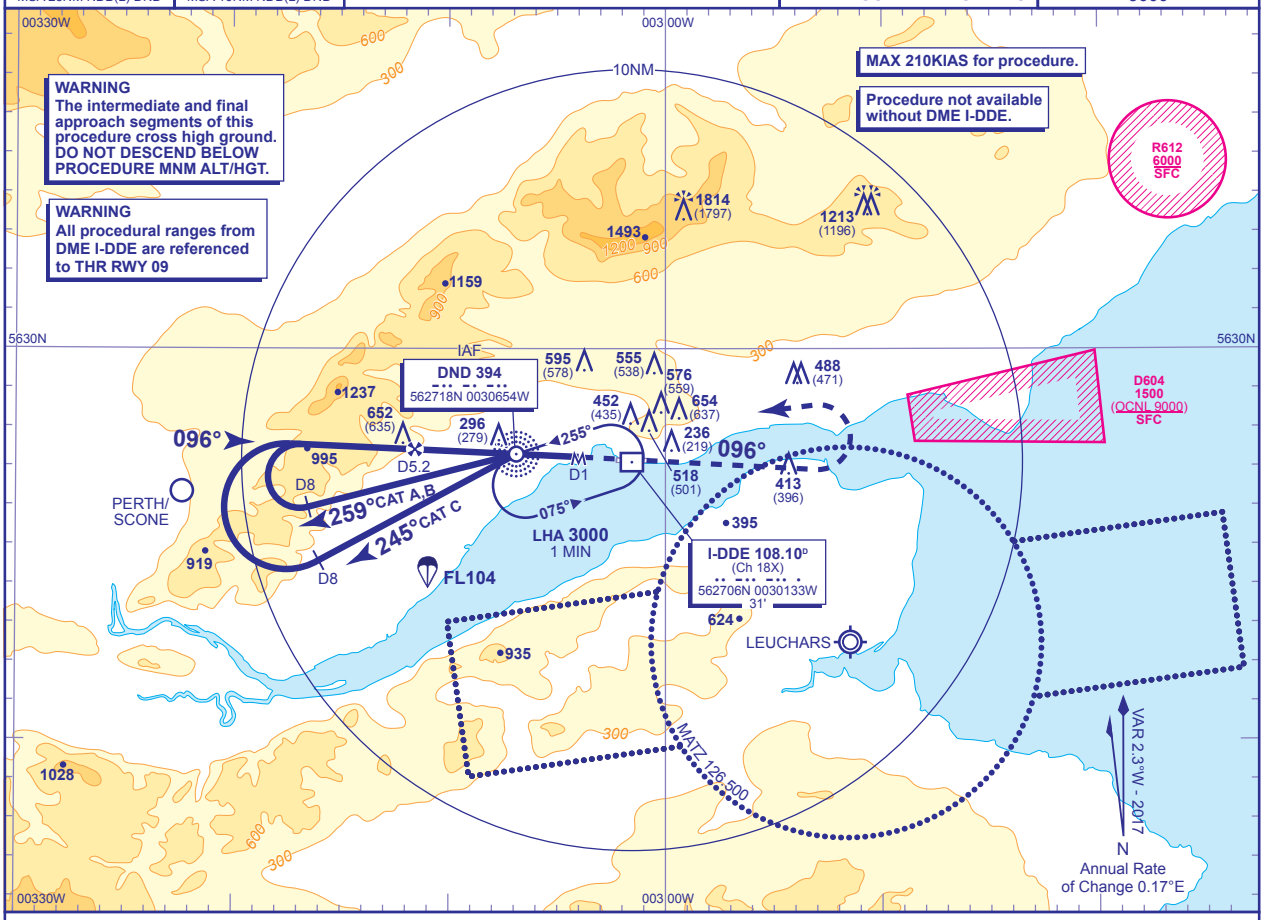
MSA 25NM NDB(L) DND



MSA 10NM NDB(L) DND

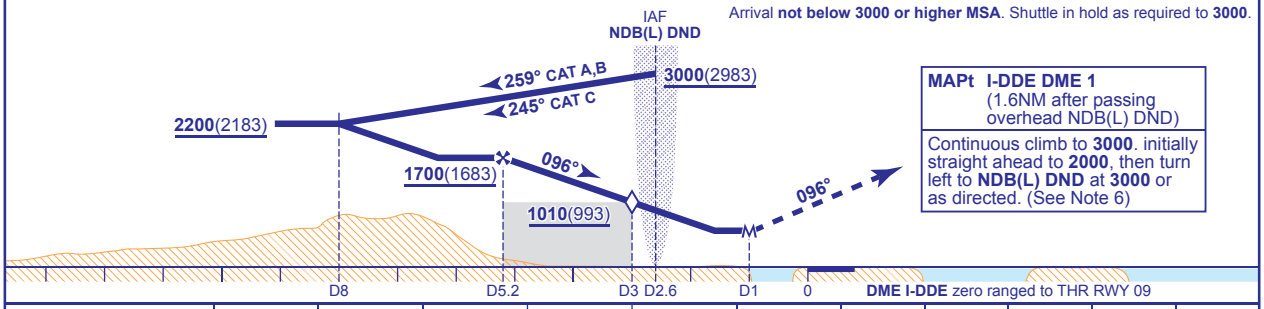
APP	122.900	DUNDEE APPROACH	
TWR	122.900	DUNDEE TOWER	

AD ELEVATION	17
THR ELEVATION	17
OBSTACLE ELEVATION	**1814 AMSL** (1797) (ABOVE THR)
BEARINGS ARE MAGNETIC	
TRANSITION ALTITUDE	**3000**



RECOMMENDED PROFILE Gradient 5.2%, 316FT/NM

DME I-DDE	5	4	3 **(SDF)**	2.6 (NDB(L) DND)	2
ALT(HGT)	**1640**(1623)	**1320**(1303)	**1010**(993)	**880**(863)	**690**(673)



Aircraft Category		A	B	C
OCA (OCH)	Procedure	**570**(553)	**570**(553)	**610**(593)
VM(C)OCA (OCH AAL)	Total Area	**970**(953)	**970**(953)	**1170**(1153)
	South of RWY 09/27	**540**(523)	**750**(733)	**1080**(1063)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	840	740	630	530	420

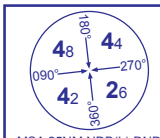
NOTE
1 Subject to ATC approval, when inbound to NDB(L) DND and within I-DDE DME 10, aircraft may descend to **3000**.
2 NDB(L) DND is 2.6NM from THR RWY 09 and is offset 230m north of extended RWY C/L.
3 FAT is offset 3° from RWY C/L.
4 The Category C Instrument Approach Procedure infringes the Perth ATZ at 1800ft above Perth aerodrome elevation. Pilots must notify ATC of their intention to conduct a Category C approach on first contact.
5 The eastern edge of the perth ATZ lies 9.5NM west of THR RWY 09. To prevent confliction with possible VFR traffic in the Perth ATZ, pilots should not extend the outbound leg of the base turn beyond the prescribed procedural distances.
6 EG D604 is 7NM east of Dundee ARP. If it appears likely that during the standard missed approach above, low performance aircraft will infringe EG D604 then such aircraft should turn right at I-DDE DME 4 onto track 137°M and climb to **2000**(1983) before turning right to return to NDB(L) DND at **3000**. Pilots should advise ATC on turning onto 137°M and expect to change to Leuchars Approach when instructed for radar assistance.

CHANGE (3/17): PAGE RENUMBERED. MSA VALUES. PARACHUTE DROP AREA ERROL ADDED.

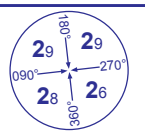
AERO INFO DATE 15 DEC 16

INSTRUMENT APPROACH CHART - ICAO

DUNDEE
RNAV (GNSS)
RWY 27
(ACFT CAT A,B,C)



MSA 25NM NDB(L) DND

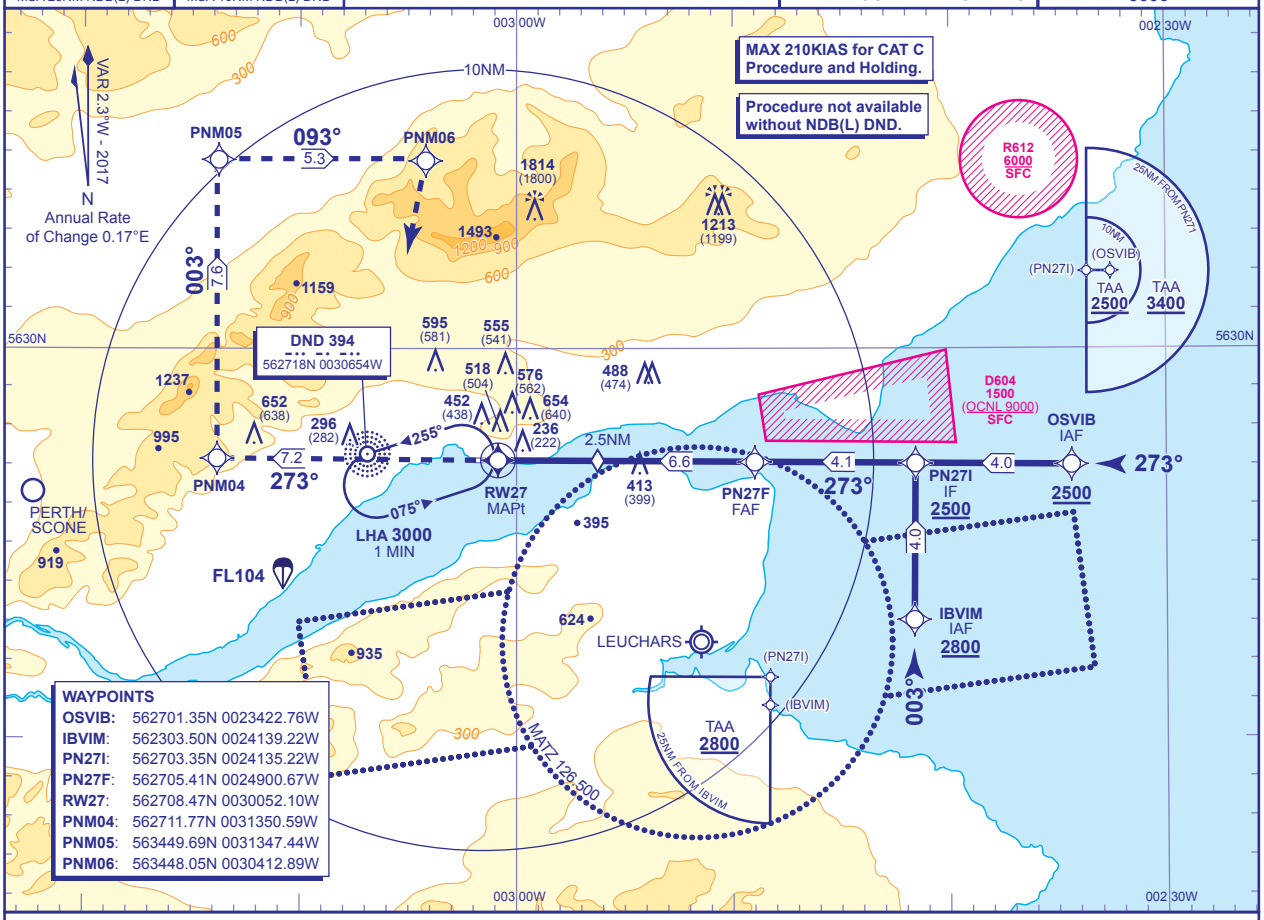


MSA 10NM NDB(L) DND

APP	122.900	DUNDEE APPROACH	
TWR	122.900	DUNDEE TOWER	

AD ELEVATION	17
THR ELEVATION	14
OBSTACLE ELEVATION	**1814 AMSL** (1800) (ABOVE THR)
BEARINGS ARE MAGNETIC	

EGNOS **CH 45344 E27A**
TRANSITION ALTITUDE **3000**



WAYPOINTS

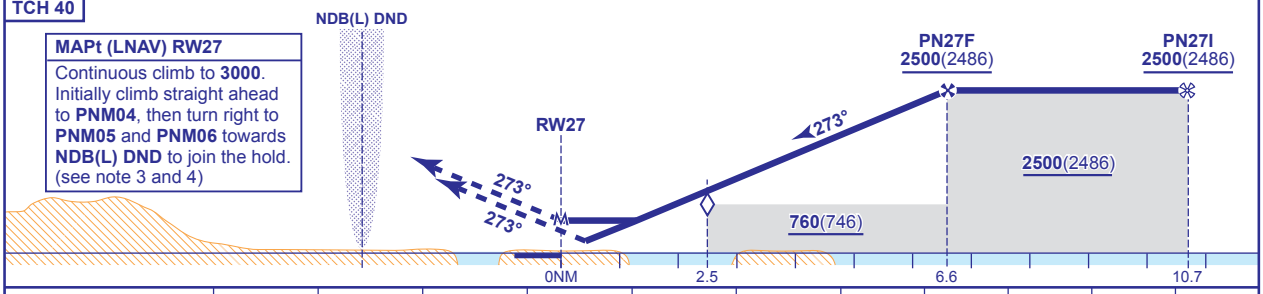
OSVIB:	562701.35N 0023422.76W
IBVIM:	562303.50N 0024139.22W
PN27I:	562703.35N 0024135.22W
PN27F:	562705.41N 0024900.67W
RW27:	562708.47N 0030052.10W
PNM04:	562711.77N 0031350.59W
PNM05:	563449.69N 0031347.44W
PNM06:	563448.05N 0030412.89W

RECOMMENDED PROFILE LPV - Vertical Path Angle 3.5° (LNAV 6.12%), 372FT/NM

NM to MAPt (RW27)	6	5	4	3	2.5 (SDF)	2
ALT(HGT)	**2280**(2266)	**1910**(1896)	**1540**(1526)	**1170**(1156)	**980**(966)	**800**(786)

TCH 40

MAPt (LNAV) RW27
Continuous climb to **3000**. Initially climb straight ahead to **PNM04**, then turn right to **PNM05** and **PNM06** towards **NDB(L) DND** to join the hold. (see note 3 and 4)



Aircraft Category		A	B	C
OCA (OCH)	LPV	**434**(420)	**447**(433)	**460**(446)
	LNAV	**680**(666)	**680**(666)	**680**(666)
VM(C)OCA (OCH AAL)	Total Area	**970**(953)	**970**(953)	**1170**(1153)
	North of RWY 09/27	**540**(523)	**750**(733)	**1080**(1063)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	740	620	500

NOTE 1 Use of this RNAV procedure is strictly PPR from the aerodrome operator.
2 NDB(L) DND is 3.3NM from THR RWY 27 and is offset 230m north of extended RWY C/L.
3 Missed approach MAX 185KIAS.
4 Missed approach reverts to conventional navigation at PNM06.

CHANGE (3/17): NEW CHART.

AERO INFO DATE 15 DEC 16

Instrument Approach Procedure Coding Tables

Dundee RNAV(GNSS) RWY 09 - Instrument Approach Procedure via ABDED

Designator	Sequence Number	Path Term-inator	Waypoint Name	Fly-over	Course/ Track °M (°T)	Turn Direction	Level Constraint	Speed Constraint	Co-ordinates	Remarks and Distance to MAPt
RW09R	001	IF	ABDED	N	-	-	3400	210	562315.17N 0032356.23W	IAF
RW09R	002	TF	MARIV	N	003° (000.5°)	RIGHT	3400	210	562714.67N 0032352.42W	IF / 11.01 NM
RW09R	003	TF	PN09F	N	093° (090.4°)	-	2500	210	562712.52N 0031603.16W	FAF / 6.67 NM
RW09R	004	TF	MA09	Y	093° (090.4°)	-	-	-	562709.42N 0030401.97W	MAPt (1NM before THR)
RW09R	005	CF	PNM01	N	093° (090.5°)	LEFT	-	185	562706.77N 0025557.53W	-
RW09R	006	TF	PNM02	N	041° (039.0°)	LEFT	-	185	563220.90N 0024816.72W	-
RW09R	007	TF	PNM03	N	311° (309.1°)	-	-	185	563529.62N 0025517.55W	At PNM03 revert to conventional navigation

Dundee RNAV(GNSS) RWY 09 - Instrument Approach Procedure via MARIV

Designator	Sequence Number	Path Term-inator	Waypoint Name	Fly-over	Course/ Track °M (°T)	Turn Direction	Level Constraint	Speed Constraint	Co-ordinates	Remarks and Distance to MAPt
RW09C	001	IF	MARIV	N	-	-	3400	210	562714.67N 0032352.42W	IAF / IF / 11.01 NM
RW09C	002	TF	PN09F	N	093° (090.4°)	-	2500	210	562712.52N 0031603.16W	FAF / 6.67 NM
RW09C	003	TF	MA09	Y	093° (090.4°)	-	-	-	562709.42N 0030401.97W	MAPt (1NM before THR)
RW09C	004	CF	PNM01	N	093° (090.5°)	LEFT	-	185	562706.77N 0025557.53W	-
RW09C	005	TF	PNM02	N	041° (039.0°)	LEFT	-	185	563220.90N 0024816.72W	-
RW09C	006	TF	PNM03	N	311° (309.1°)	-	-	185	563529.62N 0025517.55W	At PNM03 revert to conventional navigation

Dundee RNAV(GNSS) RWY 09 - Instrument Approach Procedure via IVGEX

Designator	Sequence Number	Path Term-inator	Waypoint Name	Fly-over	Course/ Track °M (°T)	Turn Direction	Level Constraint	Speed Constraint	Co-ordinates	Remarks and Distance to MAPt
RW09L	001	IF	IVGEX	N	-	-	3600	210	563114.16N 0032349.25W	IAF
RW09L	002	TF	MARIV	N	183° (180.4°)	LEFT	3400	210	562714.67N 0032352.42W	IF / 11.01 NM
RW09L	003	TF	PN09F	N	093° (090.4°)	-	2500	210	562712.52N 0031603.16W	FAF / 6.67 NM
RW09L	004	TF	MA09	Y	093° (090.4°)	-	-	-	562709.42N 0030401.97W	MAPt (1NM before THR)
RW09L	005	CF	PNM01	N	093° (090.5°)	LEFT	-	185	562706.77N 0025557.53W	-
RW09L	006	TF	PNM02	N	041° (039.0°)	LEFT	-	185	563220.90N 0024816.72W	-
RW09L	007	TF	PNM03	N	311° (309.1°)	-	-	185	563529.62N 0025517.55W	At PNM03 revert to conventional navigation

CHANGE (3/17): NEW PAGE.

AERO INFO DATE 15 DEC 16

Instrument Approach Procedure Coding Tables

Dundee RNAV(GNSS) RWY 27 - Instrument Approach Procedure via OSVIB

Designator	Sequence Number	Path Term-inator	Waypoint Name	Fly-over	Course/ Track °M (°T)	Turn Direction	Level Constraint	Speed Constraint	Co-ordinates	Remarks and Distance to MAPt
RW27C	001	IF	OSVIB	N	-	-	2500	210	562701.35N 0023422.76W	IAF
RW27C	002	TF	PN27I	N	273° (270.5°)	-	2500	210	562703.35N 0024135.22W	IF / 10.7 NM
RW27C	003	TF	PN27F	N	273° (270.5°)	-	2500	210	562705.41N 0024900.67W	FAF / 6.58 NM
RW27C	004	TF	RW27	Y	273° (270.5°)	-	-	-	562708.47N 0030052.10W	MAPt
RW27C	005	CF	PNM04	N	273° (270.5°)	RIGHT	-	185	562711.77N 0031350.59W	-
RW27C	006	TF	PNM05	N	003° (000.2)°	RIGHT	-	185	563449.69N 0031347.44W	-
RW27C	007	TF	PNM06	N	093° (090.2°)	-	-	185	563448.05N 0030412.89W	At PNM06 revert to conventional navigation

Dundee RNAV(GNSS) RWY 27 - Instrument Approach Procedure via IBVIM

Designator	Sequence Number	Path Term-inator	Waypoint Name	Fly-over	Course/ Track °M (°T)	Turn Direction	Level Constraint	Speed Constraint	Co-ordinates	Remarks and Distance to MAPt
RW27L	001	IF	IBVIM	N	-	-	2800	210	562303.50N 0024139.22W	IAF
RW27L	002	TF	PN27I	N	003° (000.5°)	LEFT	2500	210	562703.35N 0024135.22W	IF / 10.7 NM
RW27L	003	TF	PN27F	N	273° (270.5°)	-	2500	210	562705.41N 0024900.67W	FAF / 6.58 NM
RW27L	004	TF	RW27	Y	273° (270.5°)	-	-	-	562708.47N 0030052.10W	MAPt
RW27L	005	CF	PNM04	N	273° (270.5°)	RIGHT	-	185	562711.77N 0031350.59W	-
RW27L	006	TF	PNM05	N	003° (000.2°)	RIGHT	-	185	563449.69N 0031347.44W	-
RW27L	007	TF	PNM06	N	093° (090.2°)	-	-	185	563448.05N 0030412.89W	At PNM06 revert to conventional navigation

CHANGE (3/17): NEW PAGE.

AERO INFO DATE 07 DEC 16

SBAS FAS Data Block Coding Data

Dundee RNAV(GNSS) RWY 09

Input Data	
Parameters	**Values**
Operation Type	0
SBAS Provider	1
Airport Identifier	EGPN
Runway	09
Runway Direction	0
Approach Performance Designator	0
Route Indicator	
Reference Path Data Selector	0
Reference Path Identifier	E09A
LTP/FTP Latitude	562708.8850N
LTP/FTP Longitude	0030213.8480W
LTP/FTP Ellipsoidal Height (metres)	56.8
FPAP Latitude	562708.3775N
Delta FPAP Latitude (seconds)	-0.5075
FPAP Longitude	0030034.8935W
Delta FPAP Longitude (seconds)	98.9545
Threshold Crossing Height	12.0
TCH Units Selector	1
Glidepath Angle (degrees)	3.00
Course Width (metres)	105.00
Length Offset (metres)	296
HAL (metres)	40.0
VAL (metres)	50.0

Output Data	
Data Block	10 0E 10 07 05 09 00 00 01 39 30 05 AA 0D 3A 18 50 53 B2 FE 38 16 09 FC FF 15 05 03 F0 80 2C 01 64 25 C8 FA 8A 13 48 28
Calculated CRC Value	8A134828

Additional Data	
Parameters	**Values**
ICAO Code:	EG
LTP/FTP Orthometric Height (metres):	5.2
FPAP Orthometric Height (metres):	4.2

CHANGE (3/17): NEW TABLE.

AERO INFO DATE 28 NOV 16

SBAS FAS Data Block Coding Data

Dundee RNAV(GNSS) RWY 27

Input Data	
Parameters	**Values**
Operation Type	0
SBAS Provider	1
Airport Identifier	EGPN
Runway	27
Runway Direction	0
Approach Performance Designator	0
Route Indicator	
Reference Path Data Selector	0
Reference Path Identifier	E27A
LTP/FTP Latitude	562708.4670N
LTP/FTP Longitude	0030052.0970W
LTP/FTP Ellipsoidal Height (metres)	55.8
FPAP Latitude	562708.9710N
Delta FPAP Latitude (seconds)	0.5040
FPAP Longitude	0030231.0515W
Delta FPAP Longitude (seconds)	-98.9545
Threshold Crossing Height	12.0
TCH Units Selector	1
Glidepath Angle (degrees)	3.50
Course Width (metres)	105.00
Length Offset (metres)	296
HAL (metres)	40.0
VAL (metres)	50.0

Output Data	
Data Block	10 0E 10 07 05 1B 00 00 01 37 32 05 66 0A 3A 18 FE D1 B4 FE 2E 16 F0 03 00 EB FA FC F0 80 5E 01 64 25 C8 FA 26 DB 2B 29
Calculated CRC Value	26DB2B29

Additional Data	
Parameters	**Values**
ICAO Code:	EG
LTP/FTP Orthometric Height (metres):	4.2
FPAP Orthometric Height (metres):	5.2

CHANGE (3/17): NEW TABLE.

AERO INFO DATE 07 DEC 16

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AERODROME CHART - ICAO

ARP 511631N 0004639W

AD ELEV 238FT

FARNBOROUGH
EGLF

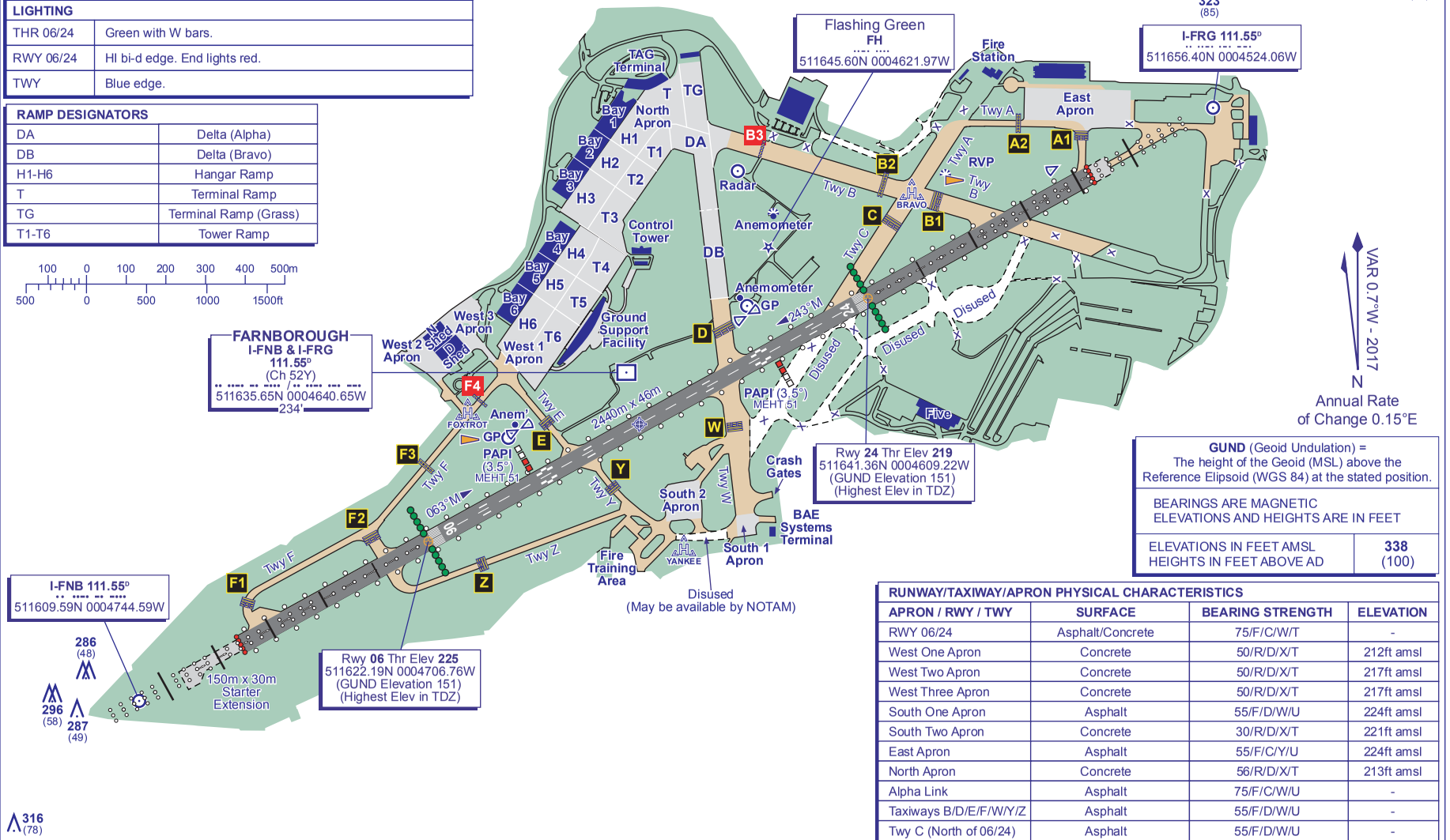
AERO INFO DATE 16 DEC 16

COM		
ATIS	128.400	FARNBOROUGH INFO
TWR	122.500	FARNBOROUGH TOWER
	121.600	FARNBOROUGH FIRE

LIGHTING	
THR 06/24	Green with W bars.
RWY 06/24	HI bi-d edge. End lights red.
TWY	Blue edge.

RAMP DESIGNATORS	
DA	Delta (Alpha)
DB	Delta (Bravo)
H1-H6	Hangar Ramp
T	Terminal Ramp
TG	Terminal Ramp (Grass)
T1-T6	Tower Ramp

100 0 100 200 300 400 500m
500 0 500 1000 1500ft



GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.

BEARINGS ARE MAGNETIC
ELEVATIONS AND HEIGHTS ARE IN FEET

ELEVATIONS IN FEET AMSL / HEIGHTS IN FEET ABOVE AD: **338** (100)

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 06/24	Asphalt/Concrete	75/F/C/W/T	-
West One Apron	Concrete	50/R/D/X/T	212ft amsl
West Two Apron	Concrete	50/R/D/X/T	217ft amsl
West Three Apron	Concrete	50/R/D/X/T	217ft amsl
South One Apron	Asphalt	55/F/D/W/U	224ft amsl
South Two Apron	Concrete	30/R/D/X/T	221ft amsl
East Apron	Asphalt	55/F/C/Y/U	224ft amsl
North Apron	Concrete	56/R/D/X/T	213ft amsl
Alpha Link	Asphalt	75/F/C/W/U	-
Taxiways B/D/E/F/W/Y/Z	Asphalt	55/F/D/W/U	-
Twy C (North of 06/24)	Asphalt	55/F/D/W/U	-

CHANGE (3/17): MAG VAR/ANNUAL RATE OF CHANGE. OBSTACLES AMENDED. X2 ANEMOMETERS ADDED.

AIRCRAFT PARKING/DOCKING CHART - ICAO

ARP 511631N 0004639W

AD ELEV 238FT

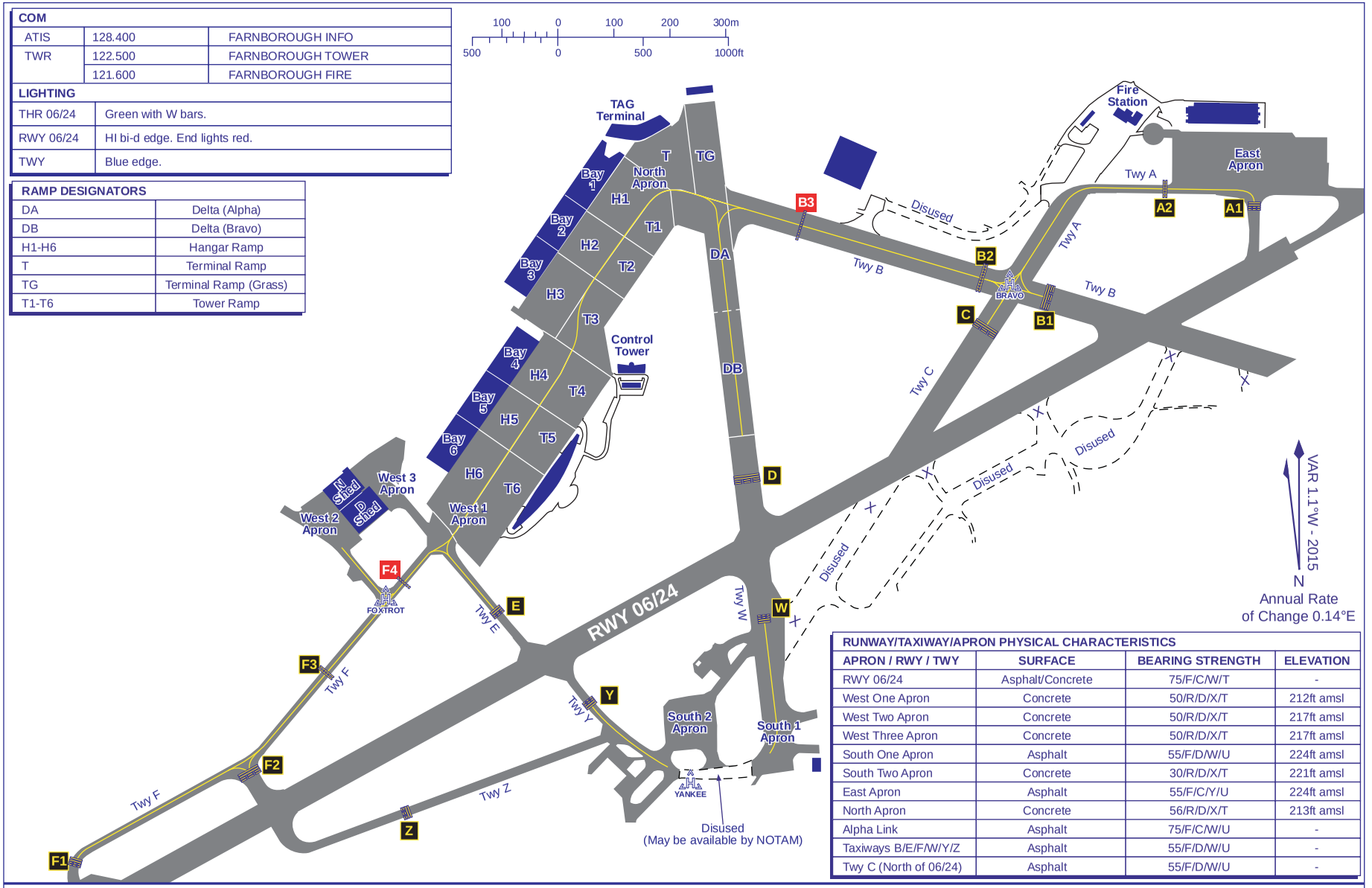
FARNBOROUGH
EGLF

AERO INFO DATE 19 AUG 15

COM		
ATIS	128.400	FARNBOROUGH INFO
TWR	122.500	FARNBOROUGH TOWER
	121.600	FARNBOROUGH FIRE

LIGHTING	
THR 06/24	Green with W bars.
RWY 06/24	HI bi-d edge. End lights red.
TWY	Blue edge.

RAMP DESIGNATORS	
DA	Delta (Alpha)
DB	Delta (Bravo)
H1-H6	Hangar Ramp
T	Terminal Ramp
TG	Terminal Ramp (Grass)
T1-T6	Tower Ramp



RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 06/24	Asphalt/Concrete	75/F/C/W/T	-
West One Apron	Concrete	50/R/D/X/T	212ft amsl
West Two Apron	Concrete	50/R/D/X/T	217ft amsl
West Three Apron	Concrete	50/R/D/X/T	217ft amsl
South One Apron	Asphalt	55/F/D/W/U	224ft amsl
South Two Apron	Concrete	30/R/D/X/T	221ft amsl
East Apron	Asphalt	55/F/C/Y/U	224ft amsl
North Apron	Concrete	56/R/D/X/T	213ft amsl
Alpha Link	Asphalt	75/F/C/W/U	-
Taxiways B/E/F/W/Y/Z	Asphalt	55/F/D/W/U	-
Twy C (North of 06/24)	Asphalt	55/F/D/W/U	-

CHANGE (12/15): MAG VAR. HOLDS Z/B3/F4 LOCATION CORRECTION.

AERODROME CHART - ICAO

ARP 531041N 0025840W

AD ELEV 45FT

HAWARDEN
EGNR

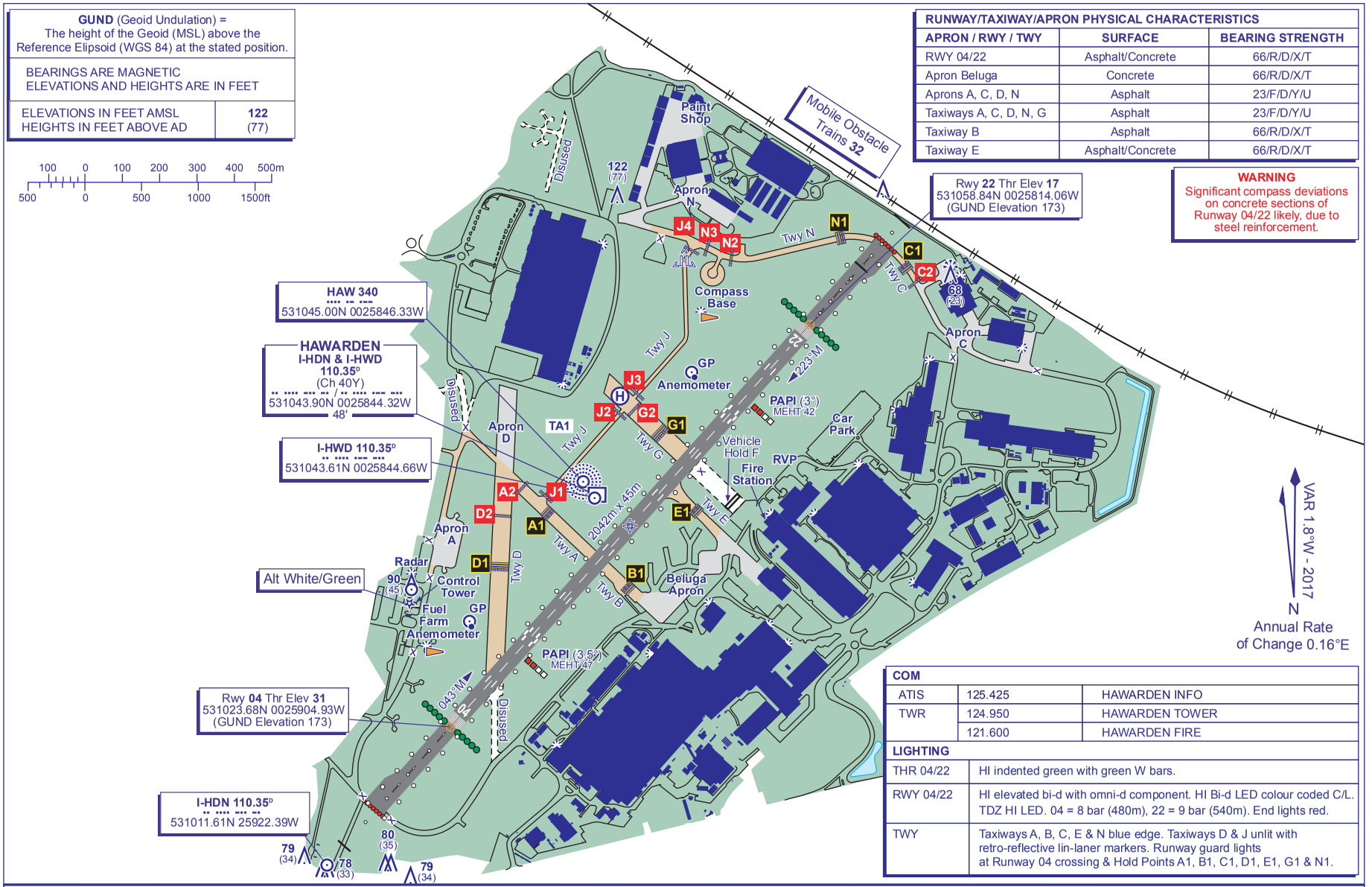
AERO INFO DATE 01 DEC 16

GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.	
BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET	
ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	**122** (77)

100 0 100 200 300 400 500m
500 0 500 1000 1500ft

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS		
APRON / RWY / TWY	**SURFACE**	**BEARING STRENGTH**
RWY 04/22	Asphalt/Concrete	66/R/D/X/T
Apron Beluga	Concrete	66/R/D/X/T
Aprons A, C, D, N	Asphalt	23/F/D/Y/U
Taxiways A, C, D, N, G	Asphalt	23/F/D/Y/U
Taxiway B	Asphalt	66/R/D/X/T
Taxiway E	Asphalt/Concrete	66/R/D/X/T

WARNING
Significant compass deviations on concrete sections of Runway 04/22 likely, due to steel reinforcement.



COM		
ATIS	125.425	HAWARDEN INFO
TWR	124.950	HAWARDEN TOWER
	121.600	HAWARDEN FIRE

LIGHTING	
THR 04/22	HI indented green with green W bars.
RWY 04/22	HI elevated bi-d with omni-d component. HI Bi-d LED colour coded C/L. TDZ HI LED. 04 = 8 bar (480m), 22 = 9 bar (540m). End lights red.
TWY	Taxiways A, B, C, E & N blue edge. Taxiways D & J unlit with retro-reflective lin-laner markers. Runway guard lights at Runway 04 crossing & Hold Points A1, B1, C1, D1, E1, G1 & N1.

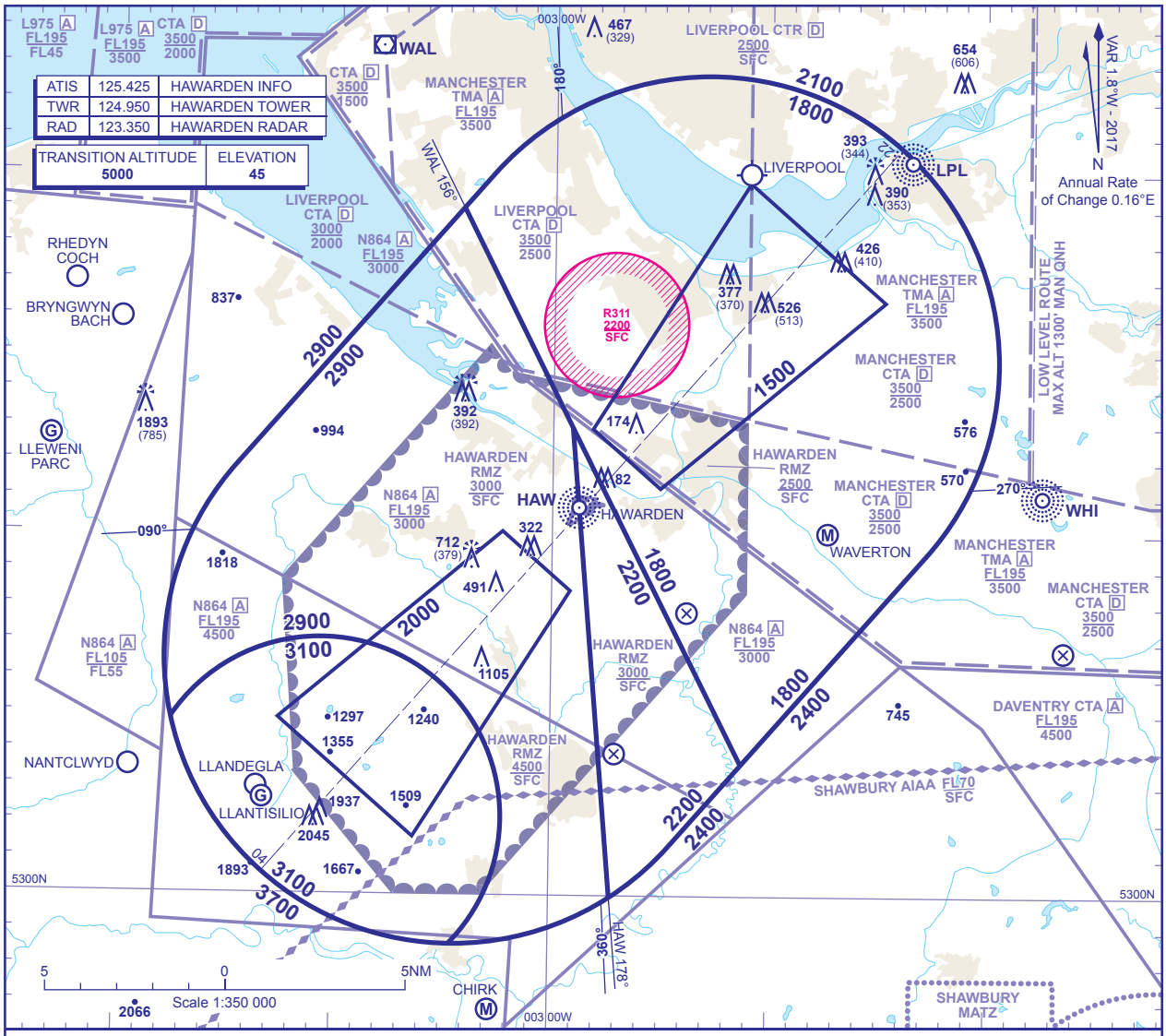
CHANGE (3/17): MAG VAR. WARNING BOX ADDED. RADAR ADJACENT TO ARP WITHDRAWN. BUILDINGS.

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ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ELEVATIONS IN FEET AMSL **1900**
HEIGHTS IN FEET AGL (785)

HAWARDEN



MINIMUM INITIAL ALTITUDE

Within the ATC Surveillance Minimum Altitude area the minimum initial altitude to be allocated by the approach surveillance controller is:

a) **1800** in the sector defined by the lateral limits; 531902N 0030414W - 531959N 0030250W thence clockwise by an arc of a circle radius 8NM centred on 531445N 0025246W to 530929N 0024245W - 530339N 0025113W - 531258N 0025906W - 531902N 0030414W.

b) **2200** in the sector defined by the lateral limits; 531258N 0025906W - 530339N 0025113W - 530123N 0025431W thence clockwise by an arc of a circle radius 8NM centred on 530637N 0030432W to 525957N 0025712W - 531258N 0025906W.

c) **2900** in the sector defined by the lateral limits; 531151N 0031435W - 531902N 0030414W - 531258N 0025906W - 525957N 0025712W thence clockwise by an arc of a circle radius 8NM centred on 530637N 0030432W to 525838N 0030434W thence anti-clockwise by an arc of a circle radius 5NM centred on 530205N 0031032W to 530450N 0031728W thence clockwise by an arc of a circle radius 8NM centred on 530637N 0030432W to 531151N 0031435W.

d) **3100** in the sector defined by the lateral limits; 530450N 0031728W thence clockwise by an arc of a circle radius 5NM centred on 530205N 0031032W to 525838N 0030434W thence clockwise by an arc of a circle radius 8NM centred on 530637N 0030432W to 530450N 0031728W.

OUTSIDE THE DESIGNATED APPROACH SURVEILLANCE MINIMUM ALTITUDE AREA

The minimum altitude to be allocated by the approach surveillance controller will be either the Minimum Sector Altitude, or **1000** above any fixed obstacles:

a) within 5NM of the aircraft*, and

b) within the sector 15NM ahead of and within 20° either side of the aircraft's track*.

*When the aircraft is within 15NM of the radar antennae, the 5NM in a) and the 15NM in b) may be reduced to 3NM and 10NM respectively.

LOSS OF COMMUNICATION PROCEDURES

Initial Approach

Continue visually or by means of an appropriate approved final approach aid. If not possible proceed at **2500**, or last assigned level if higher to **NDB(L) HAW†**.

Intermediate and Final Approach

Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to **NDB(L) HAW†**.

† In all cases where the aircraft returns to the holding facility the procedure to be adopted is the Radio Failure Procedure detailed at ENR 1.1.3.

GENERAL INFORMATION

1. Levels shown are based on QNH.
2. Only significant obstacles and dominant spot heights are shown.
3. The minimum levels shown within the ATC Surveillance Minimum Altitude Area are in conformance with the Standard European Rules of the Air - SERA.5015.
4. Minimum Sector Altitudes are based on obstacles and spot heights within 25NM of the Aerodrome Reference Point.
5. Controlled airspace with a base in excess of **5000** or FL55, as appropriate, is not shown.
6. **This chart should only be used for the cross-checking of assigned altitudes whilst in receipt of a approach surveillance service.**
7. **When vectoring an aircraft within the Final Approach Vectoring Area descent clearance below the SMAA to the FAVA altitude may only be issued if the aircraft is either established on the final approach track or on an intercept of 40° or less, and in the case of instrument approaches other than SRA is cleared to intercept the final approach track.**

CHANGE (3/17): MAG VAR. HAWARDEN RADIO MANDATORY ZONE ADDED. OBSTACLES.

AERO INFO DATE 15 DEC 16

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AERODROME CHART - ICAO

ARP 535158N 0013939W

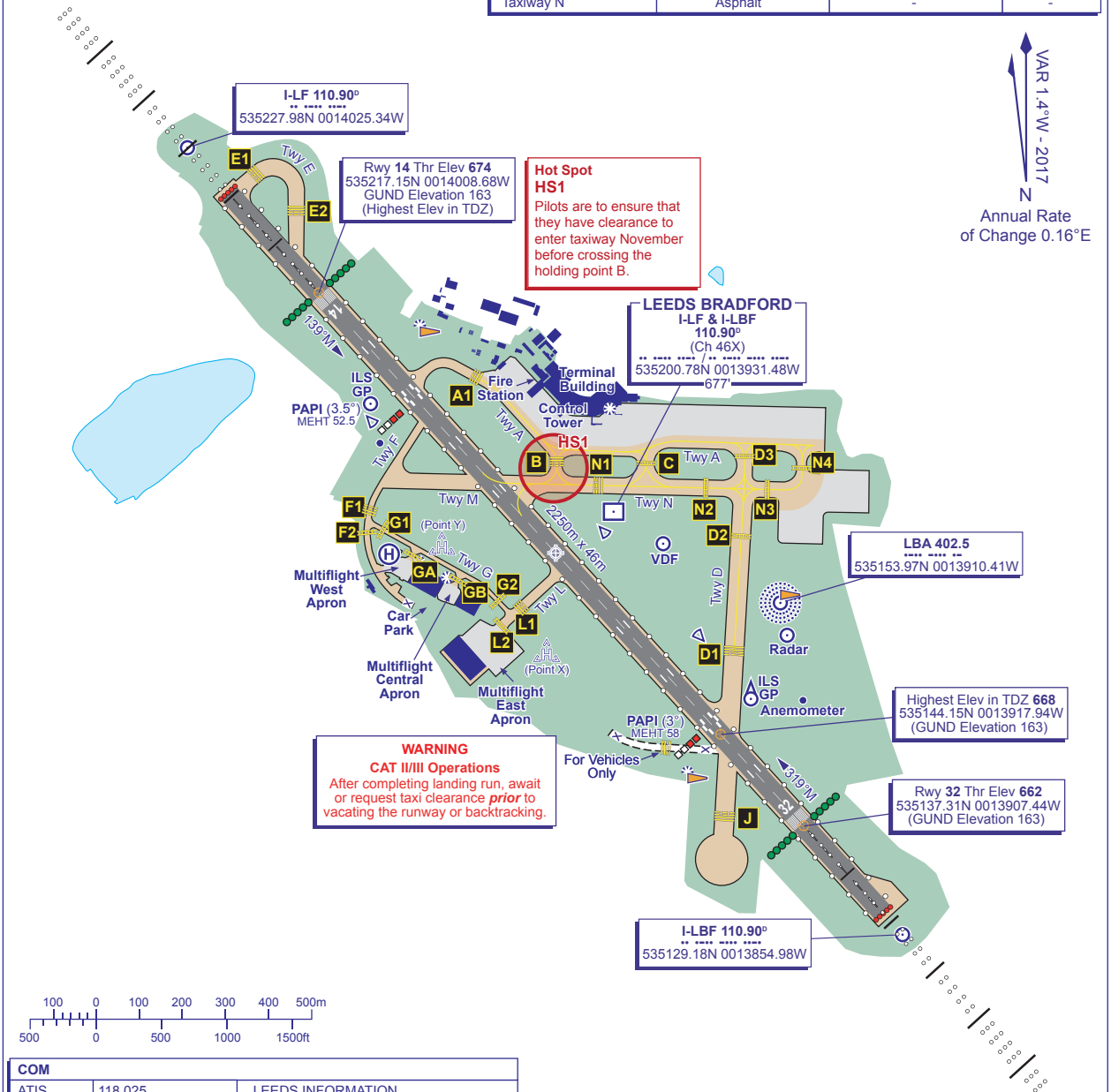
AD ELEV 681FT

LEEDS BRADFORD
EGNM

GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.	
BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET	
ELEVATIONS IN FEET AMSL	681

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS

APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 14/32	Grooved Concrete	51/R/B/W/T	-
Main Apron	Concrete	61/R/A/W/T	662ft amsl
Taxiway A	Concrete	61/R/A/W/T	-
Taxiway D	Concrete	61/R/A/W/T	-
Taxiway F	Asphalt	32/F/A/W/U	-
Taxiway G	Asphalt	32/F/A/W/U	-
Taxiway L	Asphalt	59/F/D/X/T	-
Taxiway M	Asphalt	-	-
Taxiway N	Asphalt	-	-



COM		
ATIS	118.025	LEEDS INFORMATION
RAD	134.575	LEEDS RADAR
TWR	120.300	LEEDS TOWER
	121.800	LEEDS DELIVERY
	121.600	LEEDS FIRE

LIGHTING	
THR 14/32	HI green with HI W bars.
RWY 14/32	HI elev bi-d edge with LI omni-d component. HI colour coded C/L. End lights red. TDZ 900m (RWY 32 only).
TWY	Blue edge colour coded via D3, B and C exits.

CHANGE (3/17): COM (LEEDS RADAR FREQUENCY) AMENDED.

AERO INFO DATE 30 NOV 16

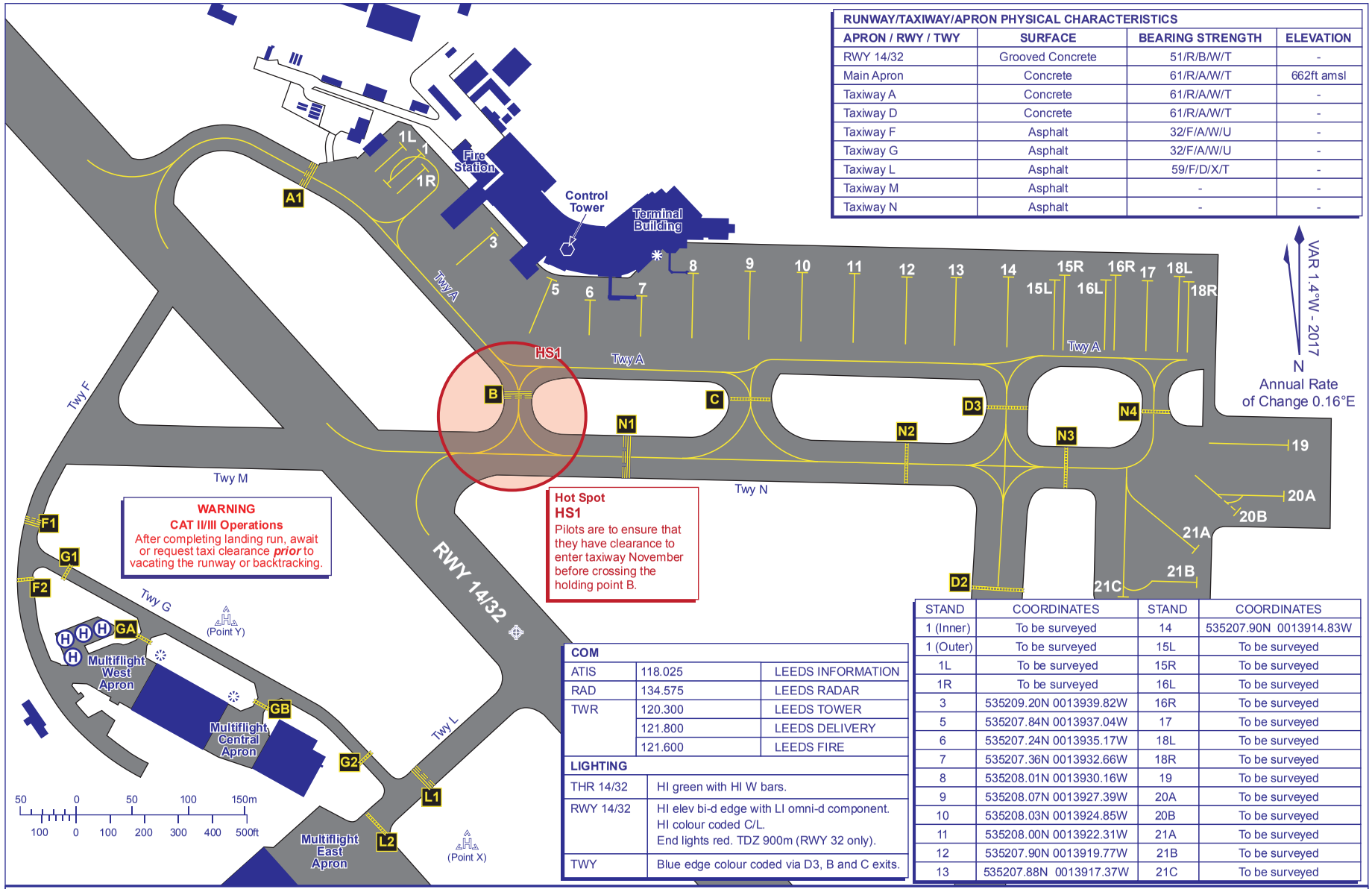
AIRCRAFT PARKING/DOCKING CHART - ICAO

ARP 535158N 0013939W

AD ELEV 681FT

LEEDS BRADFORD
EGNM

AERO INFO DATE 30 NOV 16



RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 14/32	Grooved Concrete	51/R/B/W/T	-
Main Apron	Concrete	61/R/A/W/T	662ft amsl
Taxiway A	Concrete	61/R/A/W/T	-
Taxiway D	Concrete	61/R/A/W/T	-
Taxiway F	Asphalt	32/F/A/W/U	-
Taxiway G	Asphalt	32/F/A/W/U	-
Taxiway L	Asphalt	59/F/D/X/T	-
Taxiway M	Asphalt	-	-
Taxiway N	Asphalt	-	-

WARNING
CAT II/III Operations
After completing landing run, await or request taxi clearance ***prior*** to vacating the runway or backtracking.

Hot Spot
HS1
Pilots are to ensure that they have clearance to enter taxiway November before crossing the holding point B.

COM		
ATIS	118.025	LEEDS INFORMATION
RAD	134.575	LEEDS RADAR
TWR	120.300	LEEDS TOWER
	121.800	LEEDS DELIVERY
	121.600	LEEDS FIRE

LIGHTING	
THR 14/32	HI green with HI W bars.
RWY 14/32	HI elev bi-d edge with LI omni-d component. HI colour coded C/L. End lights red. TDZ 900m (RWY 32 only).
TWY	Blue edge colour coded via D3, B and C exits.

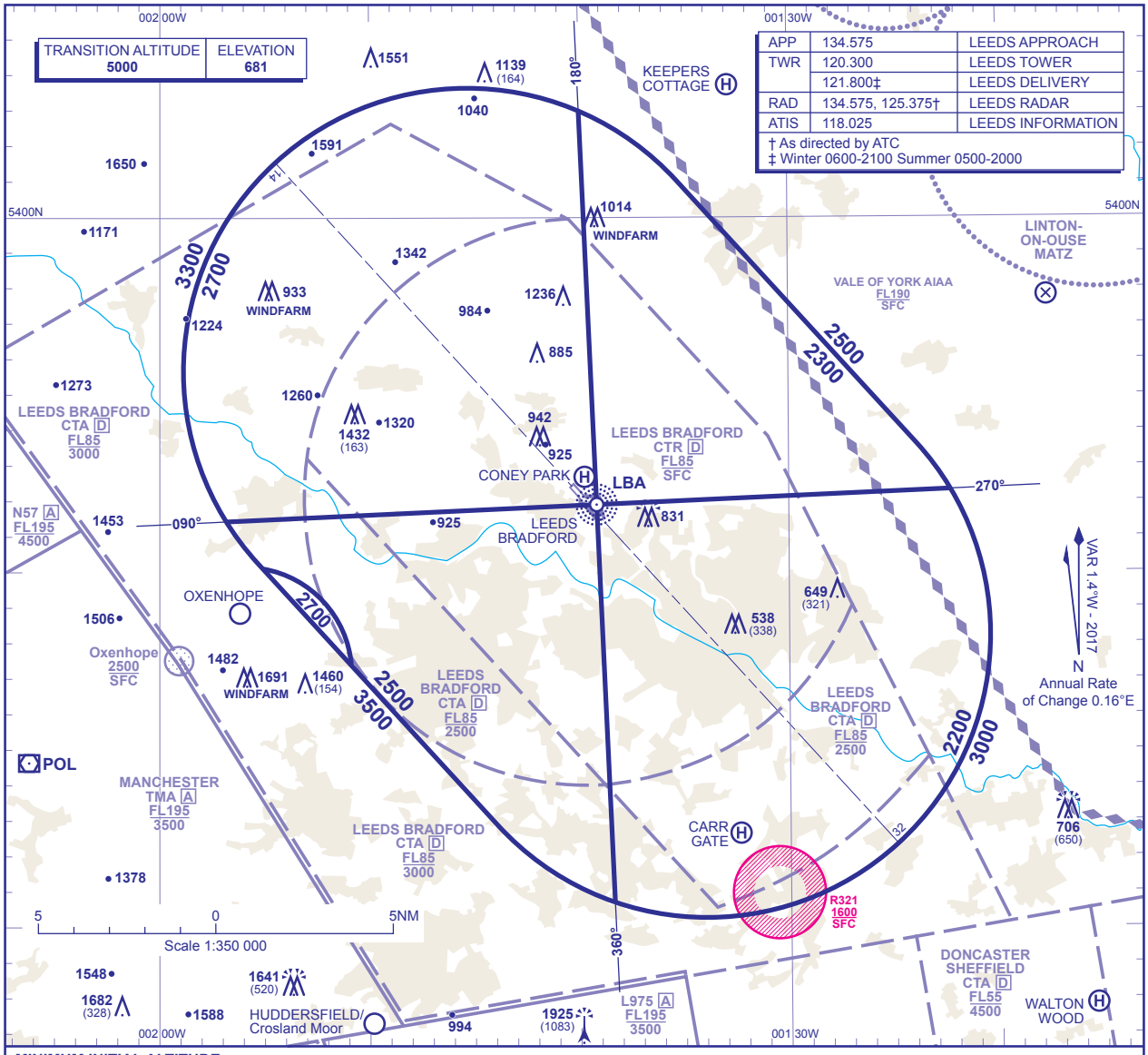
STAND	COORDINATES	STAND	COORDINATES
1 (Inner)	To be surveyed	14	535207.90N 0013914.83W
1 (Outer)	To be surveyed	15L	To be surveyed
1L	To be surveyed	15R	To be surveyed
1R	To be surveyed	16L	To be surveyed
3	535209.20N 0013939.82W	16R	To be surveyed
5	535207.84N 0013937.04W	17	To be surveyed
6	535207.24N 0013935.17W	18L	To be surveyed
7	535207.36N 0013932.66W	18R	To be surveyed
8	535208.01N 0013930.16W	19	To be surveyed
9	535208.07N 0013927.39W	20A	To be surveyed
10	535208.03N 0013924.85W	20B	To be surveyed
11	535208.00N 0013922.31W	21A	To be surveyed
12	535207.90N 0013919.77W	21B	To be surveyed
13	535207.88N 0013917.37W	21C	To be surveyed

CHANGE (3/17): COM (LEEDS RADAR FREQUENCY) AMENDED.

ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ELEVATIONS IN FEET AMSL **1924**
HEIGHTS IN FEET AGL (1084)

LEEDS BRADFORD



MINIMUM INITIAL ALTITUDE
Within the ATC Surveillance Minimum Altitude area the minimum initial altitude to be allocated by the approach surveillance controller is:
a) **2700** in the sector defined by the lateral limits; 535126N 0015650W thence clockwise by an arc of a circle radius 8NM centred on 535539N 0014519W to 540259N 0013958W - 535154N 0013910W - 535126N 0015650W.
b) **2300** in the sector defined by the lateral limits; 540259N 0013958W thence clockwise by an arc of a circle radius 8NM centred on 535539N 0014519W to 540101N 0013518W - 535337N 0012356W thence clockwise by an arc of a circle radius 8NM centred on 534815N 0013358W to 535218N 0012219W - 535154N 0013910W - 540259N 0013958W.
c) **2200** in the sector defined by the lateral limits; 535154N 0013910W - 535218N 0012219W thence clockwise by an arc of a circle radius 8NM centred on 534815N 0013358W to 534042N 0013822W - 535154N 0013910W.
d) **2500** in the sector defined by the lateral limits; 535126N 0015650W - 535154N 0013910W - 534042N 0013822W thence clockwise by an arc of a circle radius 8NM centred on 534815N 0013358W to 534253N 0014356W - 534724N 0015053W thence anticlockwise by an arc of a circle radius 3NM centred on 534709N 0015556W to 535007N 0015505W - 535016N 0015519W thence clockwise by an arc of a circle radius 8NM centred on 535539N 0014519W to 535126N 0015650W.
e) **2700** in the sector defined by the lateral limits; 535007N 0015505W thence clockwise by an arc of a circle radius 3NM centred on 534709N 0015556W to 534724N 0015053W - 535007N 0015505W.

OUTSIDE THE DESIGNATED ATC SURVEILLANCE MINIMUM ALTITUDE AREA
The minimum altitude to be allocated by the approach surveillance controller will be either the Minimum Sector Altitude, or **1000** above any fixed obstacles:
a) within 5NM of the aircraft*, and
b) within the sector 15NM ahead of and within 20° either side of the aircraft's track*.
*When the aircraft is within 15NM of the radar antennae, the 5NM in a) and the 15NM in b) may be reduced to 3NM and 10NM respectively.

LOSS OF COMMUNICATION PROCEDURES
Initial Approach
Continue visually or by means of an appropriate approved final approach aid. If not possible proceed at **3000**, or last assigned level if higher to **NDB(L) LBA†**.
Intermediate and Final Approach
Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to **NDB(L) LBA†**.
† In all cases where the aircraft returns to the holding facility the procedure to be adopted is the Radio Failure Procedure detailed at ENR 1.1.3.

GENERAL INFORMATION
1. Levels shown are based on QNH.
2. Only significant obstacles and dominant spot heights are shown.
3. The minimum levels shown within the ATC Surveillance Minimum Altitude Area are in conformance with the Standard European Rules of the Air - SERA.5015.
4. Minimum Sector Altitudes are based on obstacles and spot heights within 25NM of the NDB LBA.
5. Controlled airspace with a base in excess of **5000** or FL55, as appropriate, is not shown.
6. The ATC Surveillance service is provided by Primary and/or Secondary Radar equipment.
7. **This chart should only be used for the cross-checking of assigned altitudes whilst in receipt of an ATC Surveillance service.**

CHANGE (3/17): APP, RADAR FREQ. MAG VAR.

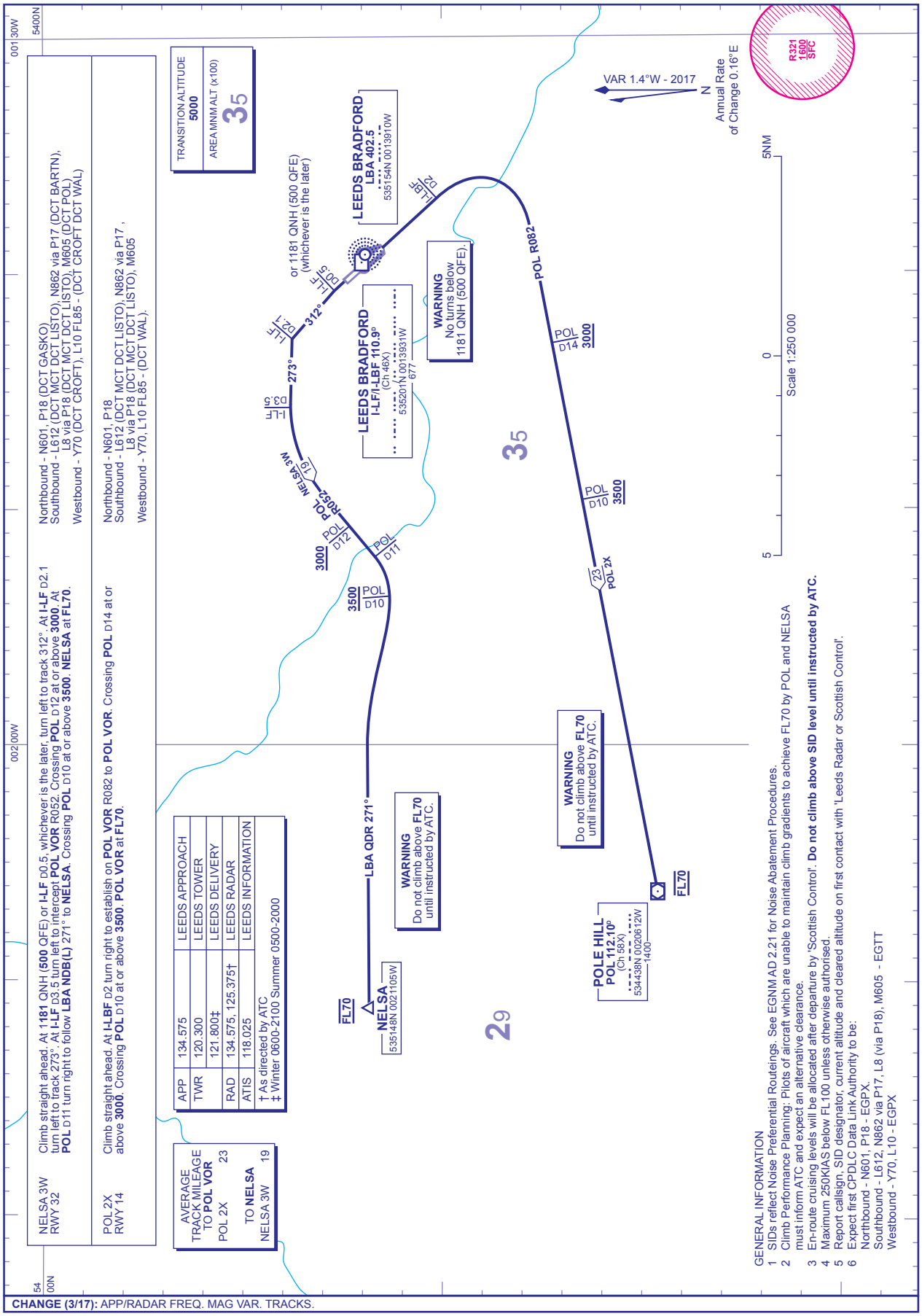
AERO INFO DATE 30 NOV 16

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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LEEDS BRADFORD NELSA/POLE HILL



NELSA 3W RWY 32	Climb straight ahead. At **1181** QNH (**500** QFE) or **I-LF** D0.5, whichever is the later, turn left to track 312°. At **I-LF** D2.1 turn left to track 273°. At **I-LF** D3.5 turn left to intercept **POL VOR** R052. Crossing **POL** D12 at or above **3000**. At **POL** D11 turn right to follow **LBA NDB(L)** 271° to **NELSA**. Crossing **POL** D10 at or above **3500**. **NELSA** at **FL70**.
POL 2X RWY 14	Climb straight ahead. At **I-LBF** D2 turn right to establish on **POL VOR** R082 to **POL VOR**. Crossing **POL** D14 at or above **3000**. Crossing **POL** D10 at or above **3500**. **POL VOR** at **FL70**.

Northbound - N601, P18 (DCT GASKO)
Southbound - L612 (DCT MCT DCT LISTO), N862 via P17 (DCT BARTN), L8 via P18 (DCT MCT DCT LISTO), M605 (DCT POL)
Westbound - Y70 (DCT CROFT), L10 FL85 - (DCT CROFT DCT WAL)

Northbound - N601, P18
Southbound - L612 (DCT MCT DCT LISTO), N862 via P17 , L8 via P18 (DCT MCT DCT LISTO), M605
Westbound - Y70, L10 FL85 - (DCT WAL).

AVERAGE TRACK MILEAGE TO **POL VOR**
POL 2X 23
TO **NELSA**
NELSA 3W 19

APP	134.575 LEEDS APPROACH
TWR	120.300 LEEDS TOWER
	121.800‡ LEEDS DELIVERY
RAD	134.575, 125.375† LEEDS RADAR
ATIS	118.025 LEEDS INFORMATION

† As directed by ATC.
‡ Winter 0600-2100 Summer 0500-2000

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGNM AD 2.21 for Noise Abatement Procedures.
2 Climb Performance Planning: Pilots of aircraft which are unable to maintain climb gradients to achieve FL70 by POL and NELSA must inform ATC and expect an alternative clearance.
3 En-route cruising levels will be allocated after departure by 'Scottish Control'. **Do not climb above SID level until instructed by ATC.**
4 Maximum 250KIAS below FL100 unless otherwise authorised.
5 Report callsign, SID designator, current altitude and cleared altitude on first contact with 'Leeds Radar or Scottish Control'.
6 Expect first CPDLC Data Link Authority to be:
Northbound - N601, P18 - EGPX.
Southbound - L612, N862 via P17, L8 (via P18), M605 - EGTT
Westbound - Y70, L10 - EGPX

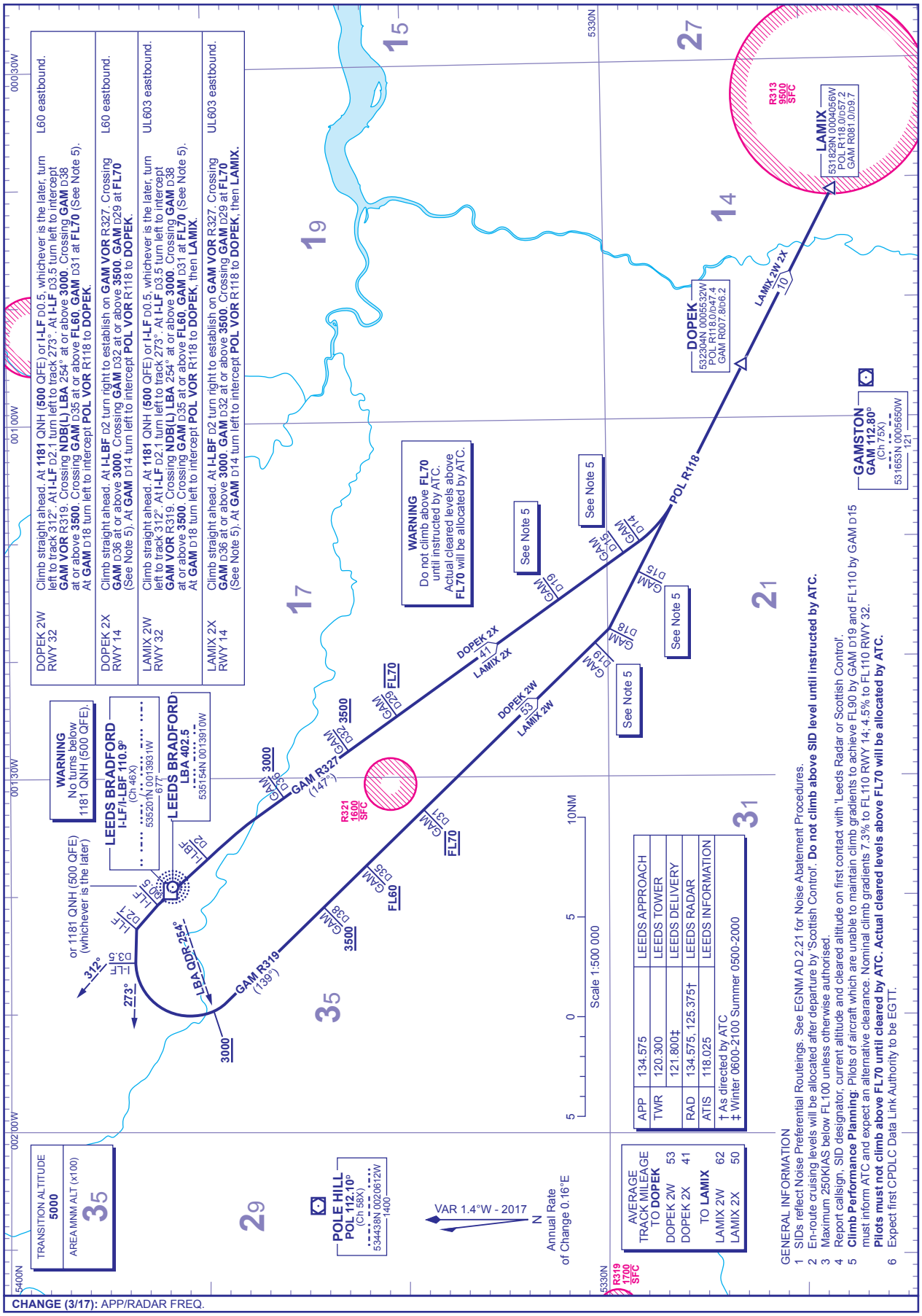
CHANGE (3/17): APP/RADAR FREQ. MAG VAR. TRACKS.

AERO INFO DATE 07 DEC 16

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

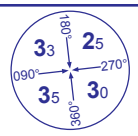
DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LEEDS BRADFORD DOPEK/LAMIX

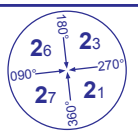


INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
ILS/DME y
RWY 14
(ACFT CAT A,B)

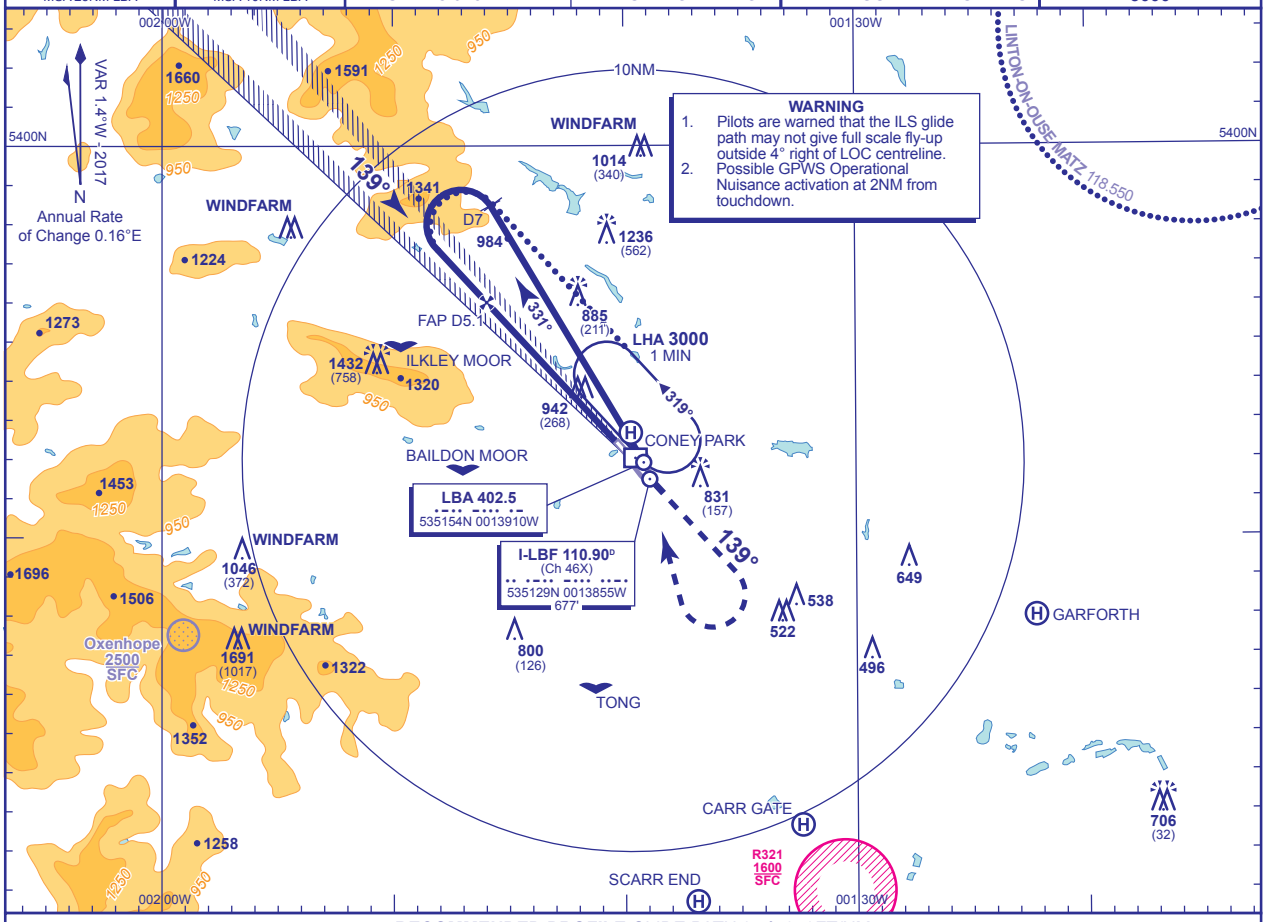


MSA 25NM LBA



MSA 10NM LBA

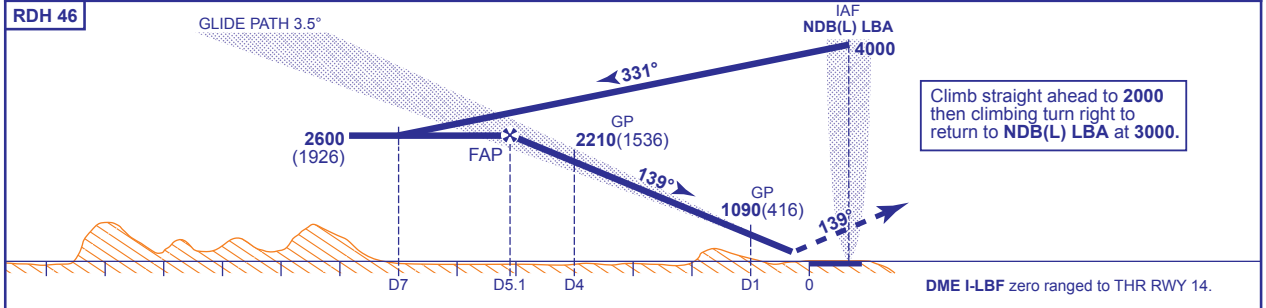
APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	674	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1017) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE GLIDE PATH 3.5°, 370FT/NM

DME I-LBF	5	4	3	2	1
ALT(HGT)	**2580**(1906)	**2210**(1536)	**1840**(1166)	**1460**(786)	**1090**(416)

RDH 46



Aircraft Category		A	B
OCA (OCH)	CAT I	**825**(151)	**835**(161)
VM(C)OCA (OCH AAL)	Total Area	**1320**(639)	**1320**(639)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	740	620	500

ALTERNATIVE PROCEDURE EXTENDED HOLDING PATTERN
Overhead NDB(L) LBA in holding pattern, turn left and descend on extended outbound leg to **2600**(1926). At I-LBF DME 7 turn left to intercept the localizer. When established continue as Main Procedure.

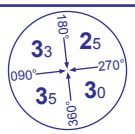
NOTE **1** Lowest altitude to commence procedure from hold is **3000.**
2 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the base turn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

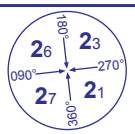
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
ILS/DME z
RWY 14
(ACFT CAT C,D)

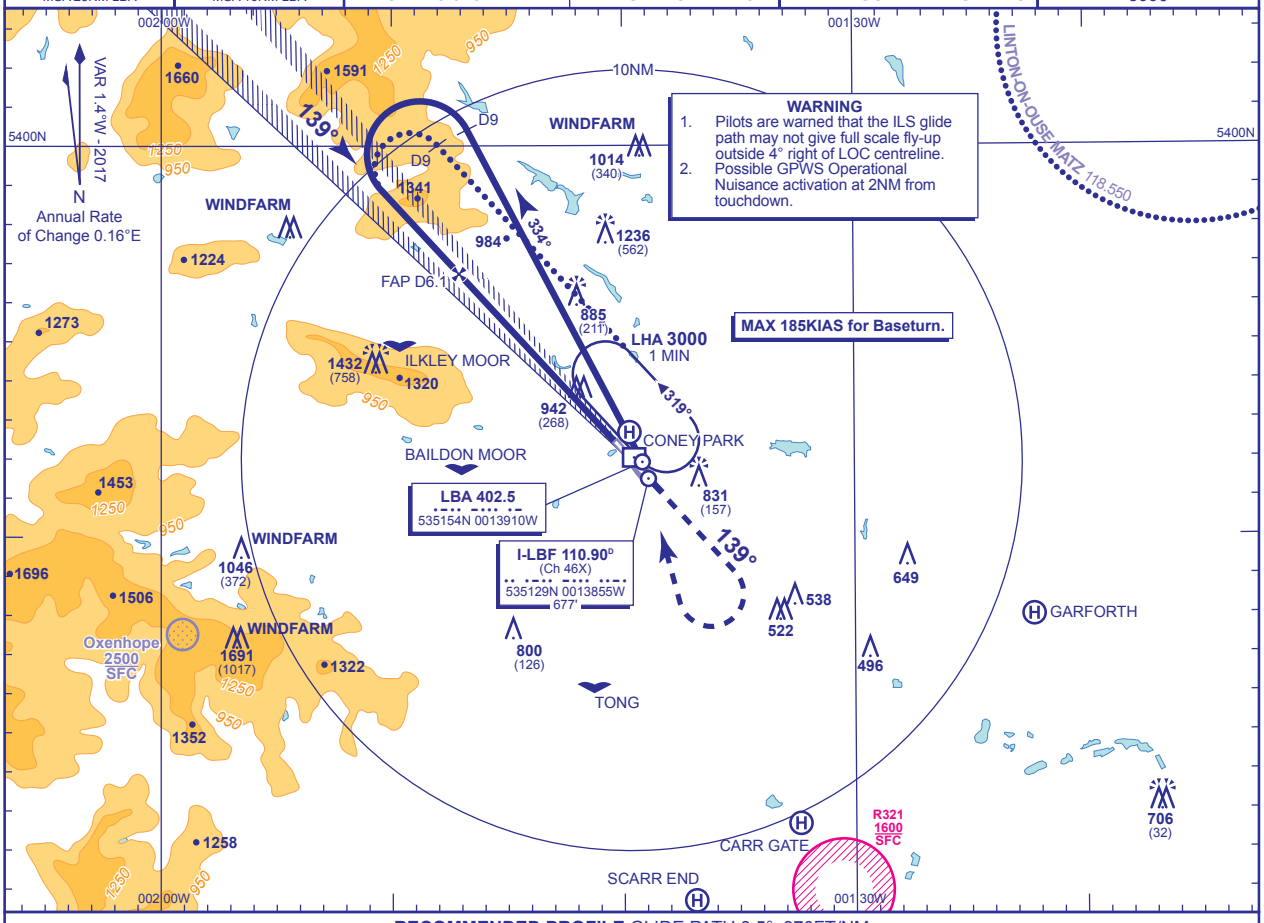


MSA 25NM LBA



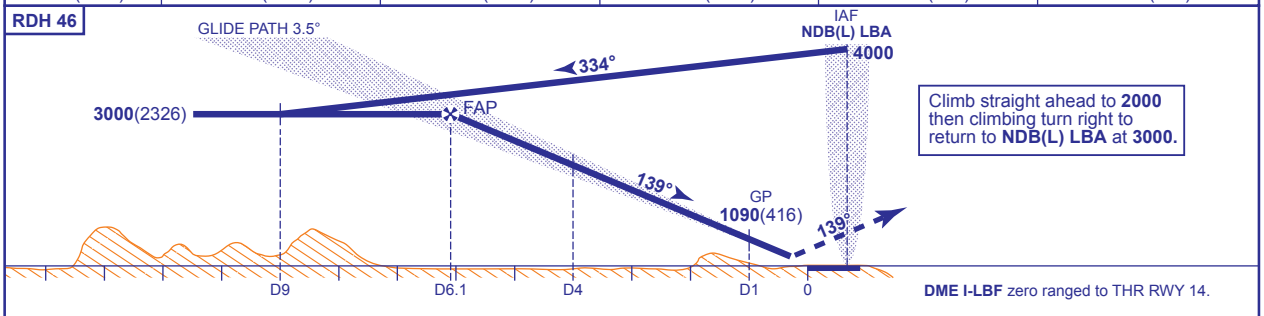
MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	674	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1017) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE GLIDE PATH 3.5°, 370FT/NM

DME I-LBF	5	4	3	2	1
ALT(HGT)	**2580**(1906)	**2210**(1536)	**1840**(1166)	**1460**(786)	**1090**(416)



Aircraft Category		C	D
OCA (OCH)	CAT I	**845**(171)	**855**(181)
VM(C)OCA (OCH AAL)	Total Area	**1420**(739)	**1610**(929)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	740	620	500

ALTERNATIVE PROCEDURE EXTENDED HOLDING PATTERN
Overhead NDB(L) LBA in holding pattern, turn left and descend on extended outbound leg to **3000**(2326). At I-LBF DME 9 turn left to intercept the localizer. When established continue as Main Procedure.

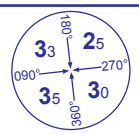
NOTE **1** Lowest altitude to commence procedure from hold is **3000.**
2 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the base turn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

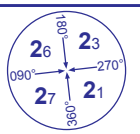
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
LOC/DME y
RWY 14
(ACFT CAT A,B)



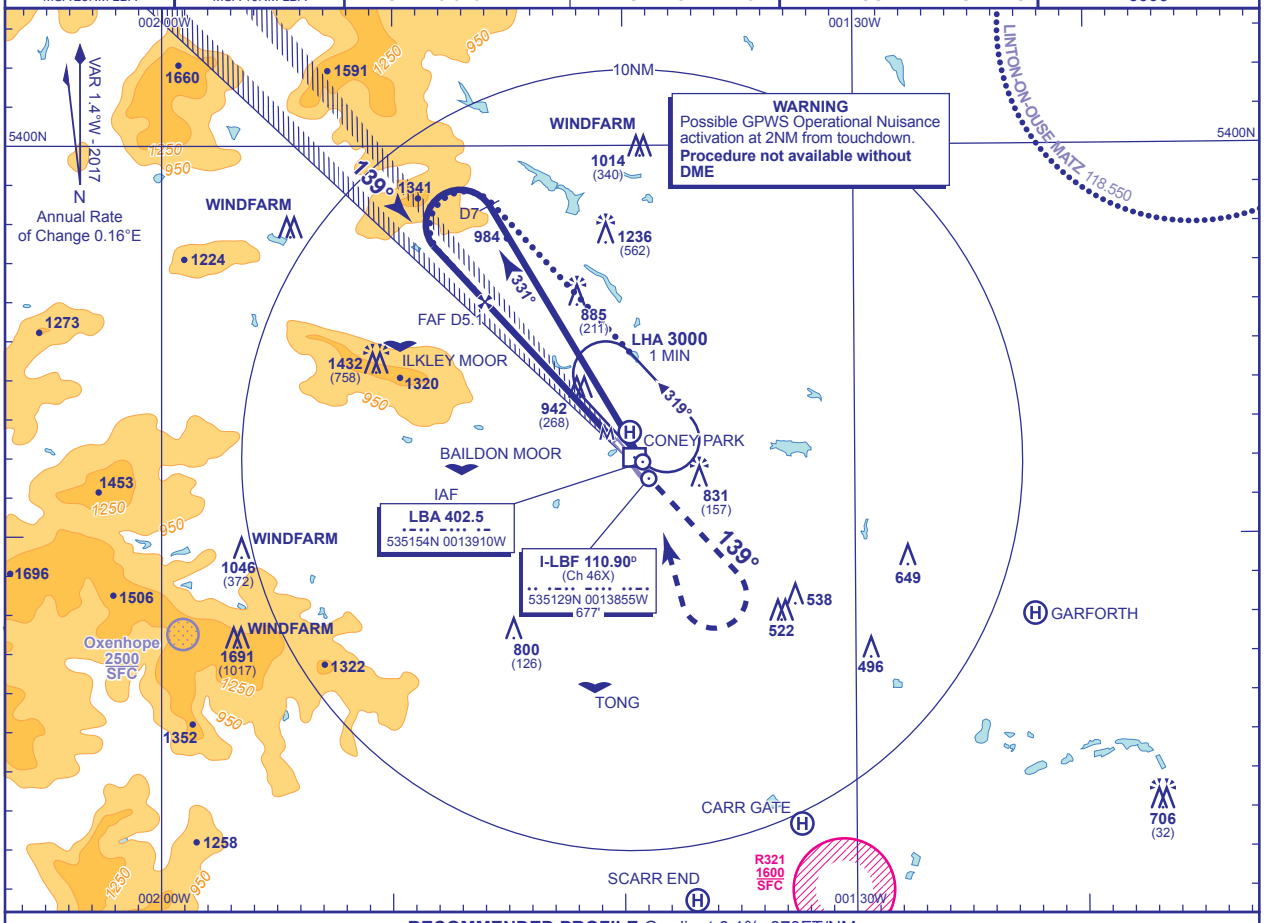
MSA 25NM LBA



MSA 10NM LBA

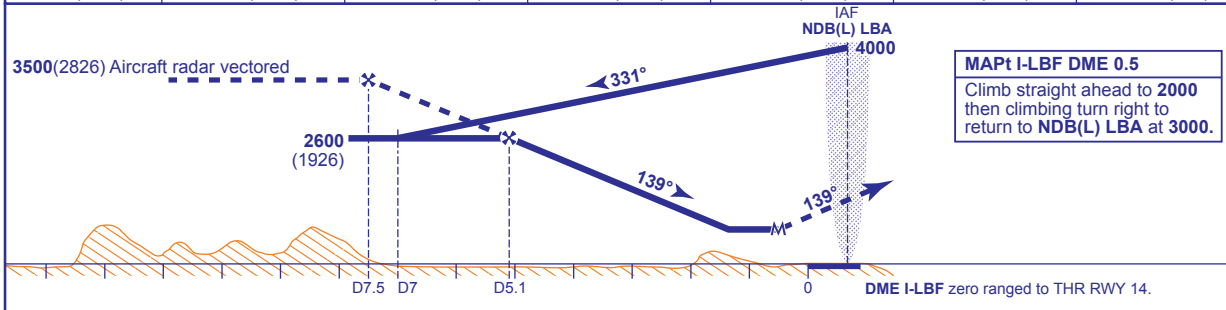
APP	134.575	LEEDS APPROACH	AD ELEVATION	681	
TWR	120.300	LEEDS TOWER	THR ELEVATION	674	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION		
RAD	134.575, 125.375	LEEDS RADAR	1691 AMSL (1017) (ABOVE THR)		
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		

TRANSITION ALTITUDE **5000**



RECOMMENDED PROFILE Gradient 6.1%, 370FT/NM

DME I-LBF	7	6	5	4	3	2
ALT(HGT)	**3320**(2646)	**2950**(2276)	**2580**(1906)	**2210**(1536)	**1840**(1166)	**1460**(786)



MAPt I-LBF DME 0.5
Climb straight ahead to **2000** then climbing turn right to return to **NDB(L) LBA** at **3000.**

Aircraft Category		A	B
OCA (OCH)	Procedure	**1190**(516)	**1190**(516)
VM(C)OCA (OCH AAL)	Total Area	**1320**(639)	**1320**(639)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	740	620	500

ALTERNATIVE PROCEDURE EXTENDED HOLDING PATTERN
Overhead NDB(L) LBA in holding pattern, turn left and descend on extended outbound leg to **2600**(1926). At I-LBF DME 7 turn left to intercept the localizer. When established continue as Main Procedure.

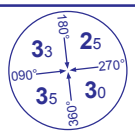
NOTE **1** Lowest altitude to commence procedure from hold is **3000.**
2 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the base turn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

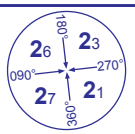
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
LOC/DME z
RWY 14
(ACFT CAT C,D)

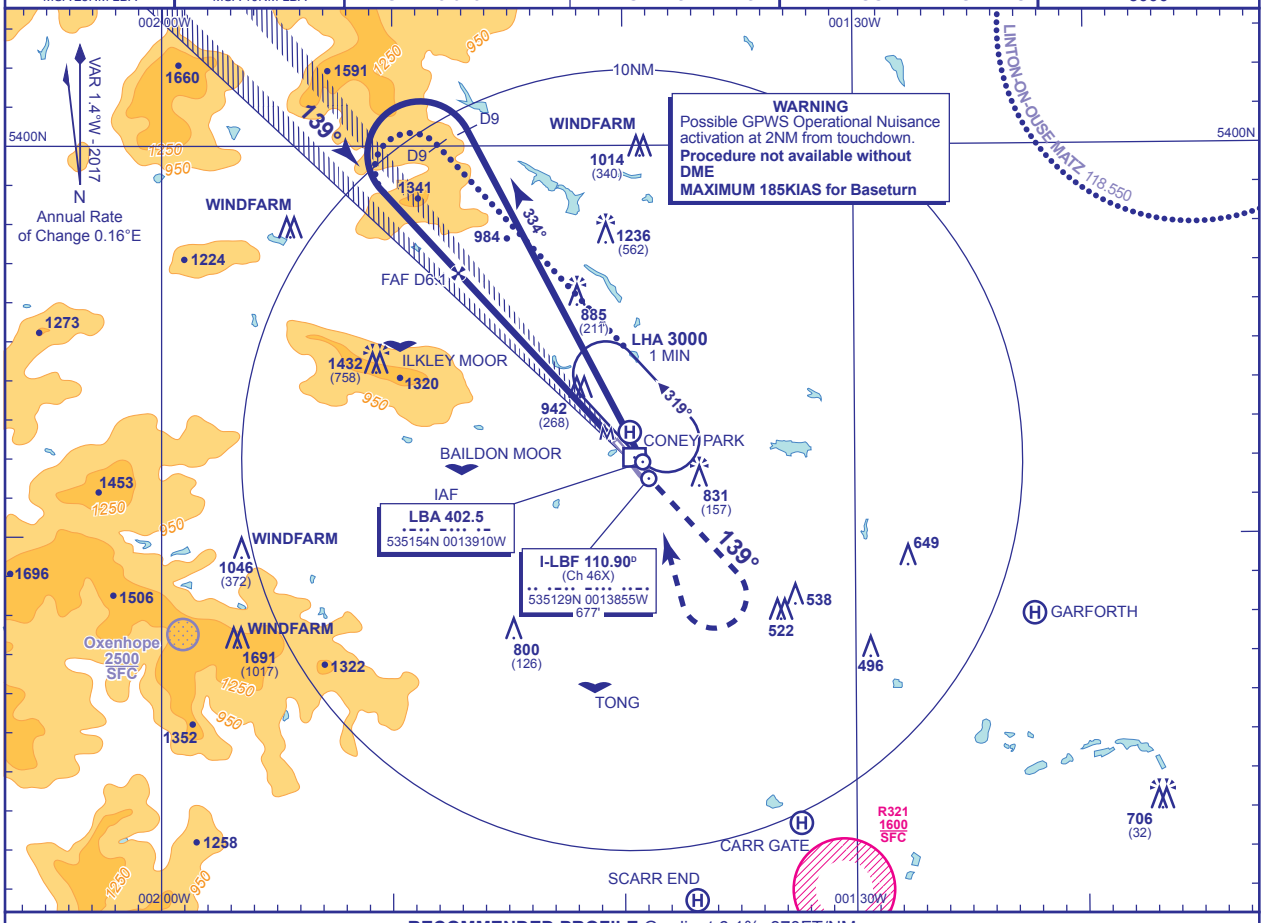


MSA 25NM LBA



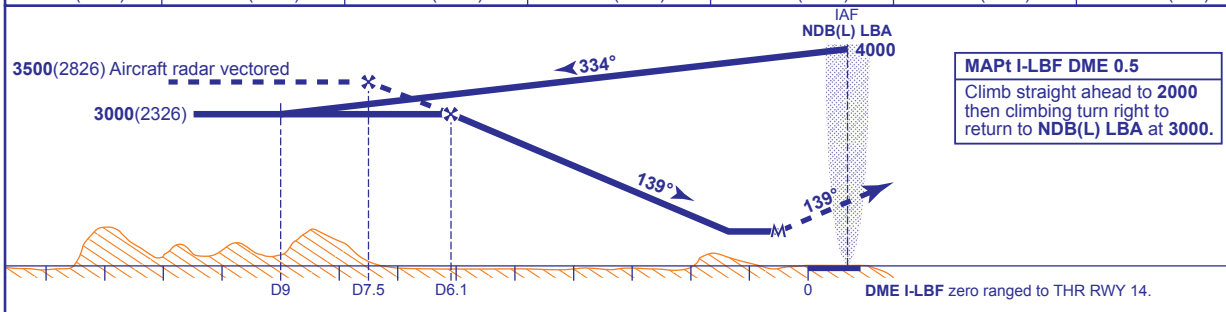
MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	674	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1017) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 6.1%, 370FT/NM

DME I-LBF	7	6	5	4	3	2
ALT(HGT)	**3320**(2646)	**2950**(2276)	**2580**(1906)	**2210**(1536)	**1840**(1166)	**1460**(786)



Aircraft Category		C	D
OCA (OCH)	Procedure	**1190**(516)	**1190**(516)
VM(C)OCA (OCH AAL)	Total Area	**1420**(739)	**1610**(929)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	740	620	500

ALTERNATIVE PROCEDURE EXTENDED HOLDING PATTERN

Overhead NDB(L) LBA in holding pattern, turn left and descend on extended outbound leg to **3000**(2326). At I-LBF DME 9 turn left to intercept the localizer. When established continue as Main Procedure.

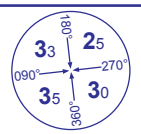
NOTE 1 Lowest altitude to commence procedure from hold is **3000.**
2 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the base turn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

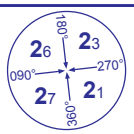
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
NDB(L)/DME y
RWY 14
(ACFT CAT A,B)

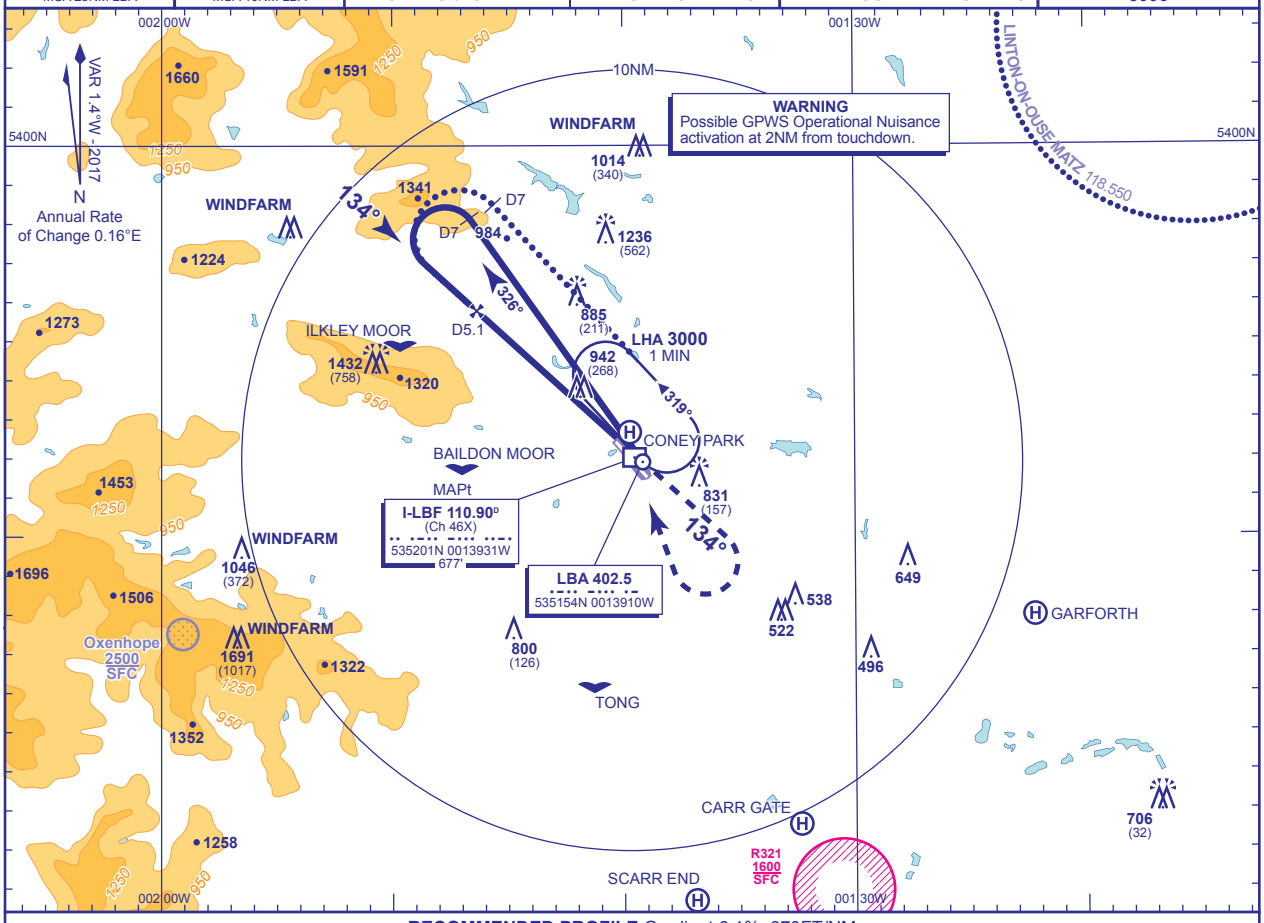


MSA 25NM LBA



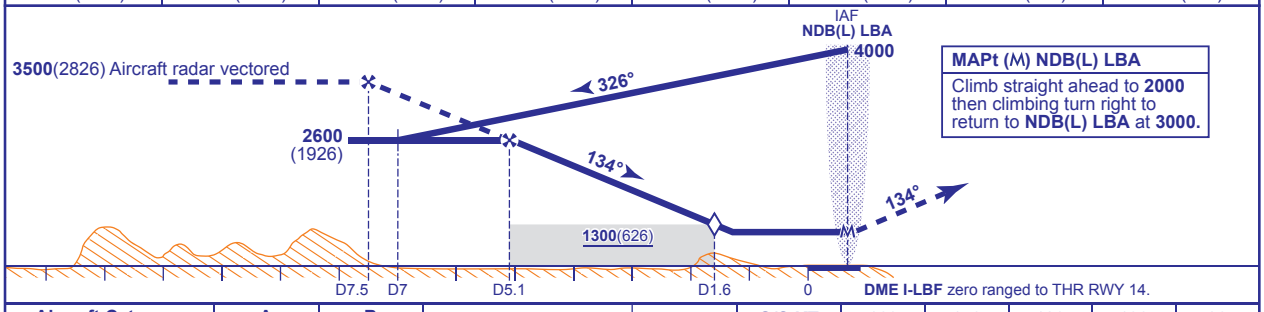
MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	674	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1017) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 6.1%, 370FT/NM

DME I-LBF	7	6	5	4	3	2	1.6 (SDF)
ALT(HGT)	**3340**(2666)	**2960**(2286)	**2590**(1916)	**2220**(1546)	**1840**(1166)	**1470**(796)	**1300**(626)



Aircraft Category		A	B
OCA (OCH)	WITH DME	**1190**(516)	**1190**(516)
	NO DME	**1860**(1186)	**1860**(1186)
VM(C)OCA (OCH AAL)	Total Area	**1320**(639)	**1320**(639)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	750	620	500

ALTERNATIVE PROCEDURE EXTENDED HOLDING PATTERN Overhead NDB(L) LBA in holding pattern, turn left and descend on extended outbound leg to **2600**(1926). At I-LBF DME 7 turn left onto FAT. When established continue as Main Procedure.

ALTERNATIVE TIMED PROCEDURE AIRCRAFT CAT A,B ONLY
Fly procedures, substituting timing of 3MIN on outbound leg, when established inbound on extended FAT descend to MDH.

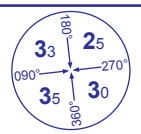
NOTES
1 FAT offset by 5° from RWY C/L.
2 Lowest altitude to commence procedure from hold is **3000.**
3 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the baseturn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. HOLD TRACK.

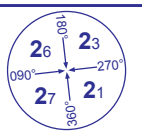
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
NDB(L)/DME z
RWY 14
(ACFT CAT C,D)

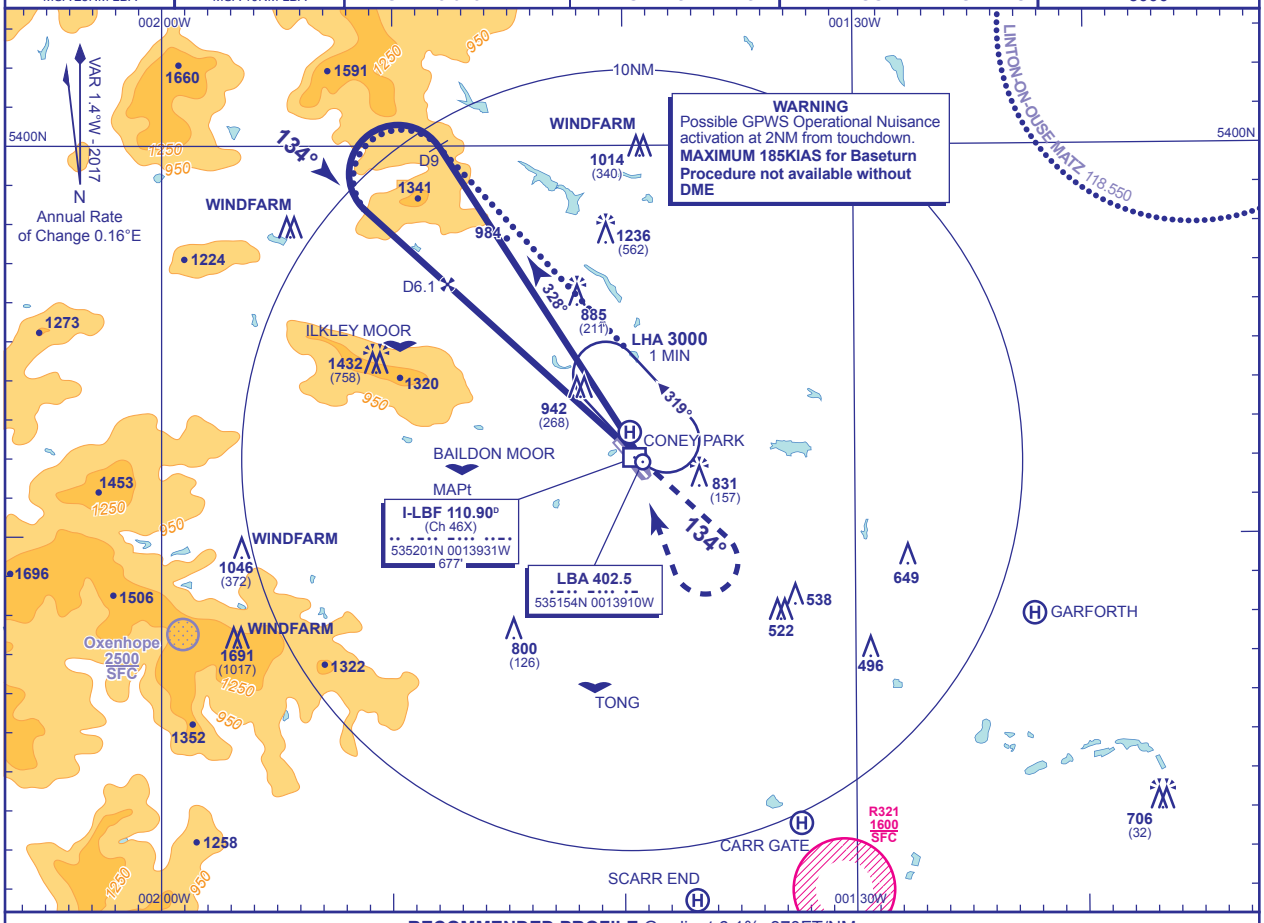


MSA 25NM LBA



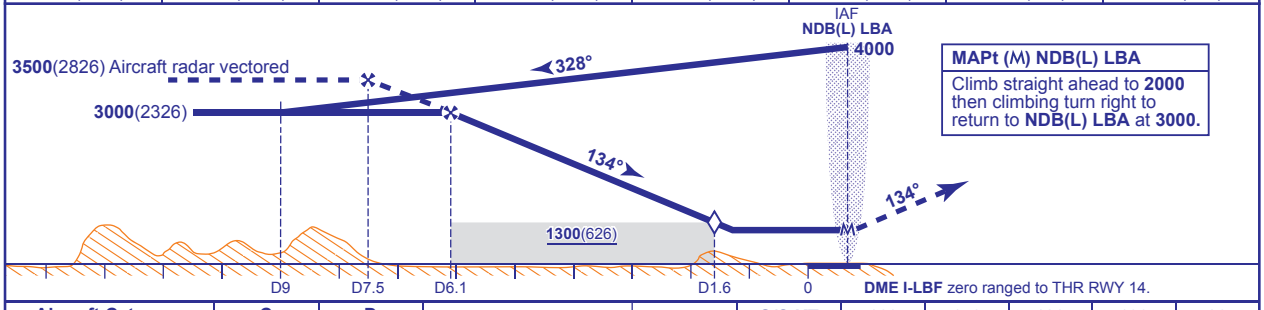
MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	674	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1017) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 6.1%, 370FT/NM

DME I-LBF	7	6	5	4	3	2	1.6 (SDF)
ALT(HGT)	3340(2666)	2960(2286)	2590(1916)	2220(1546)	1840(1166)	1470(796)	1300(626)



MAPt (M) NDB(L) LBA
Climb straight ahead to **2000** then climbing turn right to return to **NDB(L) LBA** at **3000.**

Aircraft Category		C	D
OCA (OCH)	Procedure	1190(516)	1190(516)
VM(C)OCA (OCH AAL)	Total Area	1420(739)	1610(929)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	750	620	500

ALTERNATIVE PROCEDURE EXTENDED HOLDING PATTERN Overhead NDB(L) LBA in holding pattern, turn left and descend on extended outbound leg to **3000**(2326). At I-LBF DME 9 turn left onto FAT. When established continue as Main Procedure.

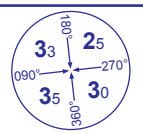
NOTES 1 FAT offset by 5° from RWY C/L.
2 Lowest altitude to commence procedure from hold is **3000.**
3 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the baseturn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

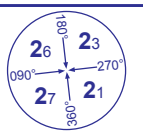
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
ILS/DME/NDB(L)
RWY 32
(ACFT CAT A,B,C,D)



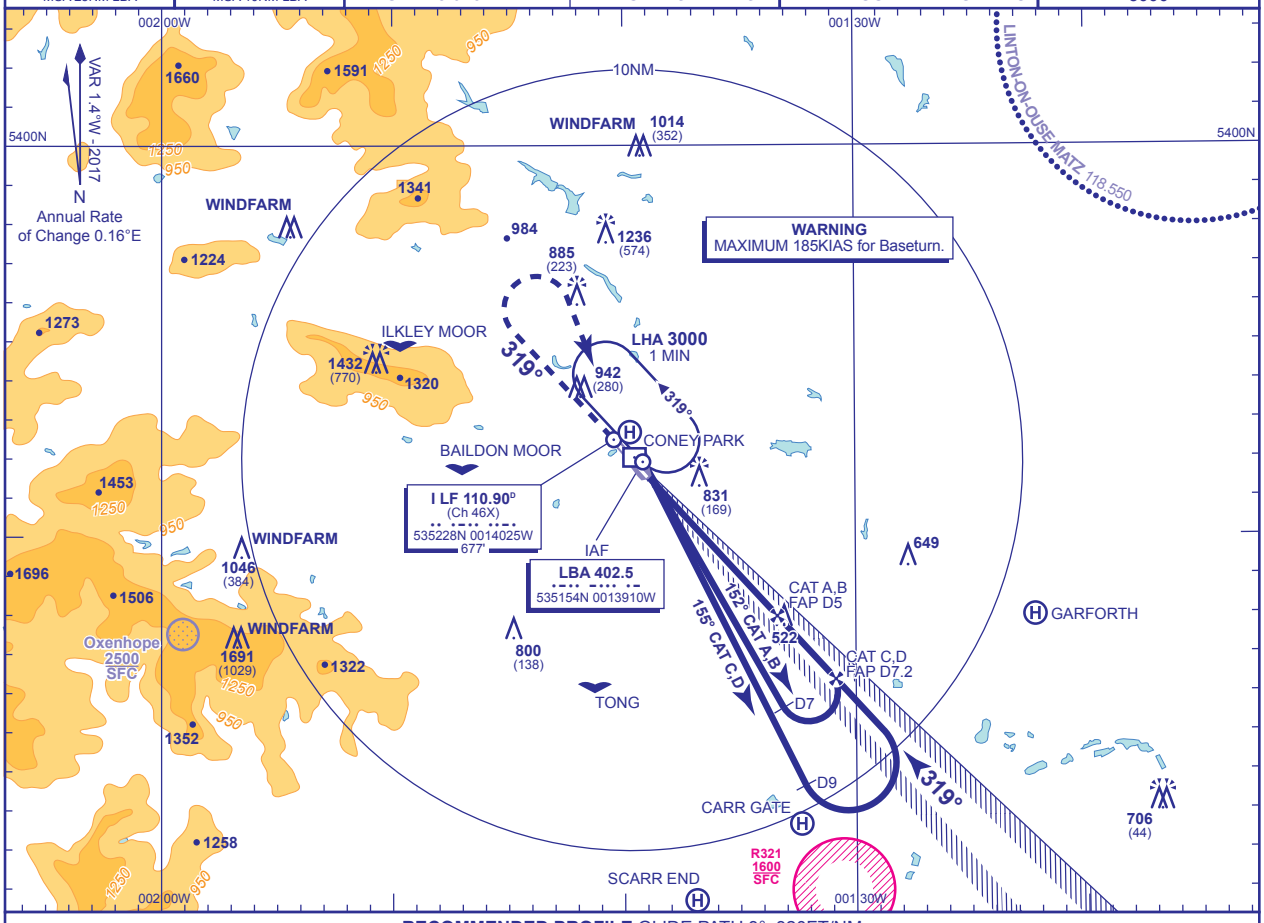
MSA 25NM LBA



MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681
TWR	120.300	LEEDS TOWER	THR ELEVATION	662
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION	
RAD	134.575, 125.375	LEEDS RADAR	1691 AMSL (1029) (ABOVE THR)	
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC	

TRANSITION ALTITUDE **5000**

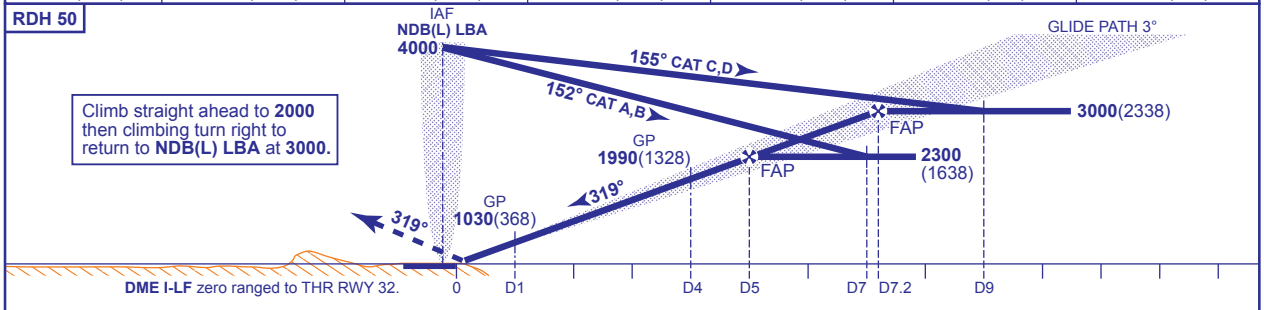


RECOMMENDED PROFILE GLIDE PATH 3°, 320FT/NM

DME I-LF	6	5	4	3	2	1
ALT(HGT)	**2620**(1958)	**2310**(1648)	**1990**(1328)	**1670**(1008)	**1350**(688)	**1030**(368)

RDH 50

Climb straight ahead to **2000** then climbing turn right to return to **NDB(L) LBA** at **3000.**



Aircraft Category		A	B	C	D
OCA (OCH)	CAT I	**832**(170)	**842**(180)	**852**(190)	**872**(210)
	CAT II	**721**(59)	**734**(72)	**748**(86)	**767**(105)
VM(C)OCA (OCH AAL)	Total Area	**1320**(639)	**1320**(639)	**1420**(739)	**1610**(929)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

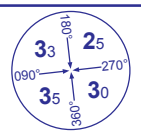
NOTE 1 Lowest altitude to commence procedure from hold is **3000.**
2 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the baseturn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

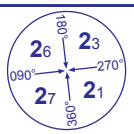
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
LOC/DME/NDB(L)
RWY 32
(ACFT CAT A,B,C,D)

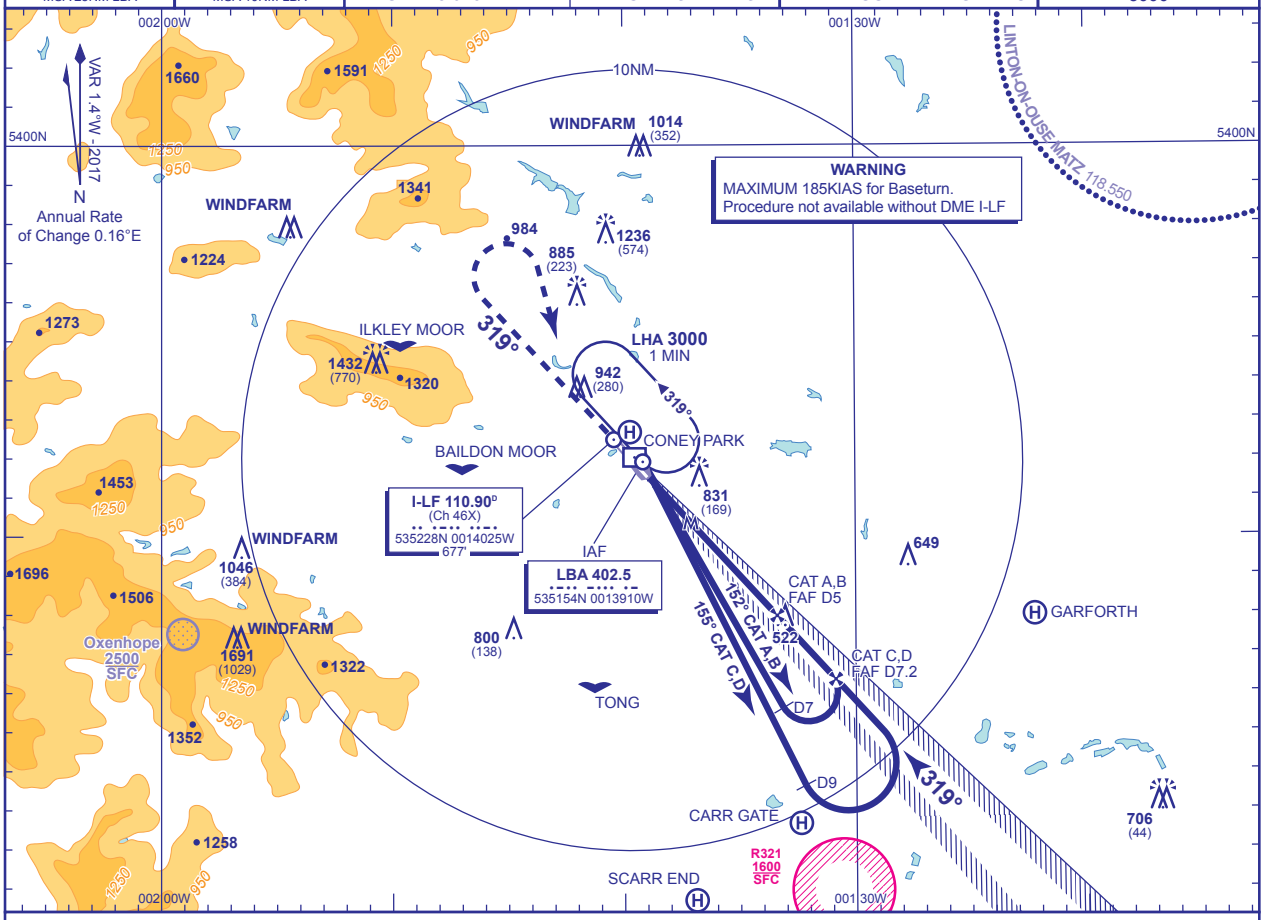


MSA 25NM LBA



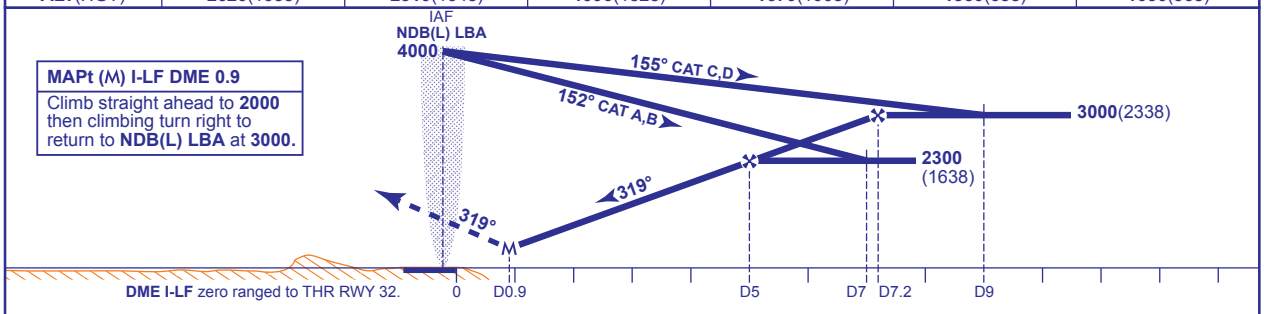
MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	662	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1029) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 5.2%, 320FT/NM

DME I-LF	6	5	4	3	2	1
ALT(HGT)	**2620**(1958)	**2310**(1648)	**1990**(1328)	**1670**(1008)	**1350**(688)	**1030**(368)



MAPt (M) I-LF DME 0.9
Climb straight ahead to **2000** then climbing turn right to return to **NDB(L) LBA** at **3000.**

Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**970**(308)	**970**(308)	**970**(308)	**970**(308)
VM(C)OCA (OCH AAL)	Total Area	**1320**(639)	**1320**(639)	**1420**(739)	**1610**(929)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

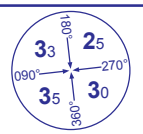
NOTE 1 Lowest altitude to commence procedure from hold is **3000.**
2 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the baseturn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

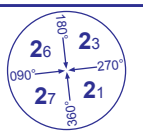
AERO INFO DATE 22 NOV 16

INSTRUMENT APPROACH CHART - ICAO

LEEDS BRADFORD
NDB(L) DME
RWY 32
(ACFT CAT A,B,C,D)

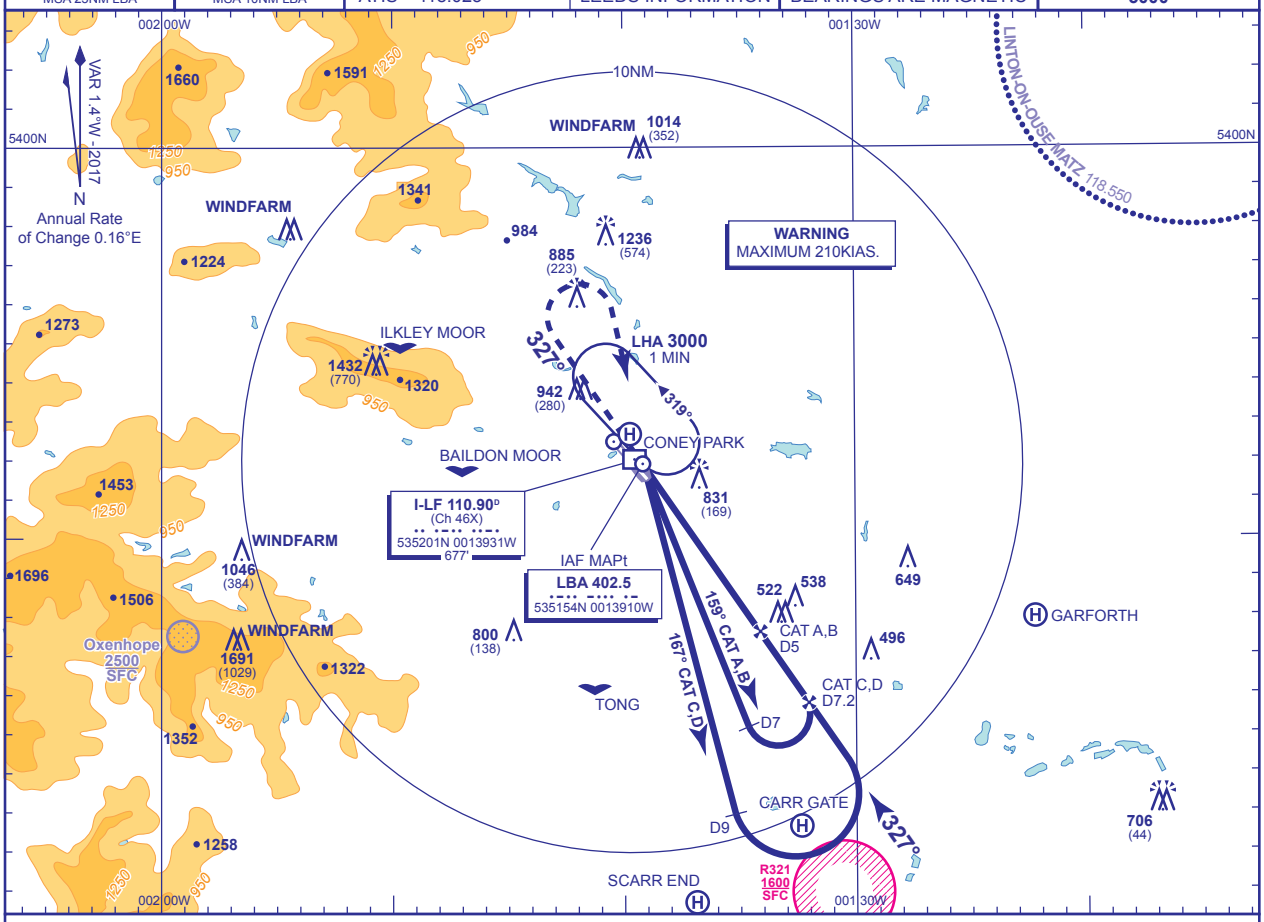


MSA 25NM LBA



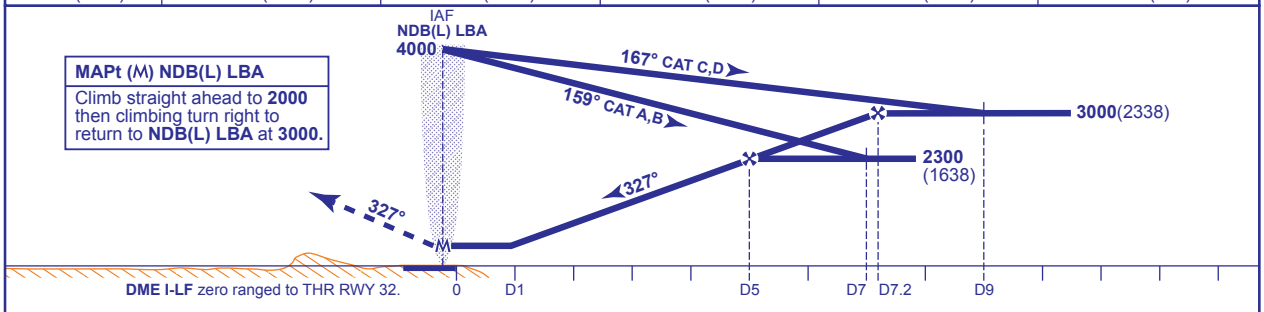
MSA 10NM LBA

APP	134.575	LEEDS APPROACH	AD ELEVATION	681	TRANSITION ALTITUDE 5000
TWR	120.300	LEEDS TOWER	THR ELEVATION	662	
	121.800	LEEDS DELIVERY	OBSTACLE ELEVATION 1691 AMSL (1029) (ABOVE THR)		
RAD	134.575, 125.375	LEEDS RADAR			
ATIS	118.025	LEEDS INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 5.2%, 320FT/NM

DME I-LF	6	5	4	3	2
ALT(HGT)	**2620**(1958)	**2300**(1638)	**1990**(1328)	**1670**(1008)	**1350**(688)



MAPt (M) NDB(L) LBA
Climb straight ahead to **2000** then climbing turn right to return to **NDB(L) LBA** at **3000.**

Aircraft Category		A	B	C	D
OCA (OCH)	WITH DME	**1050**(388)	**1050**(388)	**1050**(388)	**1050**(388)
	NO DME	**1100**(438)	**1100**(438)	N/A	N/A
VM(C)OCA (OCH AAL)	Total Area	**1320**(639)	**1320**(639)	**1420**(739)	**1610**(929)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	840	740	630	530	420

ALTERNATIVE TIMED PROCEDURE AIRCRAFT CAT A,B ONLY
Fly procedures, substituting timing of 3MIN on outbound leg, when established inbound on extended FAT descend to MDH.

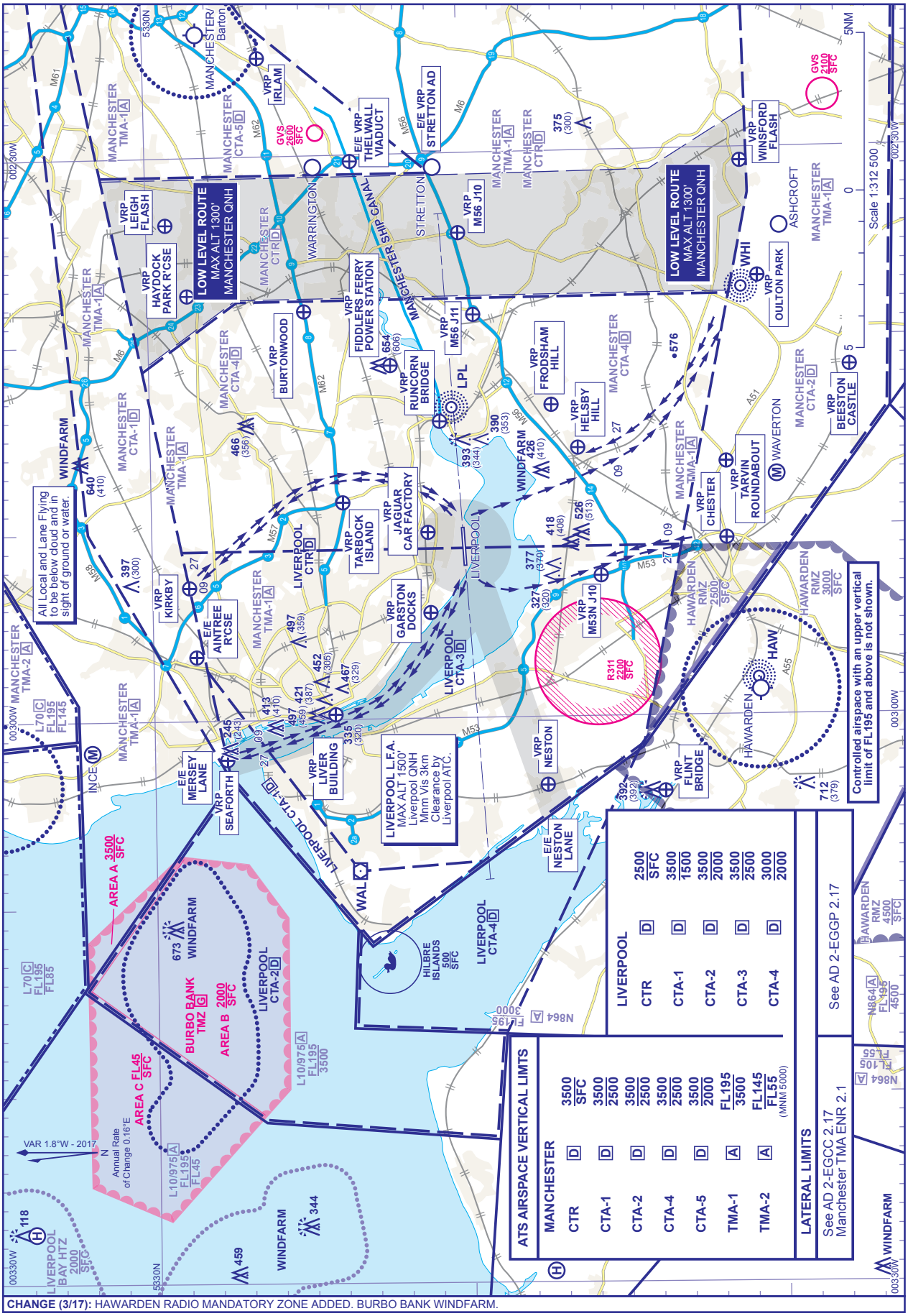
NOTES 1 FAT offset by 7.7° from RWY C/L.
2 Lowest altitude to commence procedure from hold is **3000.**
3 Due to controlled airspace constraints, aircraft may temporarily leave controlled airspace in the baseturn.

CHANGE (3/17): APP & RAD FREQ. MAG VAR. TRACKS.

AERO INFO DATE 22 NOV 16

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CONTROL ZONE AND CONTROL AREA CHART - ENTRY/EXIT LANES AND VRPs — LIVERPOOL



CHANGE (3/17): HAWARDEN RADIO MANDATORY ZONE ADDED. BURBO BANK WINDFARM.

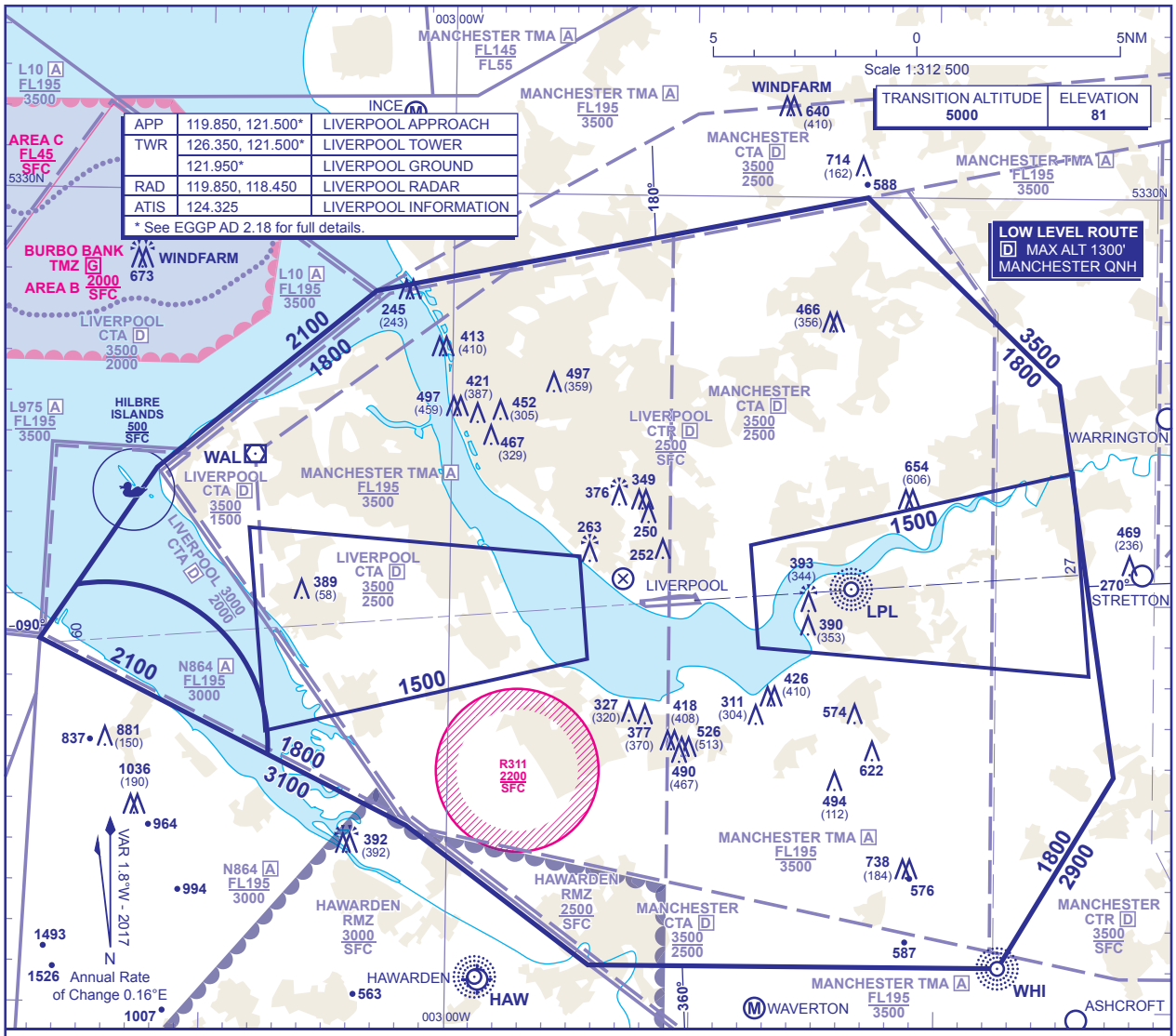
AERO INFO DATE 15 DEC 16

INTENTIONALLY BLANK

ATC SURVEILLANCE MINIMUM ALTITUDE CHART - ICAO

BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ELEVATIONS IN FEET AMSL **1036**
HEIGHTS IN FEET AGL (190)

LIVERPOOL



MINIMUM INITIAL ALTITUDE
Within the ATC Surveillance Minimum Altitude area the minimum initial altitude to be allocated by the approach surveillance controller is:

a) **1800** in the sector defined by the lateral limits; 532014N 0031520W - 532309N 0031205W - 532734N 0030310W - 533000N 0024259W - 532525N 0023502W - 531547N 0023242W - 531106N 0023723W - 531105N 0025408W - 531427N 0030140W - 531609N 0030723W thence anticlockwise by an arc of a circle radius 4NM centred on 531619N 0031403W to 532014N 0031520W.

b) **2100** in the sector defined by the lateral limits; 531609N 0030723W thence anticlockwise by an arc of a circle radius 4NM centred on 531619N 0031403W to 532014N 0031520W - 531855N 0031647W - 531609N 0030723W.

OUTSIDE THE DESIGNATED ATC SURVEILLANCE MINIMUM ALTITUDE AREA
The minimum altitude to be allocated by the approach surveillance controller will be either the Minimum Sector Altitude, or **1000** above any fixed obstacles:

a) within 5NM of the aircraft*, and
b) within the sector 15NM ahead of and within 20° either side of the aircraft's track*.

*When the aircraft is within 15NM of the radar antennae, the 5NM in a) and the 15NM in b) may be reduced to 3NM and 10NM respectively.

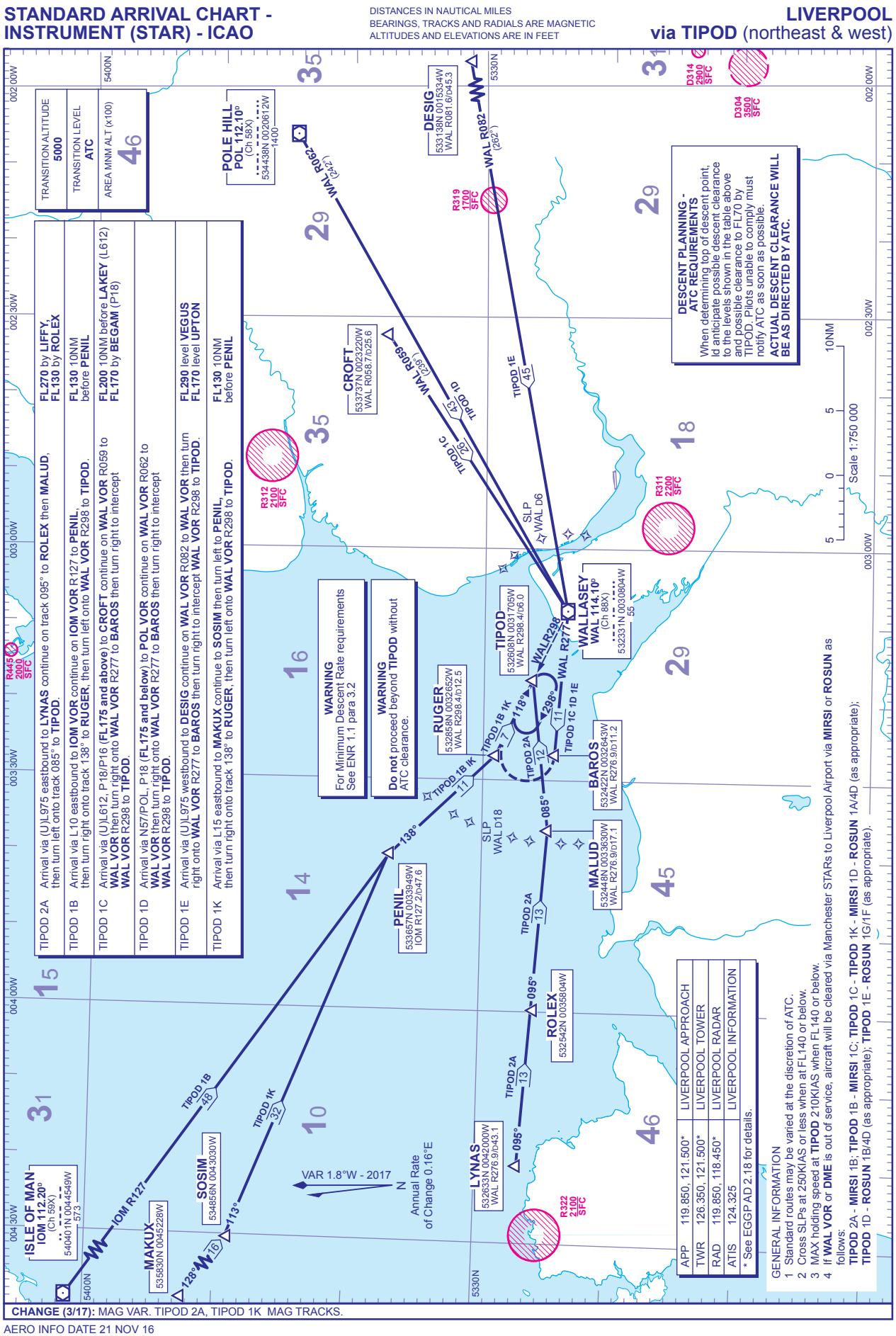
LOSS OF COMMUNICATION PROCEDURES
Initial Approach
Continue visually or by means of an appropriate approved final approach aid. If not possible proceed at **2500**, or last assigned level if higher, to **NDB(L) LPL**†.
Intermediate and Final Approach
Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to **NDB(L) LPL**†.
† In all cases where the aircraft returns to the holding facility the procedure to be adopted is the Radio Failure Procedure detailed at ENR 1.1.3 or the special procedure for the Manchester CTR and TMA (EGGP AD 2.22).

GENERAL INFORMATION
1. Levels shown are based on QNH.
2. Only significant obstacles and dominant spot heights are shown.
3. The minimum levels shown within the ATC Surveillance Minimum Altitude Area are in conformance with the Standard European Rules of the Air - SERA.5015.
4. Minimum Sector Altitudes are based on obstacles and spot heights within 25NM of the Aerodrome Reference Point.
5. Controlled airspace with a base in excess of **5000** or FL55, as appropriate, is not shown.
6. The ATC Surveillance service is provided by Primary and/or Secondary Radar equipment.
7. When receiving Radar Vectors for Runway 27 approaches, pilots should question ATC if no base leg turn has been passed by the time the aircraft reaches 8 DME east of the airfield, due to the proximity of the Manchester CTA.
8. **This chart should only be used for the cross-checking of assigned altitudes whilst in receipt of a ATC Surveillance service.**
9. **When vectoring an aircraft within the Final Approach Vectoring Area descent clearance below the SMAA to the FAVA altitude may only be issued if the aircraft is either established on the final approach track or on an intercept of 40° or less, and in the case of instrument approaches other than SRA is cleared to intercept the final approach track.**

CHANGE (3/17): BURBO BANK TRANSPONDER MANDATORY ZONE ADDED. HAWARDEN RADIO MANDATORY ZONE ADDED. OBSTACLES.

AERO INFO DATE 16 DEC 16

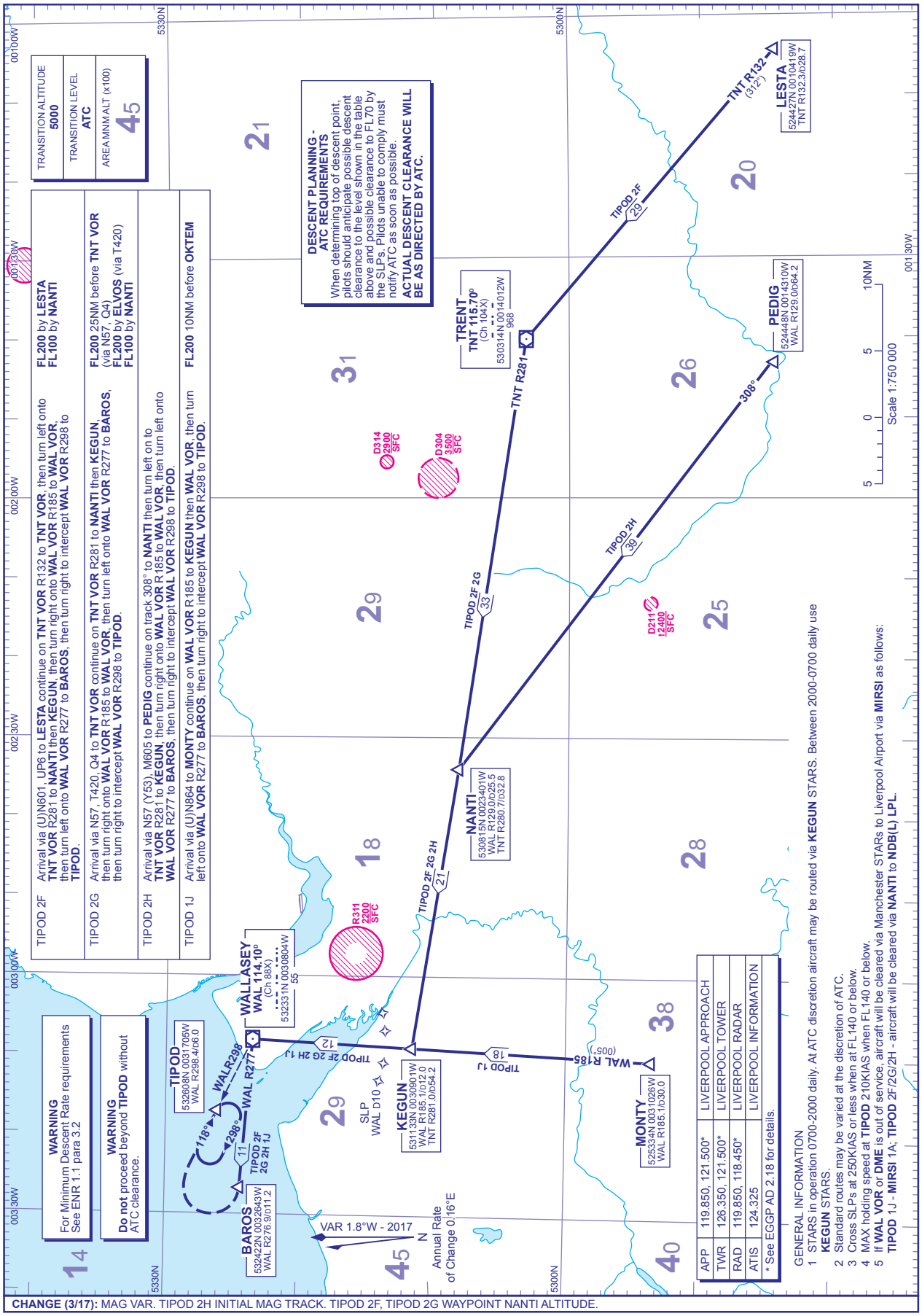
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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET
LIVERPOOL
via TIPOD (northeast & west)
TRANSITION ALTITUDE 5000
TRANSITION LEVEL ATC
AREA MNM ALT (x100) 46
TIPOD 2A Arrival via (U)L975 eastbound to LYNAS continue on track 095° to ROLEX then MALUD, then turn left onto track 085° to TIPOD. FL270 by LIFFY, FL130 by ROLEX
TIPOD 1B Arrival via L10 eastbound to IOM VOR continue on IOM VOR R127 to PENIL, then turn right onto track 138° to RUGER, then turn left onto WAL VOR R298 to TIPOD. FL130 10NM before PENIL
TIPOD 1C Arrival via (U)L612, P18/P16 (FL175 and above) to CROFT continue on WAL VOR R059 to WAL VOR then turn right onto WAL VOR R277 to BAROS then turn right to intercept WAL VOR R298 to TIPOD. FL200 10NM before LAKEY (L612) FL170 by BEGAM (P18)
TIPOD 1D Arrival via N57/POL, P18 (FL175 and below) to POL VOR continue on WAL VOR R062 to WAL VOR then turn right onto WAL VOR R277 to BAROS then turn right to intercept WAL VOR R298 to TIPOD.
TIPOD 1E Arrival via (U)L975 westbound to DESIG continue on WAL VOR R082 to WAL VOR then turn right onto WAL VOR R277 to BAROS then turn right to intercept WAL VOR R298 to TIPOD. FL290 level VEGUS FL170 level UPTON
TIPOD 1K Arrival via L15 eastbound to MAKUX continue to SOSIM then turn left to PENIL, then turn right onto track 138° to RUGER, then turn left onto WAL VOR R298 to TIPOD. FL130 10NM before PENIL
WARNING For Minimum Descent Rate requirements See ENR 1.1 para 3.2
WARNING Do not proceed beyond TIPOD without ATC clearance.
DESCENT PLANNING - ATC REQUIREMENTS When determining top of descent point, id anticipate possible descent clearance to the levels shown in the table above and possible clearance to FL70 by TIPOD. Pilots unable to comply must notify ATC as soon as possible. ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.
ISLE OF MAN IOM 112.20° (Ch 59X) 540401N 0044549W 573
MAKUX 535830N 0045228W
SOSIM 534856N 0043030W
PENIL 533857N 0033949W IOM R127 2/047.6
RUGER 532858N 0032652W WAL R298.4/018.5
LYNAS 532633N 0042000W WAL R276.9/043.1
ROLEX 532542N 0035804W
MALUD 532448N 0033630W WAL R276.9/017.1
BAROS 532422N 0032643W WAL R276.9/011.2
TIPOD 532608N 0031705W WAL R298.4/068.0
WALLASEY WAL 114.10° (Ch 88X) 532331N 0030804W 55
POLE HILL POL 112.10° (Ch 58X) 534438N 0020612W 1400
CROFT 533737N 0023220W WAL R068.7/025.6
DESIG 533138N 0015334W WAL R081.6/045.3
SLP WAL D6
SLP WAL D18
R445 2000 SFC
R312 2100 SFC
R319 1700 SFC
R311 2200 SFC
R322 2100 SFC
D314 2900 SFC
D304 3500 SFC
VAR 1.8°W - 2017 N Annual Rate of Change 0.16°E
APP 119.850, 121.500* LIVERPOOL APPROACH
TWR 126.350, 121.500* LIVERPOOL TOWER
RAD 119.850, 118.450* LIVERPOOL RADAR
ATIS 124.325 LIVERPOOL INFORMATION
* See EGGP AD 2.18 for details.
GENERAL INFORMATION
1 Standard routes may be varied at the discretion of ATC.
2 Cross SLPs at 250KIAS or less when at FL140 or below.
3 MAX holding speed at TIPOD 210KIAS when FL140 or below.
4 If WAL VOR or DME is out of service, aircraft will be cleared via Manchester STARs to Liverpool Airport via MIRSI or ROSUN as follows:
TIPOD 2A - MIRSI 1B; TIPOD 1B - MIRSI 1C; TIPOD 1C - TIPOD 1K - MIRSI 1D - ROSUN 1A/4D (as appropriate);
TIPOD 1D - ROSUN 1B/4D (as appropriate); TIPOD 1E - ROSUN 1G/1F (as appropriate).
Scale 1:750 000
CHANGE (3/17): MAG VAR. TIPOD 2A, TIPOD 1K MAG TRACKS.
AERO INFO DATE 21 NOV 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LIVERPOOL
via TIPOD (south & southeast)



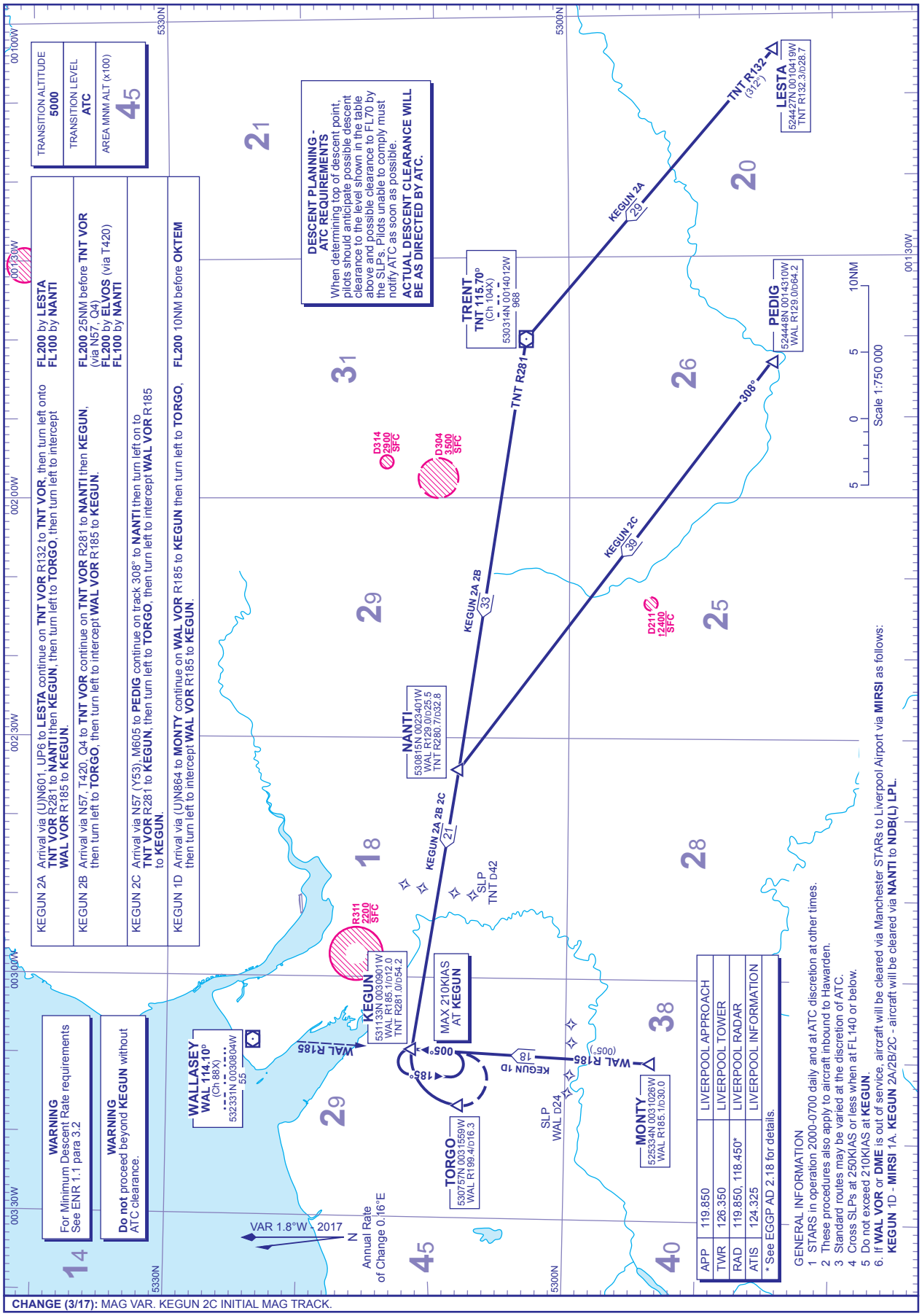
CHANGE (3/17): MAG VAR. TIPOD 2H INITIAL MAG TRACK. TIPOD 2F, TIPOD 2G WAYPOINT NANTI ALTITUDE.

AERO INFO DATE 21 NOV 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LIVERPOOL
via KEGUN (south & southeast)



CHANGE (3/17): MAG VAR. KEGUN 2C INITIAL MAG TRACK.

AERO INFO DATE 21 NOV 16

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AERODROME CHART - ICAO

ARP 513019N 0000319E

AD ELEV 19FT

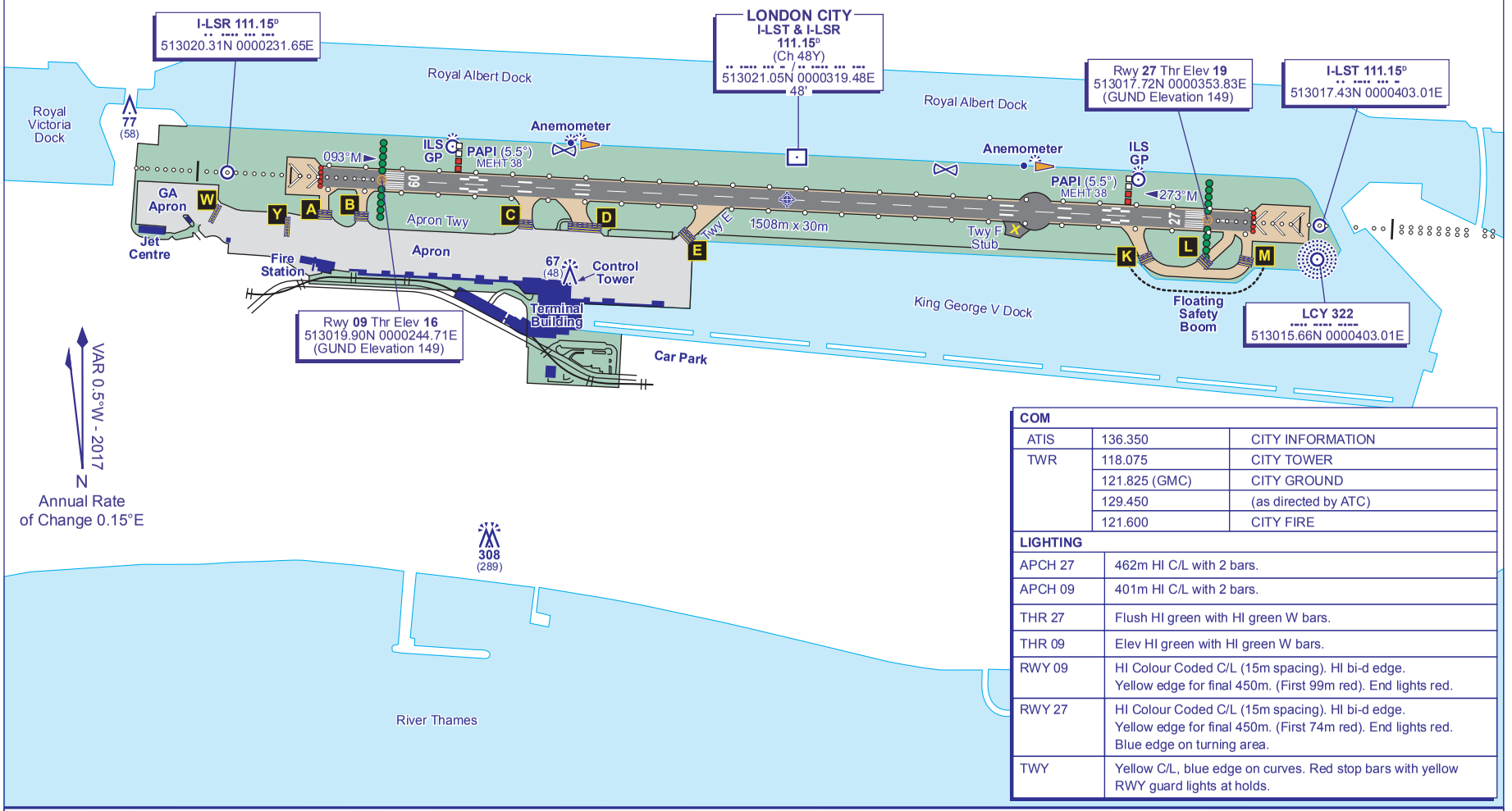
LONDON CITY
EGLC

AERO INFO DATE 05 DEC 16

GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.
BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET
ELEVATIONS IN FEET AMSL **308** HEIGHTS IN FEET ABOVE AD (289)

100 0 100 200 300m
500 0 500 1000ft

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 09/27	Grooved Asphalt	43/F/C/W/T	-
Main Apron	Concrete	30/R/C/Y/T	17ft amsl
Main Taxiway	Concrete	30/R/C/Y/T	-



COM		
ATIS	136.350	CITY INFORMATION
TWR	118.075	CITY TOWER
	121.825 (GMC)	CITY GROUND
	129.450	(as directed by ATC)
	121.600	CITY FIRE

LIGHTING	
APCH 27	462m HI C/L with 2 bars.
APCH 09	401m HI C/L with 2 bars.
THR 27	Flush HI green with HI green W bars.
THR 09	Elev HI green with HI green W bars.
RWY 09	HI Colour Coded C/L (15m spacing). HI bi-d edge. Yellow edge for final 450m. (First 99m red). End lights red.
RWY 27	HI Colour Coded C/L (15m spacing). HI bi-d edge. Yellow edge for final 450m. (First 74m red). End lights red. Blue edge on turning area.
TWY	Yellow C/L, blue edge on curves. Red stop bars with yellow RWY guard lights at holds.

CHANGE (3/17): MAG VAR/ANNUAL RATE OF CHANGE. NEW TWY D CREATED (OLD TWY D REDESIGNATED E). TWY F STUB ADDED. RUNWAY HEADINGS/RUNWAY SURFACE/RUNWAY LIGHTING AMENDED.

AIRCRAFT PARKING/DOCKING CHART - ICAO

ARP 513019N 0000319E

AD ELEV 19FT

LONDON CITY
EGLC

AERO INFO DATE 05 DEC 16

STAND	COORDINATES	STAND	COORDINATES
1	513015.77N 0000259.83E	10	513016.69N 0000239.87E
2	513015.84N 0000257.58E	12	513016.72N 0000237.06E
3	513015.89N 0000255.31E	13	513016.85N 0000234.64E
4	513015.95N 0000253.16E	14	513016.94N 0000232.95E
5	513016.02N 0000251.14E	15	513018.02N 0000226.95E
6	513016.11N 0000248.91E	21	513015.09N 0000302.15E
7	513016.18N 0000246.67E	22	513015.02N 0000304.40E
8	513016.26N 0000244.40E	23	513014.95N 0000306.67E
9	513016.32N 0000242.15E	24	513014.87N 0000308.92E

50 0 50 100m

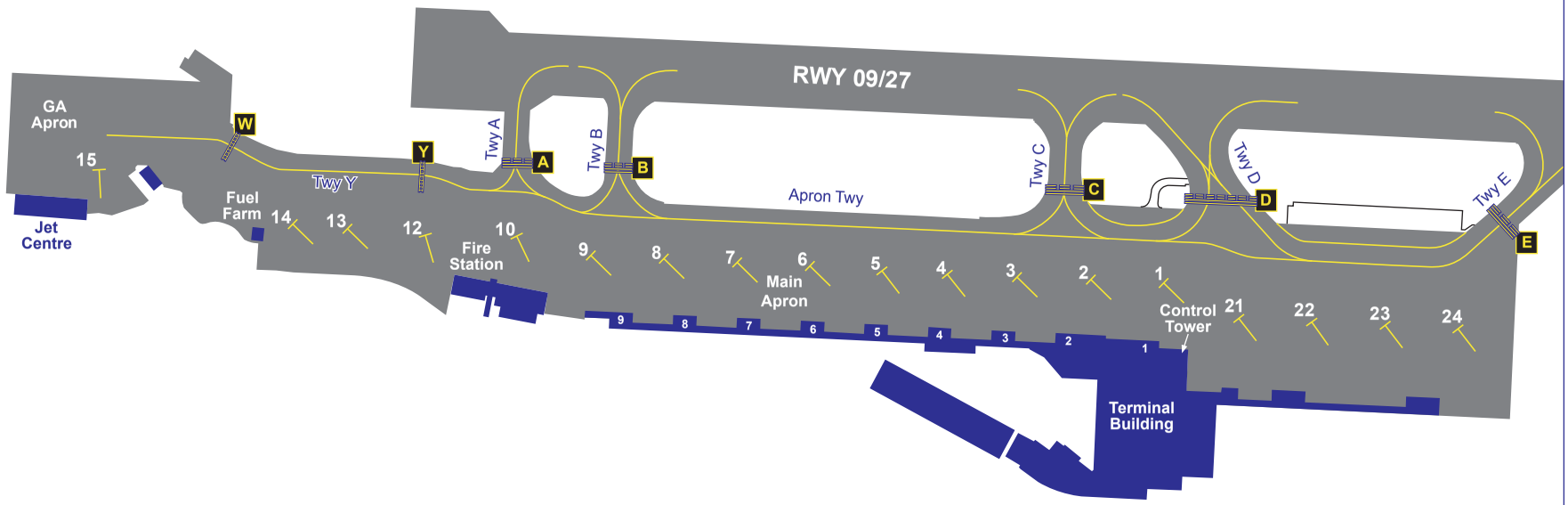
200 100 0 100 200 300 400ft

VAR 0.5°W - 2017

N

Annual Rate of Change 0.15°E

LIGHTING	
APCH 27	462m HI C/L with 2 bars.
APCH 09	401m HI C/L with 2 bars.
THR 27	Flush HI green with HI green W bars.
THR 09	Elev HI green with HI green W bars.
RWY 09	HI Colour Coded C/L (15m spacing). HI bi-d edge. Yellow edge for final 450m. (First 99m red). End lights red.
RWY 27	HI Colour Coded C/L (15m spacing). HI bi-d edge. Yellow edge for final 450m. (First 74m red). End lights red. Blue edge on turning area.
TWY	Yellow C/L, blue edge on curves. Red stop bars with yellow RWY guard lights at holds.



RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 09/27	Grooved Asphalt	43/F/C/W/T	-
Main Apron	Concrete	30/R/C/Y/T	17ft amsl
Main Taxiway	Concrete	30/R/C/Y/T	-

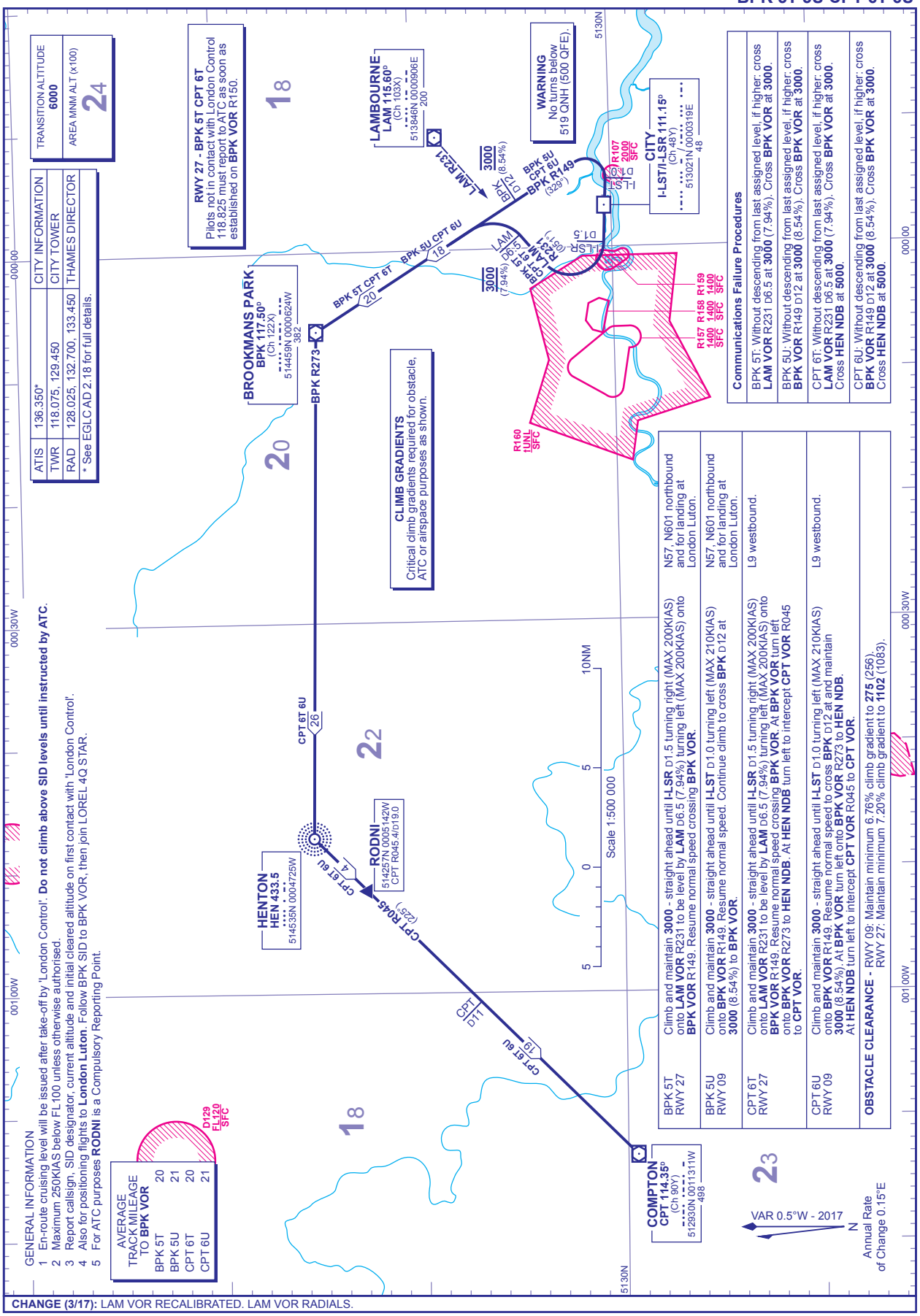
COM		
ATIS	136.350	CITY INFORMATION
TWR	118.075	CITY TOWER
	121.825 (GMC)	CITY GROUND
	129.450	(as directed by ATC)
	121.600	CITY FIRE

CHANGE (3/17): MAG VAR/ANNUAL RATE OF CHANGE. NEW TWY D CREATED (OLD TWY D REDESIGNATED E). RUNWAY SURFACE/RUNWAY LIGHTING AMENDED.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON CITY
RWY 09/27
BPK 5T 5U CPT 6T 6U



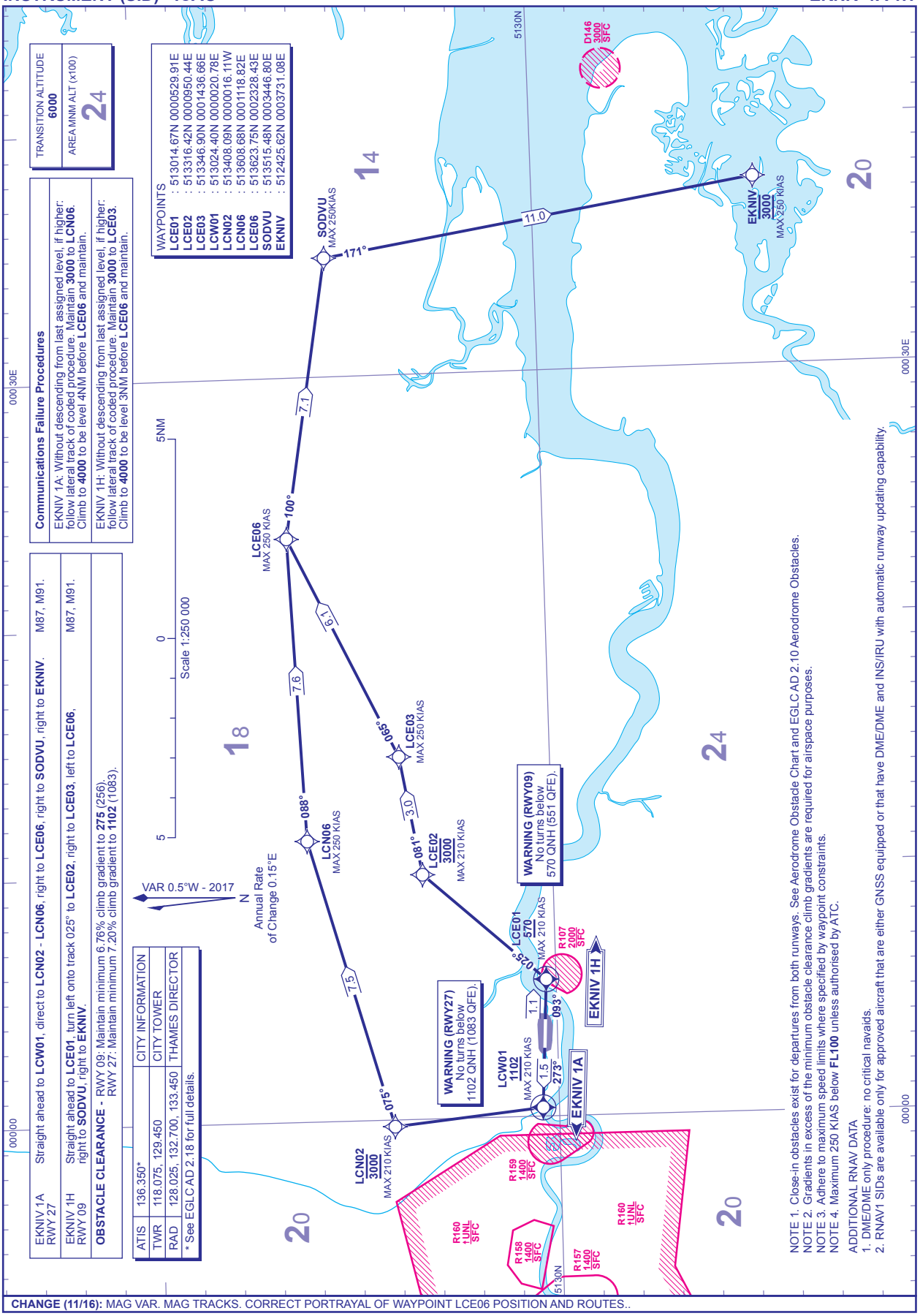
CHANGE (3/17): LAM VOR RECALIBRATED. LAM VOR RADIALS.

AERO INFO DATE 30 NOV 16

RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON CITY
RWY 09/27
EKNIV 1A 1H



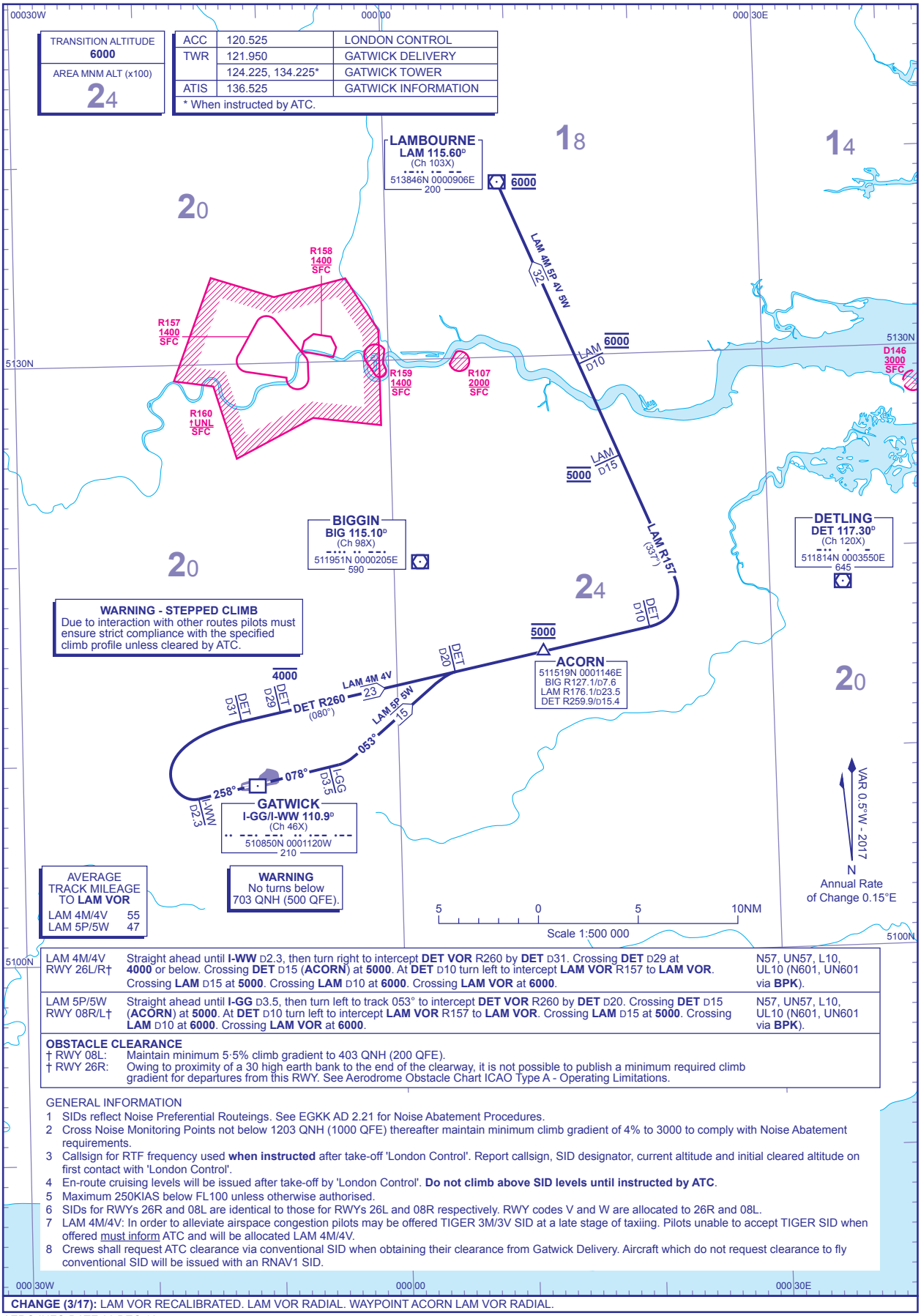
CHANGE (11/16): MAG VAR. MAG TRACKS. CORRECT PORTRAYAL OF WAYPOINT LCE06 POSITION AND ROUTES..

AERO INFO DATE 26 JUL 16

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 08R/L 26L/R
LAM 4M 4V 5P 5W



LAM 4M/4V RWY 26L/R†	Straight ahead until **I-WW** D2.3, then turn right to intercept **DET VOR** R260 by **DET** D31. Crossing **DET** D29 at **4000** or below. Crossing **DET** D15 (**ACORN**) at **5000**. At **DET** D10 turn left to intercept **LAM VOR** R157 to **LAM VOR**. Crossing **LAM** D15 at **5000**. Crossing **LAM** D10 at **6000**. Crossing **LAM VOR** at **6000**.	N57, UN57, L10, UL10 (N601, UN601 via **BPK**).
LAM 5P/5W RWY 08R/L†	Straight ahead until **I-GG** D3.5, then turn left to track 053° to intercept **DET VOR** R260 by **DET** D20. Crossing **DET** D15 (**ACORN**) at **5000**. At **DET** D10 turn left to intercept **LAM VOR** R157 to **LAM VOR**. Crossing **LAM** D15 at **5000**. Crossing **LAM** D10 at **6000**. Crossing **LAM VOR** at **6000**.	N57, UN57, L10, UL10 (N601, UN601 via **BPK**).

OBSTACLE CLEARANCE
† RWY 08L: Maintain minimum 5·5% climb gradient to 403 QNH (200 QFE).
† RWY 26R: Owing to proximity of a 30 high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION

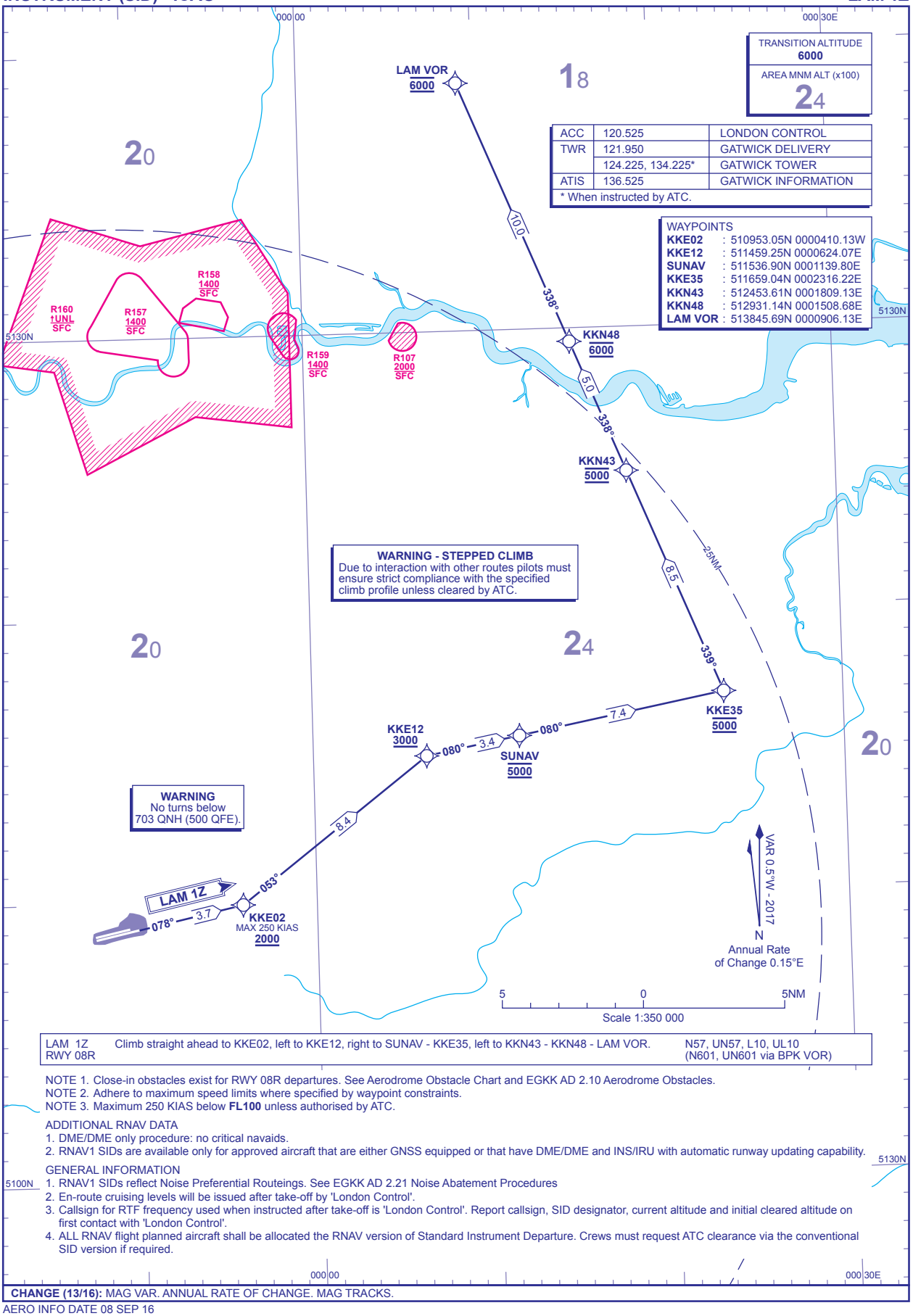
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SIDs for RWYs 26R and 08L are identical to those for RWYs 26L and 08R respectively. RWY codes V and W are allocated to 26R and 08L.
7 LAM 4M/4V: In order to alleviate airspace congestion pilots may be offered TIGER 3M/3V SID at a late stage of taxiing. Pilots unable to accept TIGER SID when offered must inform ATC and will be allocated LAM 4M/4V.
8 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.

CHANGE (3/17): LAM VOR RECALIBRATED. LAM VOR RADIAL. WAYPOINT ACORN LAM VOR RADIAL.
AERO INFO DATE 06 DEC 16

RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 08R
LAM 1Z



LAM 1Z RWY 08R	Climb straight ahead to KKE02, left to KKE12, right to SUNAV - KKE35, left to KKN43 - KKN48 - LAM VOR.	N57, UN57, L10, UL10 (N601, UN601 via BPK VOR)

NOTE 1. Close-in obstacles exist for RWY 08R departures. See Aerodrome Obstacle Chart and EGKK AD 2.10 Aerodrome Obstacles.
NOTE 2. Adhere to maximum speed limits where specified by waypoint constraints.
NOTE 3. Maximum 250 KIAS below **FL100** unless authorised by ATC.

ADDITIONAL RNAV DATA
1. DME/DME only procedure: no critical navaids.
2. RNAV1 SIDs are available only for approved aircraft that are either GNSS equipped or that have DME/DME and INS/IRU with automatic runway updating capability.

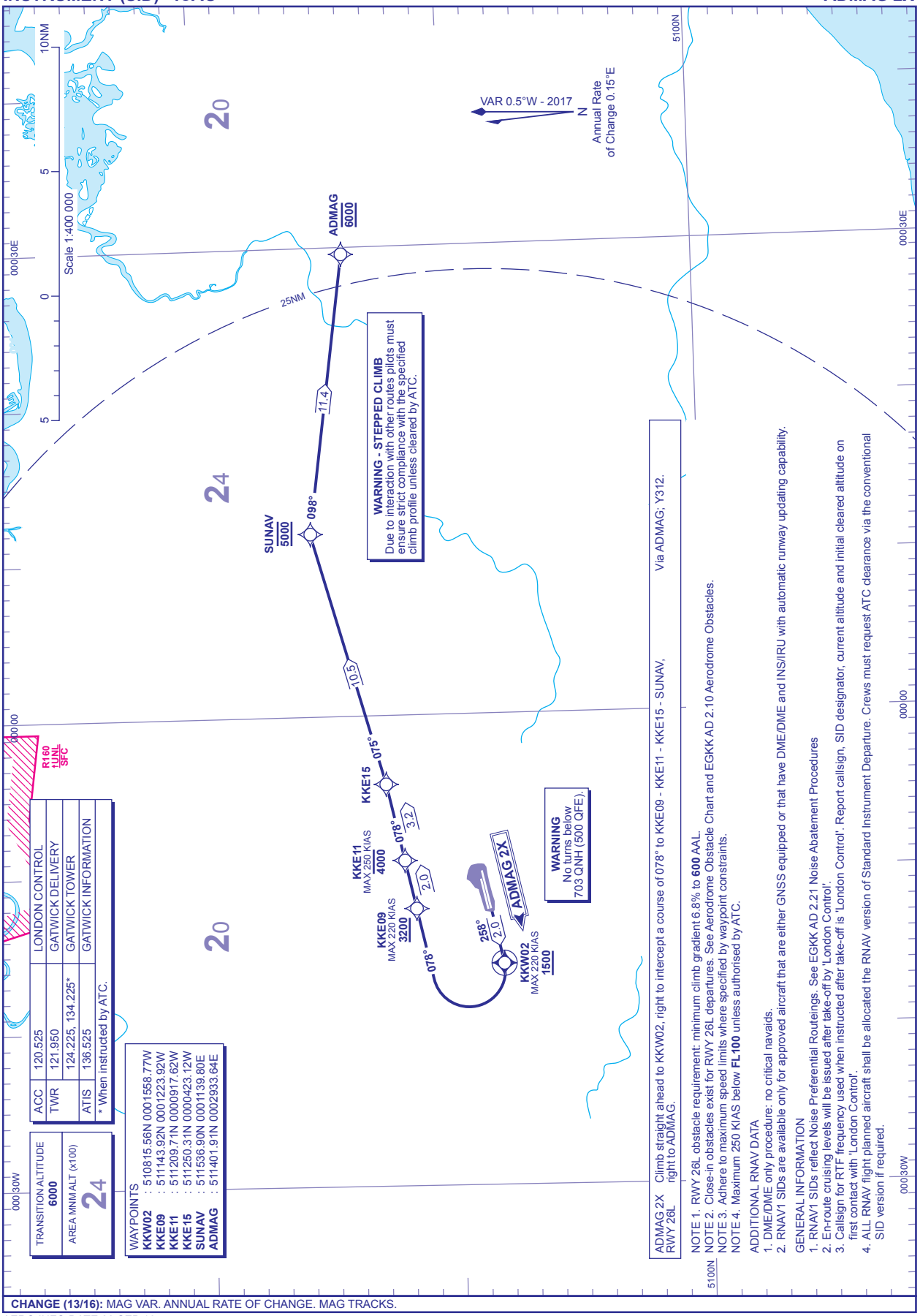
GENERAL INFORMATION
1. RNAV1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 Noise Abatement Procedures
2. En-route cruising levels will be issued after take-off by 'London Control'.
3. Callsign for RTF frequency used when instructed after take-off is 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4. ALL RNAV flight planned aircraft shall be allocated the RNAV version of Standard Instrument Departure. Crews must request ATC clearance via the conventional SID version if required.

CHANGE (13/16): MAG VAR. ANNUAL RATE OF CHANGE. MAG TRACKS.
AERO INFO DATE 08 SEP 16

RNAV1 (DME/DME or GNSS) STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
TRACKS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 26L
ADMAG 2X



TRANSITION ALTITUDE **6000**

AREA MNM ALT (x100) **24**

ACC	120.525	LONDON CONTROL
TWR	121.950	GATWICK DELIVERY
	124.225, 134.225*	GATWICK TOWER
ATIS	136.525	GATWICK INFORMATION

* When instructed by ATC.

WAYPOINTS

KKW02	: 510815.56N 0001558.77W
KKE09	: 511143.92N 0001223.92W
KKE11	: 511209.71N 0000917.62W
KKE15	: 511250.31N 0000423.12W
SUNAV	: 511536.90N 0001139.80E
ADMAG	: 511401.91N 0002933.64E

ADMAG 2X Climb straight ahead to KKW02, right to intercept a course of 078° to KKE09 - KKE11 - KKE15 - SUNAV, Via ADMAG; Y312.
RWY 26L right to ADMAG.

NOTE 1. RWY 26L obstacle requirement: minimum climb gradient 6.8% to **600** AAL.
NOTE 2. Close-in obstacles exist for RWY 26L departures. See Aerodrome Obstacle Chart and EGKK AD 2.10 Aerodrome Obstacles.
NOTE 3. Adhere to maximum speed limits where specified by waypoint constraints.
NOTE 4. Maximum 250 KIAS below **FL100** unless authorised by ATC.

ADDITIONAL RNAV DATA
1. DME/DME only procedure: no critical navaids.
2. RNAV1 SIDs are available only for approved aircraft that are either GNSS equipped or that have DME/DME and INS/IRU with automatic runway updating capability.

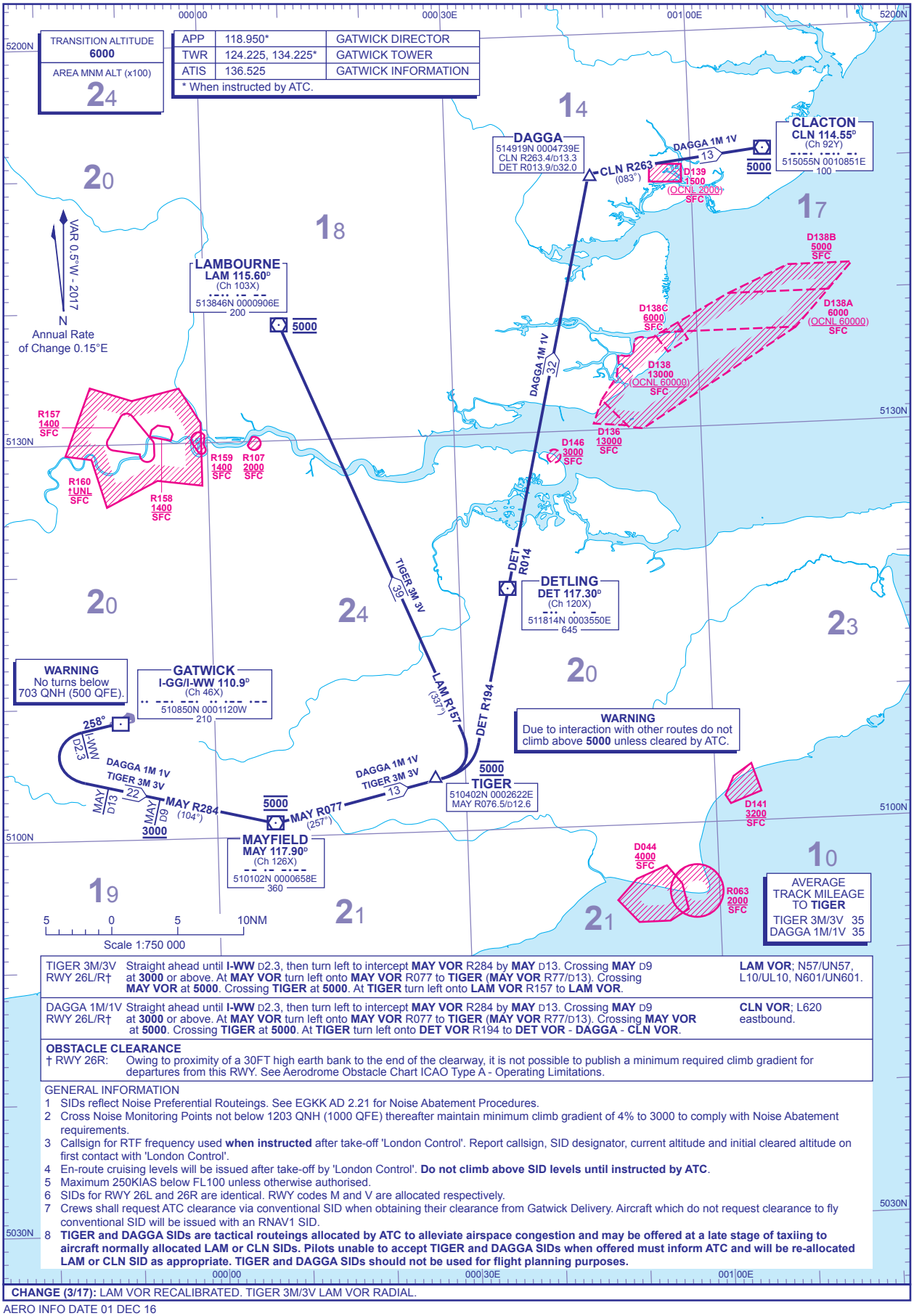
GENERAL INFORMATION
1. RNAV1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 Noise Abatement Procedures
2. En-route cruising levels will be issued after take-off by 'London Control'.
3. Callsign for RTF frequency used when instructed after take-off is 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4. ALL RNAV flight planned aircraft shall be allocated the RNAV version of Standard Instrument Departure. Crews must request ATC clearance via the conventional SID version if required.

CHANGE (13/16): MAG VAR. ANNUAL RATE OF CHANGE. MAG TRACKS.
AERO INFO DATE 22 SEP 16

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON GATWICK
RWY 26L/R
TIGER 3M 3V DAGGA 1M 1V



TIGER 3M/3V RWY 26L/R†	Straight ahead until **I-WW** D2.3, then turn left to intercept **MAY VOR** R284 by **MAY** D13. Crossing **MAY** D9 at **3000** or above. At **MAY VOR** turn left onto **MAY VOR** R077 to **TIGER** (**MAY VOR** R77/D13). Crossing **MAY VOR** at **5000**. Crossing **TIGER** at **5000**. At **TIGER** turn left onto **LAM VOR** R157 to **LAM VOR**.	**LAM VOR**; N57/UN57, L10/UL10, N601/UN601.
DAGGA 1M/1V RWY 26L/R†	Straight ahead until **I-WW** D2.3, then turn left to intercept **MAY VOR** R284 by **MAY** D13. Crossing **MAY** D9 at **3000** or above. At **MAY VOR** turn left onto **MAY VOR** R077 to **TIGER** (**MAY VOR** R77/D13). Crossing **MAY VOR** at **5000**. Crossing **TIGER** at **5000**. At **TIGER** turn left onto **DET VOR** R194 to **DET VOR** - **DAGGA** - **CLN VOR**.	**CLN VOR**; L620 eastbound.

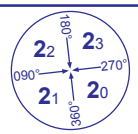
OBSTACLE CLEARANCE
† RWY 26R: Owing to proximity of a 30FT high earth bank to the end of the clearway, it is not possible to publish a minimum required climb gradient for departures from this RWY. See Aerodrome Obstacle Chart ICAO Type A - Operating Limitations.

GENERAL INFORMATION
1 SIDs reflect Noise Preferential Routeings. See EGKK AD 2.21 for Noise Abatement Procedures.
2 Cross Noise Monitoring Points not below 1203 QNH (1000 QFE) thereafter maintain minimum climb gradient of 4% to 3000 to comply with Noise Abatement requirements.
3 Callsign for RTF frequency used **when instructed** after take-off 'London Control'. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control'.
4 En-route cruising levels will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5 Maximum 250KIAS below FL100 unless otherwise authorised.
6 SIDs for RWY 26L and 26R are identical. RWY codes M and V are allocated respectively.
7 Crews shall request ATC clearance via conventional SID when obtaining their clearance from Gatwick Delivery. Aircraft which do not request clearance to fly conventional SID will be issued with an RNAV1 SID.
8 **TIGER and DAGGA SIDs are tactical routeings allocated by ATC to alleviate airspace congestion and may be offered at a late stage of taxiing to aircraft normally allocated LAM or CLN SIDs. Pilots unable to accept TIGER and DAGGA SIDs when offered must inform ATC and will be re-allocated LAM or CLN SID as appropriate. TIGER and DAGGA SIDs should not be used for flight planning purposes.**

CHANGE (3/17): LAM VOR RECALIBRATED. TIGER 3M/3V LAM VOR RADIAL.
AERO INFO DATE 01 DEC 16

INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
SRA RTR 2NM
RWY 08L
(ACFT CAT A,B,C,D)

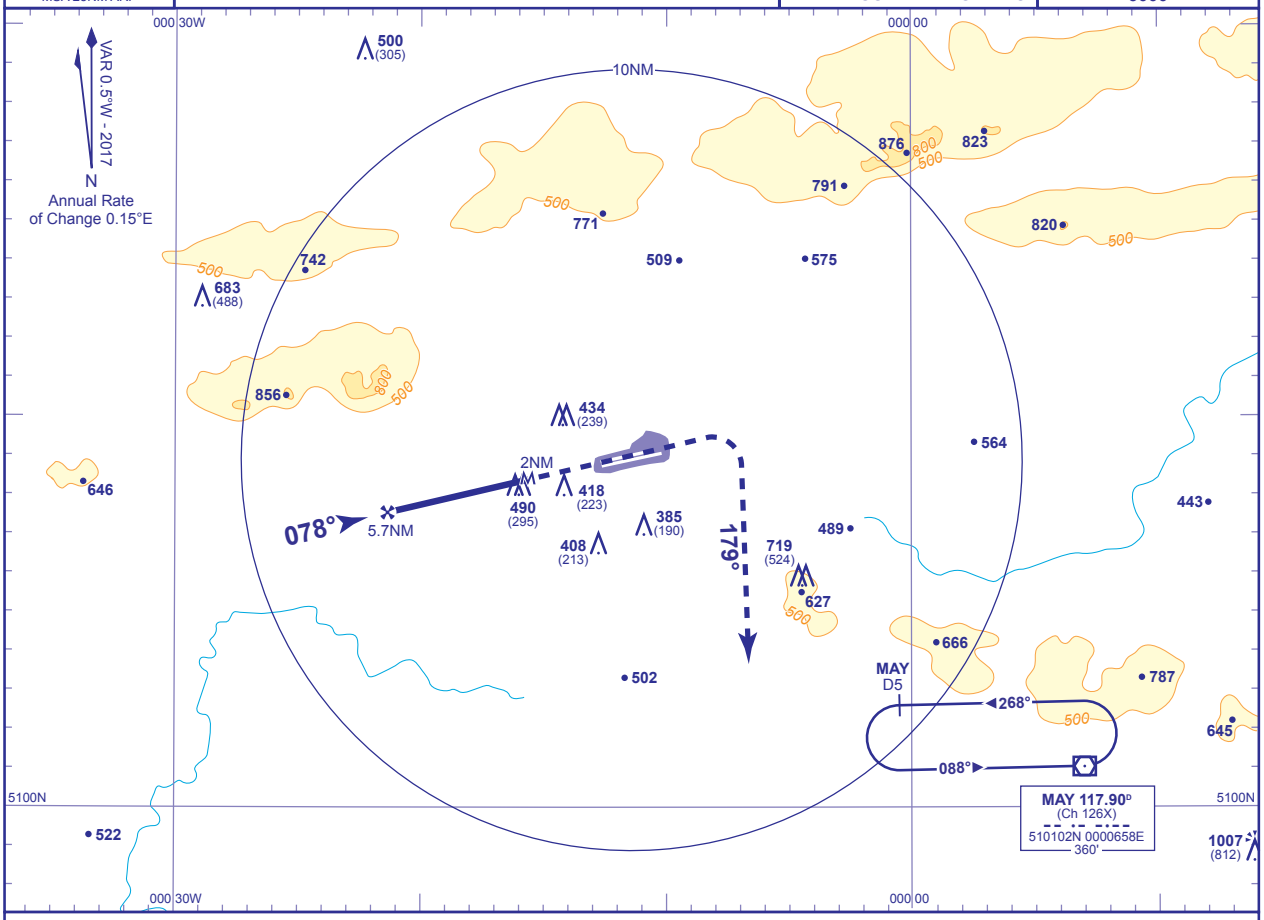


MSA 25NM ARP

APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	
TWR	124.225, 134.225, 121.500*	GATWICK TOWER (*Emergency)	
	121.800	GATWICK GROUND	
ATIS	136.525	GATWICK INFORMATION	

AD ELEVATION	**203**
THR ELEVATION	**195**
OBSTACLE ELEVATION **1007 AMSL** (812) (ABOVE THR)	
BEARINGS ARE MAGNETIC	

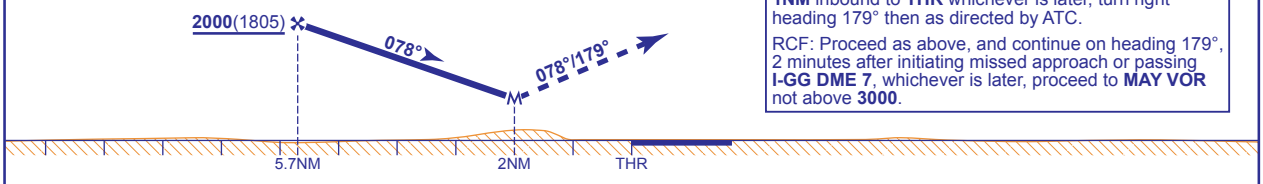
TRANSITION ALTITUDE **6000**



RADAR ADVISORY HEIGHTS Gradient 5.2%, 320FT/NM

NM	5.0	4.0	3.0	2.0
ALT(HGT)	**1780**(1585)	**1460**(1265)	**1140**(945)	**830**(635)

Initial and intermediate approach as directed by radar.



MAPt RTR 2NM

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound to **THR** whichever is later, turn right heading 179° then as directed by ATC.

RCF: Proceed as above, and continue on heading 179°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**830**(635)	**830**(635)	**830**(635)	**830**(635)
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	840	740	630	530	420
MAPT to 1NM inbound THR	MIN:SEC	0:22	0:26	0:30	0:36	0:45

CHANGE (12/16): MAG VAR. ANNUAL RATE OF CHANGE. BEARINGS. MAY VOR RECALIBRATED.

AERO INFO DATE 24 AUG 16

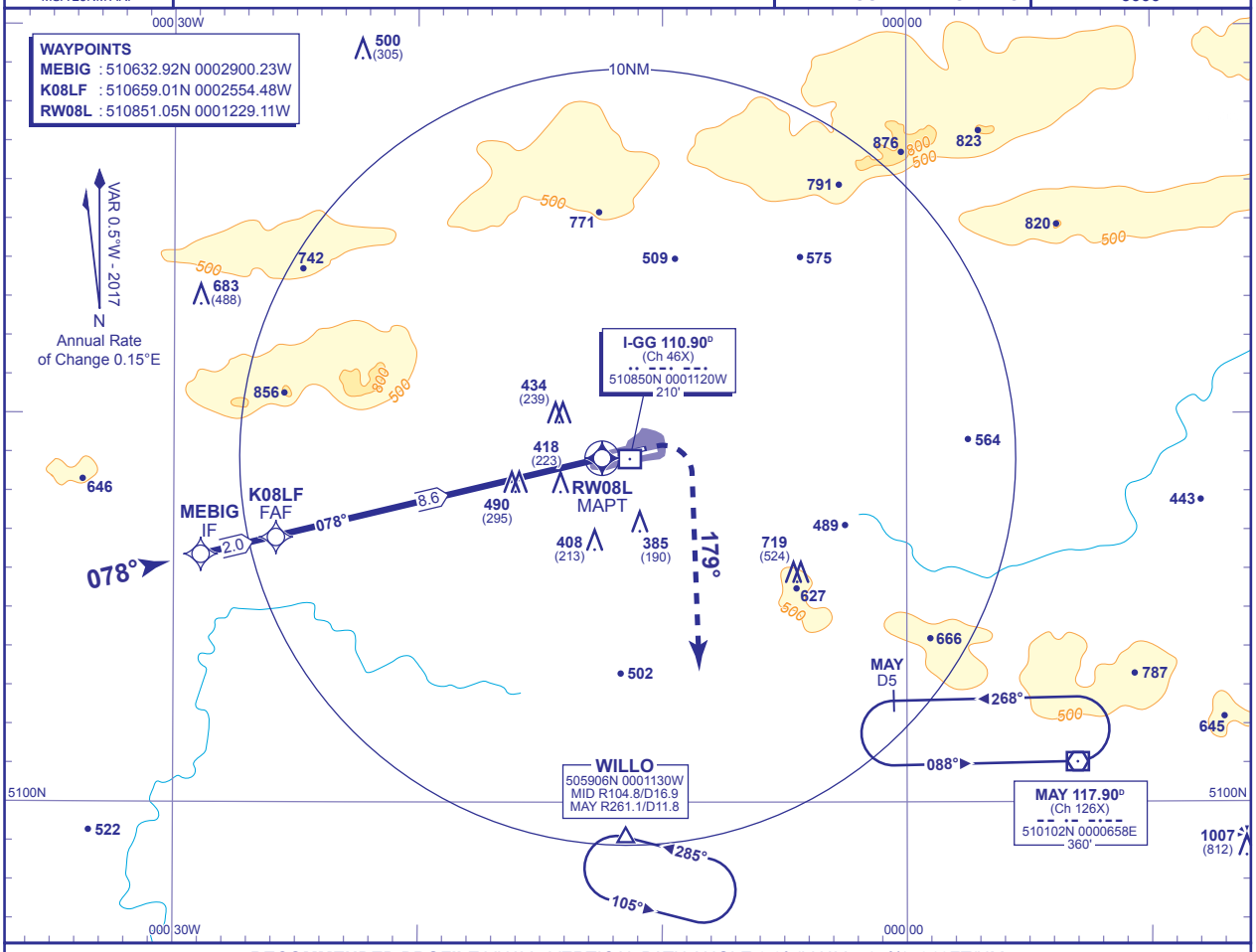
INSTRUMENT APPROACH CHART - ICAO

LONDON GATWICK
RNAV(GNSS)
RWY 08L
(ACFT CAT A,B,C,D)



MSA 25NM ARP

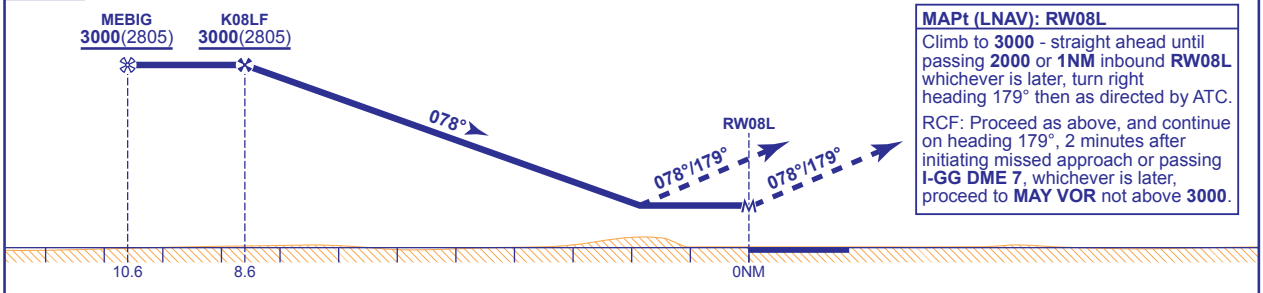
APP	126.825, 118.950, 129.025	GATWICK DIRECTOR	AD ELEVATION	203	MIN TEMP -10°C
TWR	124.225, 134.225, 121.500*	GATWICK TOWER (*Emergency)	THR ELEVATION	195	TRANSITION ALTITUDE 6000
	121.800	GATWICK GROUND	OBSTACLE ELEVATION 1007 AMSL (812) (ABOVE THR)		
ATIS	136.525	GATWICK INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE VNAV - VERTICAL PATH ANGLE 3.0° (LNAV 5.24%), 318FT/NM

NM to RW08L	8	7	6	5	4	3	2
ALT(HGT)	**2790**(2595)	**2470**(2275)	**2160**(1965)	**1840**(1645)	**1520**(1325)	**1200**(1005)	**880**(685)

TCH 50



MAPt (LNAV): RW08L

Climb to **3000** - straight ahead until passing **2000** or **1NM** inbound **RW08L** whichever is later, turn right heading 179° then as directed by ATC.

RCF: Proceed as above, and continue on heading 179°, 2 minutes after initiating missed approach or passing **I-GG DME 7**, whichever is later, proceed to **MAY VOR** not above **3000**.

Aircraft Category		A	B	C	D	Rate of descent	G/S KT	160	140	120	100	80
OCA (OCH)	LNAV/VNAV	**850**(655)	**850**(655)	**850**(655)	**850**(655)		FT/MIN	850	740	640	530	420
	LNAV	**850**(655)	**850**(655)	**850**(655)	**850**(655)							
VM(C)OCA (OCH AAL)	Total Area	**800**(597)	**800**(597)	**970**(767)	**1120**(917)							

NOTE 1 Pilots should 'Request RNAV Approach' on first contact with Gatwick Director.
2 Aircraft will be radar vectored to MEBIG.
3 In the event of radio communications failure, follow conventional arrival procedures to establish on final approach course.
4 See AD 2-EGKK-8-13 for data coding tables.
5 An early initiation of the missed approach may require pilot intervention with the RNAV system in order to comply with the 1NM inbound turn initiation point.
6 The missed approach reverts to conventional navigation after passing **2000**.

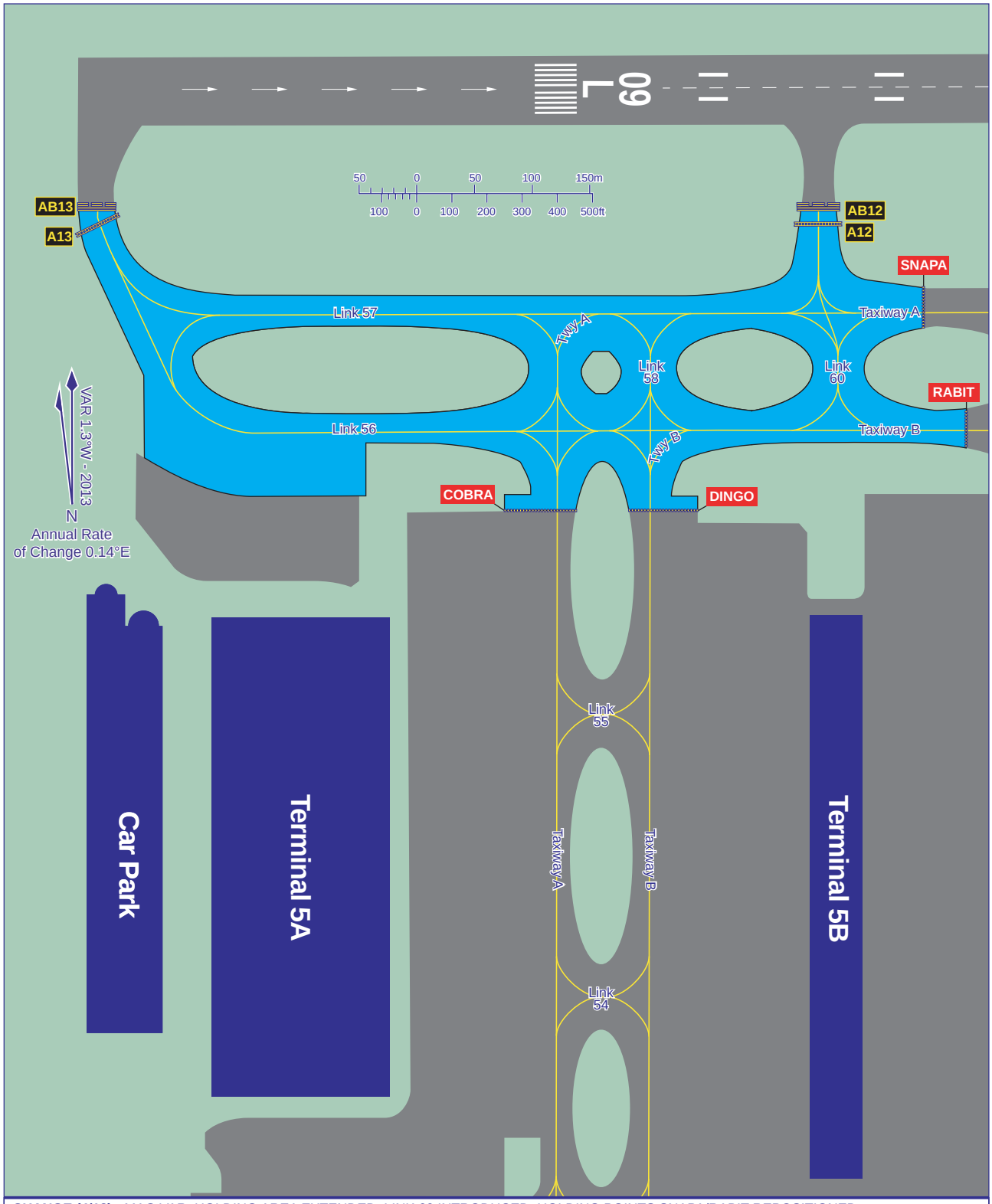
CHANGE (3/17): CORRECTION TO DME CALLSIGN ON PLAN VIEW.

AERO INFO DATE 05 DEC 16

GROUND MOVEMENT CHART - ICAO

HOLDING AREAS FOR RUNWAY 09L

LONDON HEATHROW
EGLL



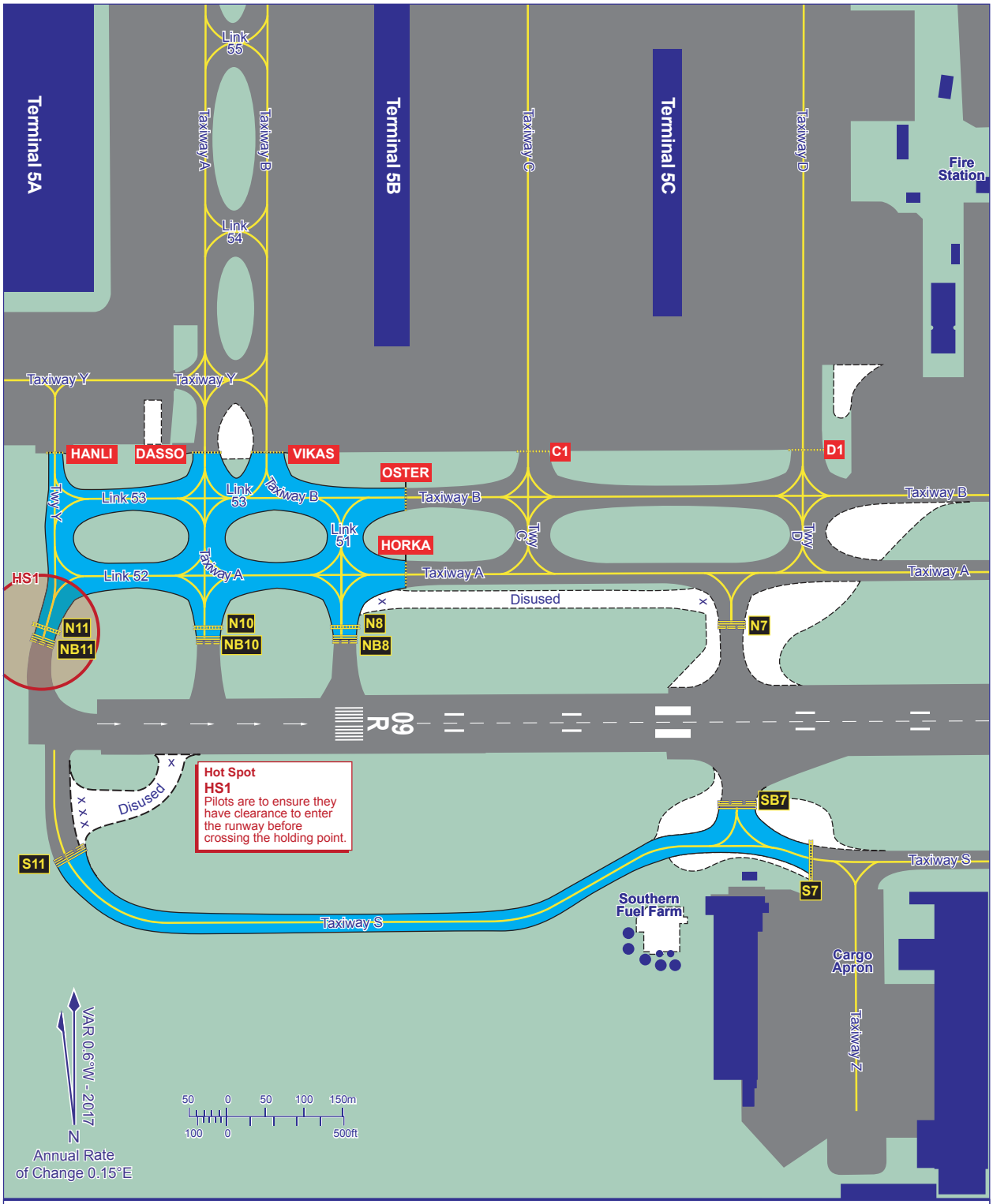
CHANGE (4/13): MAG VAR. HOLDING AREA EXTENDED. LINK 60 INTRODUCED. HOLDING POINTS SNAPA/RABIT REPOSITIONED.

AERO INFO DATE 23 JAN 13

GROUND MOVEMENT CHART - ICAO

HOLDING AREAS FOR RUNWAY 09R

LONDON HEATHROW
EGLL



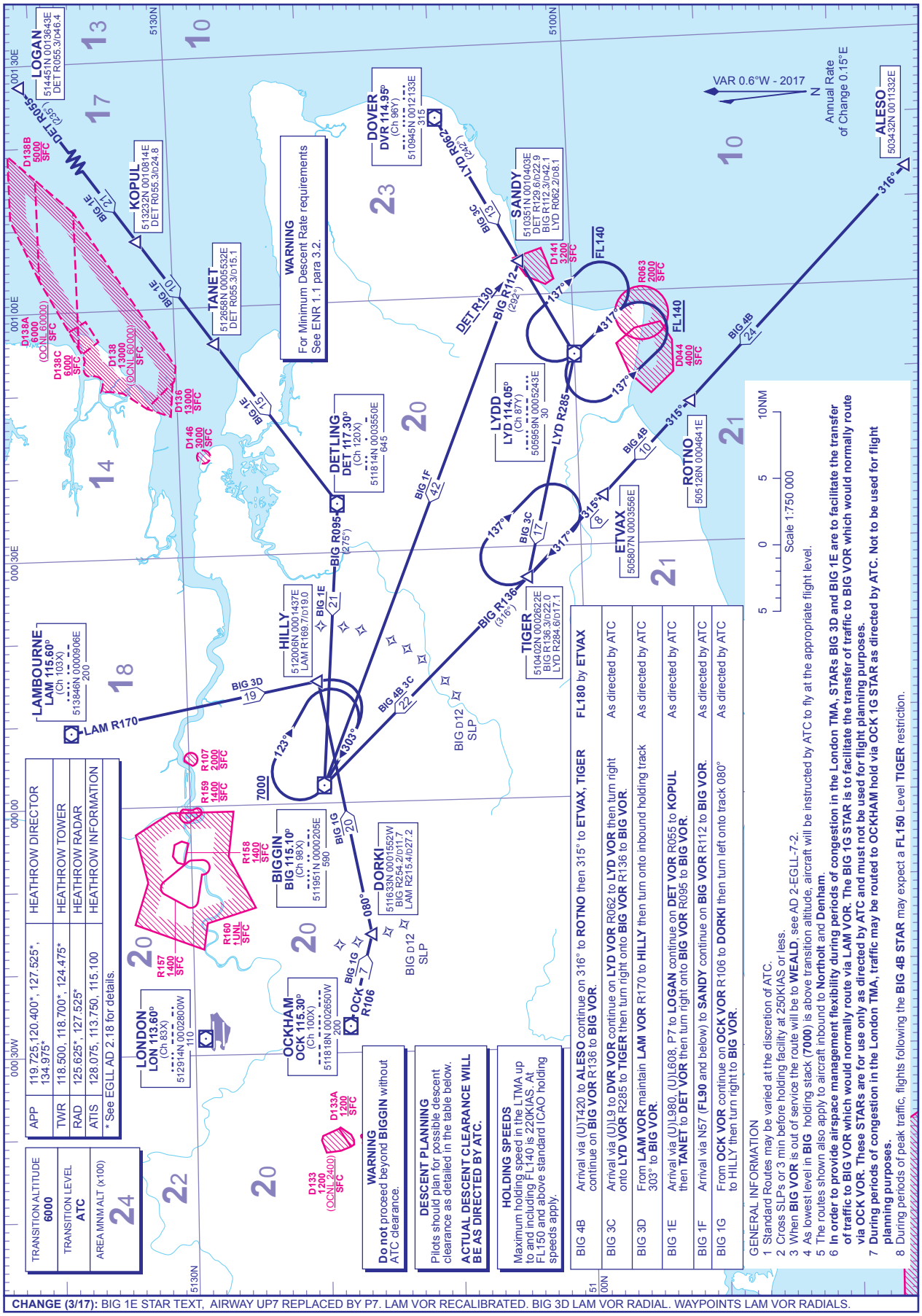
CHANGE (3/17): MAG VAR/ANNUAL RATE OF CHANGE. RUNWAY 09R/27L TURN-ON ADJACENT TO HOLD S11 DESIGNATED DISUSED.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via BIGGIN



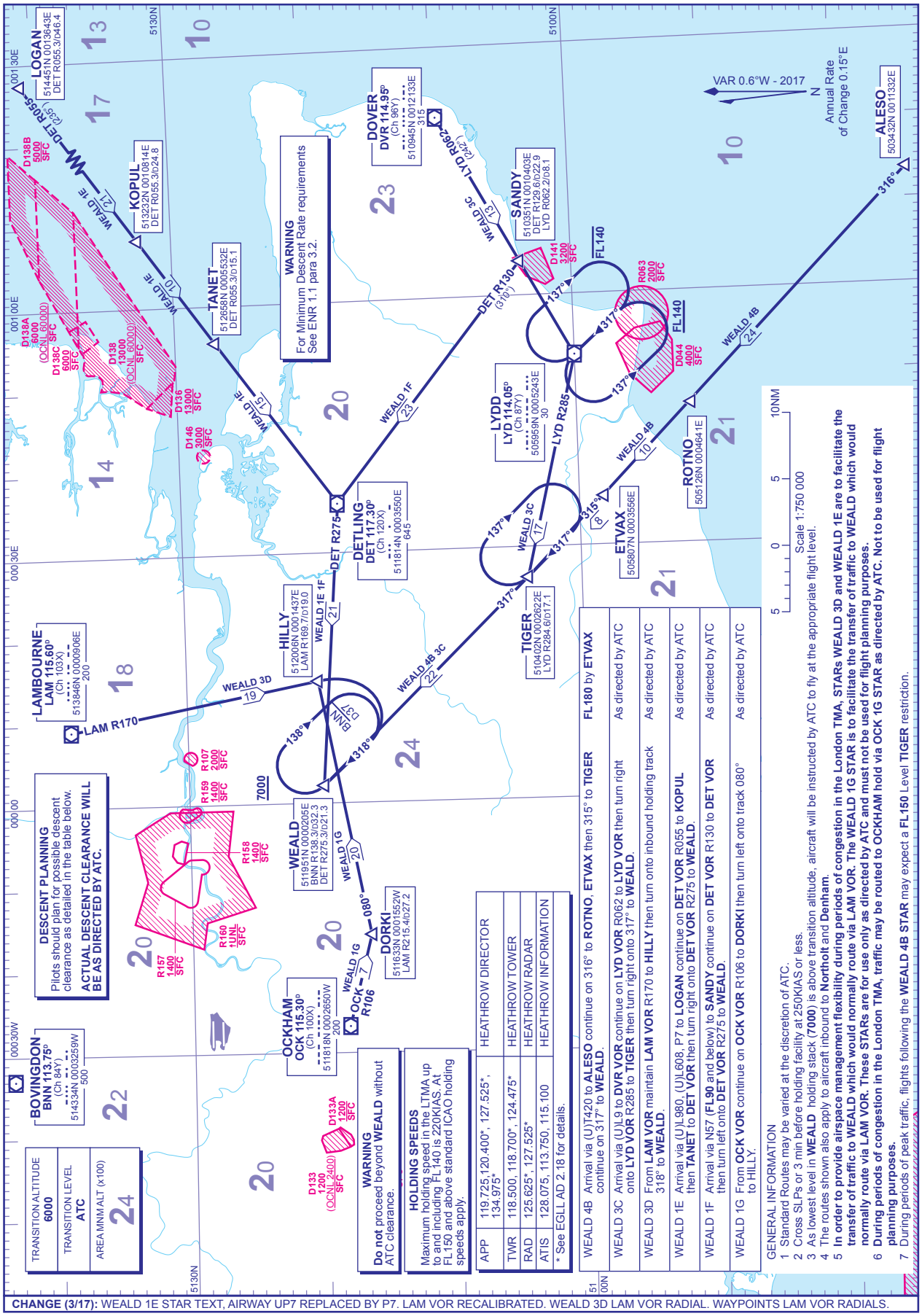
CHANGE (3/17): BIG 1E STAR TEXT, AIRWAY UP7 REPLACED BY P7. LAM VOR RECALIBRATED. BIG 3D LAM VOR RADIAL. WAYPOINTS LAM VOR RADIALS.

AERO INFO DATE 01 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via WEALD (VOR BIG u/s)



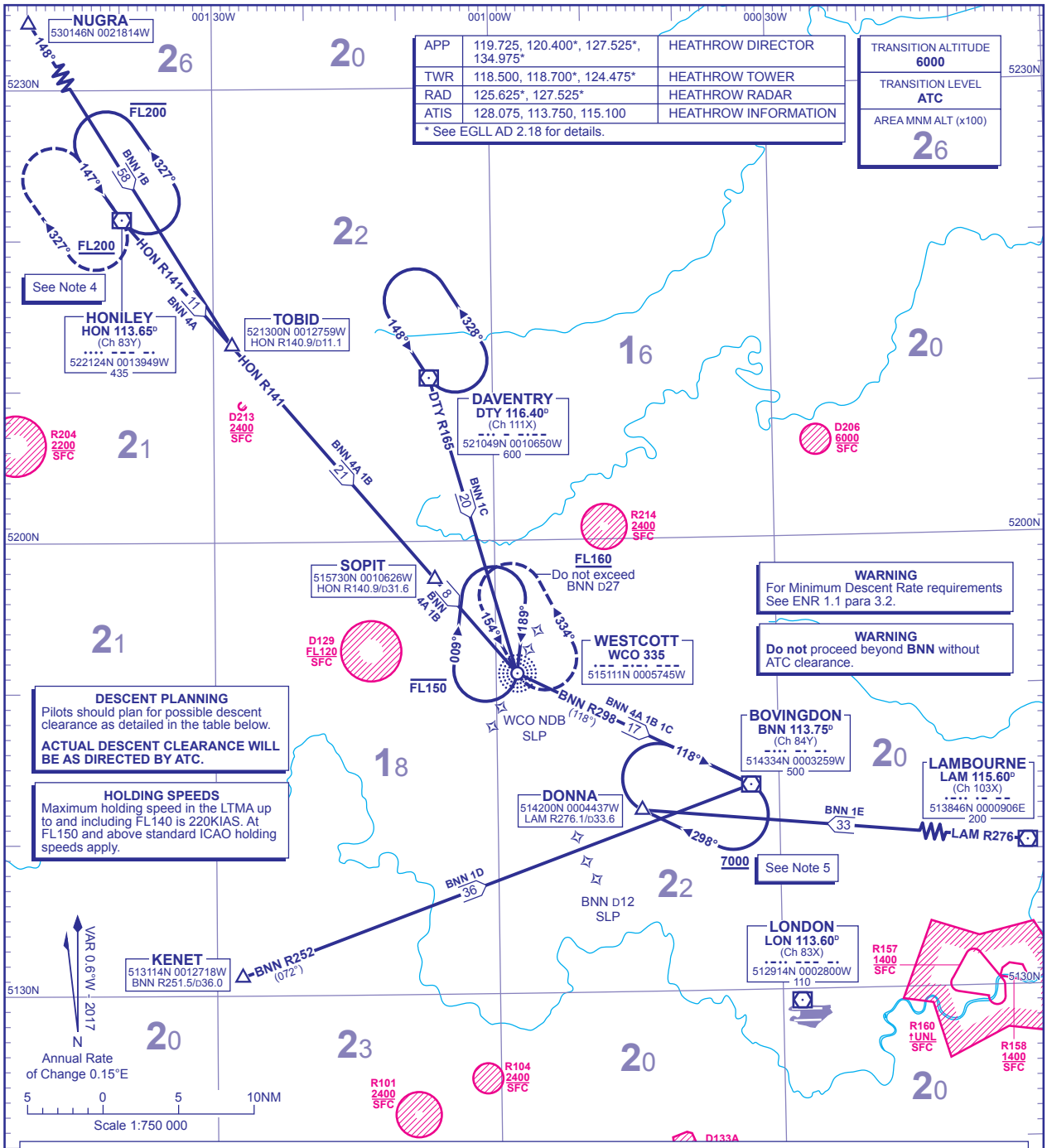
CHANGE (3/17): WEALD 1E STAR TEXT, AIRWAY UP7 REPLACED BY P7. LAM VOR RECALIBRATED. WEALD 3D LAM VOR RADIAL. WAYPOINTS LAM VOR RADIALS.

AERO INFO DATE 01 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via BOVINGDON



APP	119.725, 120.400*, 127.525*, 134.975*	HEATHROW DIRECTOR
TWR	118.500, 118.700*, 124.475*	HEATHROW TOWER
RAD	125.625*, 127.525*	HEATHROW RADAR
ATIS	128.075, 113.750, 115.100	HEATHROW INFORMATION

* See EGLL AD 2.18 for details.

TRANSITION ALTITUDE **6000**

TRANSITION LEVEL **ATC**

AREA MNM ALT (x100) **26**

DESCENT PLANNING
Pilots should plan for possible descent clearance as detailed in the table below.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

HOLDING SPEEDS
Maximum holding speed in the LTMA up to and including FL140 is 220KIAS. At FL150 and above standard ICAO holding speeds apply.

WARNING
For Minimum Descent Rate requirements See ENR 1.1 para 3.2.

WARNING
Do not proceed beyond **BNN** without ATC clearance.

BNN 4A	Arrival via L15 (**FL150** to **FL190**), L10 (**FL140 and below**), L612 (**FL90** to **FL140**) to **HON VOR** continue on **HON VOR** R141 to **TOBID** then **SOPIT** to **WCO NDB** then turn left onto **BNN VOR** R298 to **BNN VOR**.	**FL150** by **SOPIT** (Heathrow only) **FL150** by 5NM before **SOPIT** (Northolt only)
BNN 1B	Arrivals via (U)Y53 (**FL200+**) continue to **NUGRA**. From **NUGRA** continue on 148° to **TOBID** then turn left onto **HON VOR** R141 to **SOPIT** to **WCO NDB** then turn left onto **BNN VOR** R298 to **BNN VOR.**	**FL200** by **TOBID** **FL150** by **SOPIT** (Heathrow only) **FL150** by 5NM before **SOPIT** (Northolt only)
BNN 1C	Arrival via M605 (**FL70**) to **DTY VOR** continue on **DTY VOR** R165 to **WCO NDB** then turn left onto **BNN VOR** R298 to **BNN VOR**.	
BNN 1D	Arrival via **KENET** continue on **BNN VOR** R252 to **BNN VOR**.	
BNN 1E	From **LAM VOR** maintain **LAM VOR** R276 to **DONNA** then turn right onto inbound holding track 118° to **BNN VOR**.	

GENERAL INFORMATION
1 Standard Routes may be varied at the discretion of ATC.
2 Cross SLPs or 3 min before holding facility at 250KIAS or less.
3 When **BNN VOR** is out of service the route will be to **BOVVA**, see AD 2-EGLL-7-4.
4 En-route holding at **HON VOR**: During periods of congestion in the London TMA traffic from the north may be required to hold at **HON VOR**.
5 As lowest level in **BNN** holding stack (**7000**) is above transition altitude, aircraft will be instructed by ATC to fly at the appropriate flight level.
6 The routes shown also apply to aircraft inbound to **Northolt** and **Denham**.
7 **In order to provide airspace management flexibility during periods of congestion in the London TMA, STARs BNN 1D and BNN 1E are to facilitate the transfer of traffic between terminal holding facilities. These STARs are for use only as directed by ATC and must not be used for flight planning purposes.**

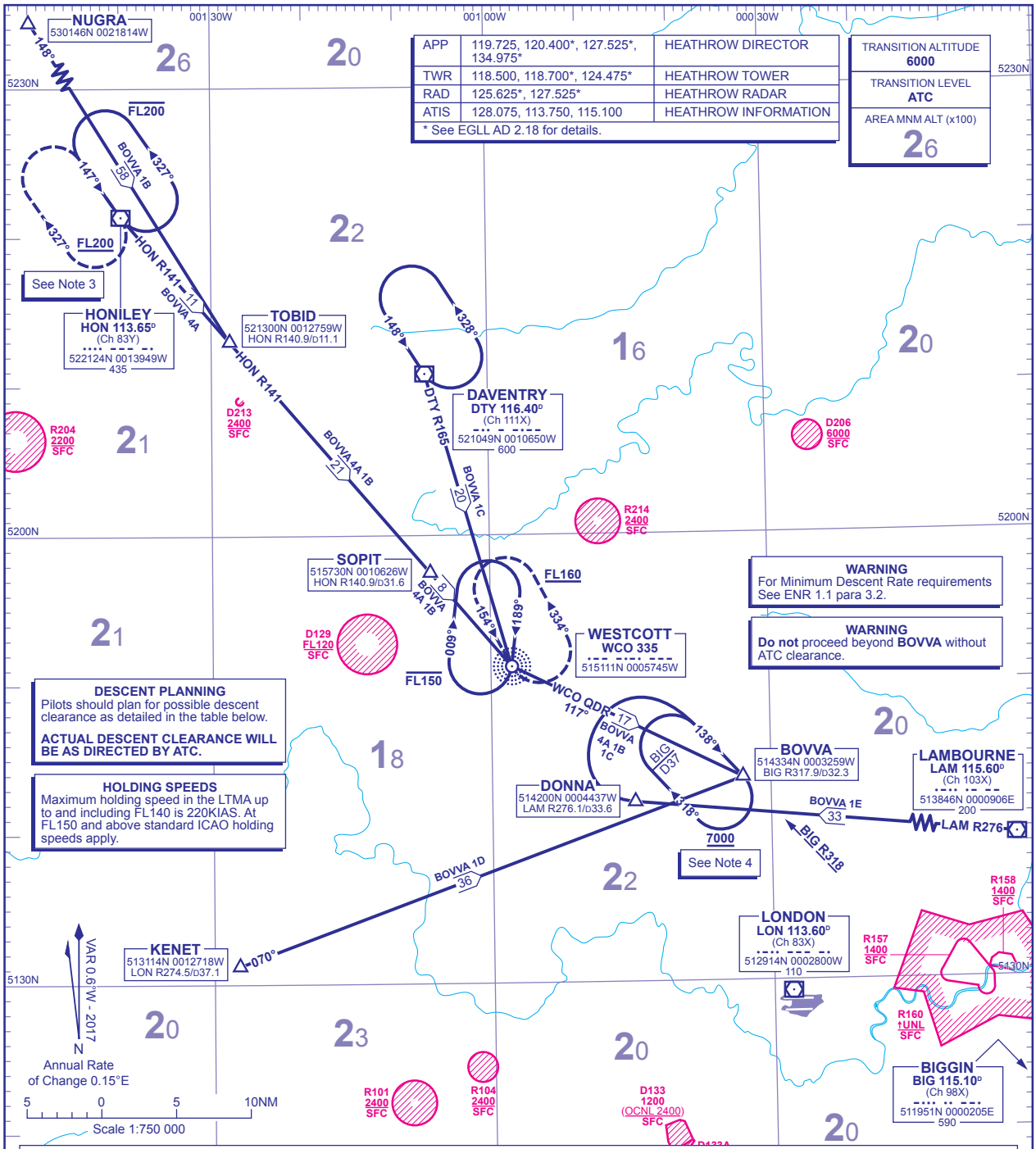
CHANGE (3/17): LAM VOR RECALIBRATED. BNN 1E LAM VOR RADIAL. WAYPOINT DONNA LAM VOR RADIAL.

AERO INFO DATE 01 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via BOVVA (VOR BNN u/s)



APP	119.725, 120.400*, 127.525*, 134.975*	HEATHROW DIRECTOR
TWR	118.500, 118.700*, 124.475*	HEATHROW TOWER
RAD	125.625*, 127.525*	HEATHROW RADAR
ATIS	128.075, 113.750, 115.100	HEATHROW INFORMATION

* See EGLL AD 2.18 for details.

TRANSITION ALTITUDE **6000**
TRANSITION LEVEL **ATC**
AREA MNM ALT (x100) **26**

DESCENT PLANNING
Pilots should plan for possible descent clearance as detailed in the table below.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

HOLDING SPEEDS
Maximum holding speed in the LTMA up to and including FL140 is 220KIAS. At FL150 and above standard ICAO holding speeds apply.

WARNING
For Minimum Descent Rate requirements See ENR 1.1 para 3.2.

WARNING
Do not proceed beyond **BOVVA** without ATC clearance.

BOVVA 4A	Arrival via L15 (**FL150** to **FL190**), L10 (**FL140 and below**), L612 (**FL90** to **FL140**) to **HON VOR** continue on **HON VOR** R141 to **TOBID** then **SOPIT** to **WCO NDB** then turn left onto **WCO QDR** 117° to **BOVVA**.	**FL150** by **SOPIT** (Heathrow only) **FL150** by 5NM before **SOPIT** (Northolt only)
BOVVA 1B	Arrival via (U)Y53 (**FL200+**) continue to **NUGRA**. From **NUGRA** continue on 148° to **TOBID** then turn left onto **HON VOR** R141 to **SOPIT** to **WCO NDB** then turn left onto **WCO QDR** 117° to **BOVVA**.	**FL200** by **TOBID** **FL150** by **SOPIT** (Heathrow only) **FL150** by 5NM before **SOPIT** (Northolt only)
BOVVA 1C	Arrival via M605 (**FL70**) to **DTY VOR** continue on **DTY VOR** R165 to **WCO NDB** then turn left onto **WCO QDR** 117° to **BOVVA**.	
BOVVA 1D	Arrival via **KENET** continue on 070° to **BOVVA**.	
BOVVA 1E	From **LAM VOR** maintain **LAM VOR** R276 to **DONNA** then turn right onto inbound holding track 138° to **BOVVA**.	

GENERAL INFORMATION
1 Standard Routes may be varied at the discretion of ATC.
2 Cross SLPs or 3 min before holding facility at 250KIAS or less.
3 En-route holding at **HON VOR**: During periods of congestion in the London TMA traffic from the north may be required to hold at **HON VOR**.
4 As lowest level in **BOVVA** holding stack (**7000**) is above transition altitude, aircraft will be instructed by ATC to fly at the appropriate flight level.
5 The routes shown also apply to aircraft inbound to **Northolt** and **Denham**.
6 **In order to provide airspace management flexibility during periods of congestion in the London TMA, STARs BOVVA 1D and BOVVA 1E are to facilitate the transfer of traffic between terminal holding facilities. These STARs are for use only as directed by ATC and must not be used for flight planning purposes.**

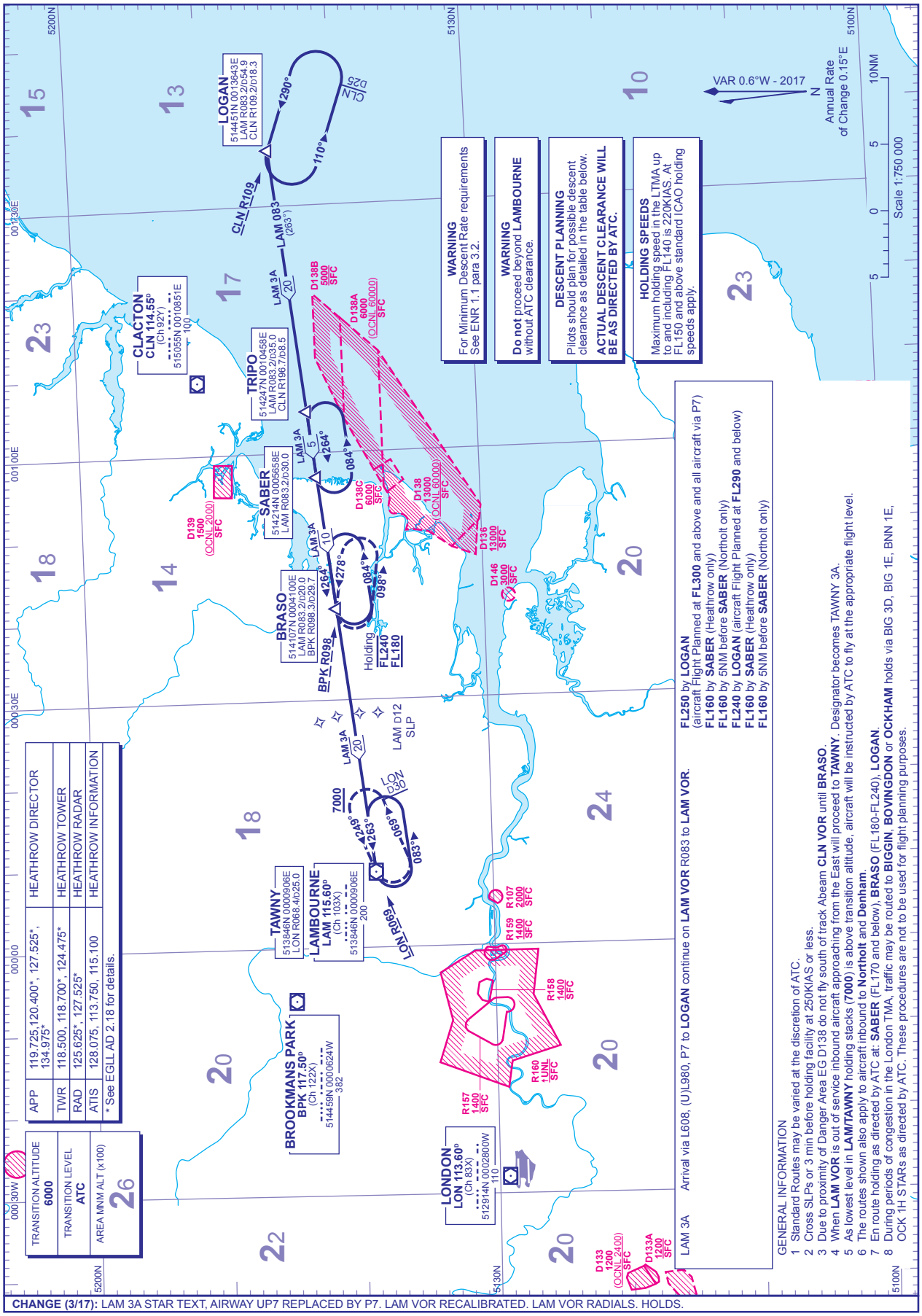
CHANGE (3/17): LAM VOR RECALIBRATED. BOVVA 1E LAM VOR RADIAL. WAYPOINT DONNA LAM VOR RADIAL.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via LAMBOURNE



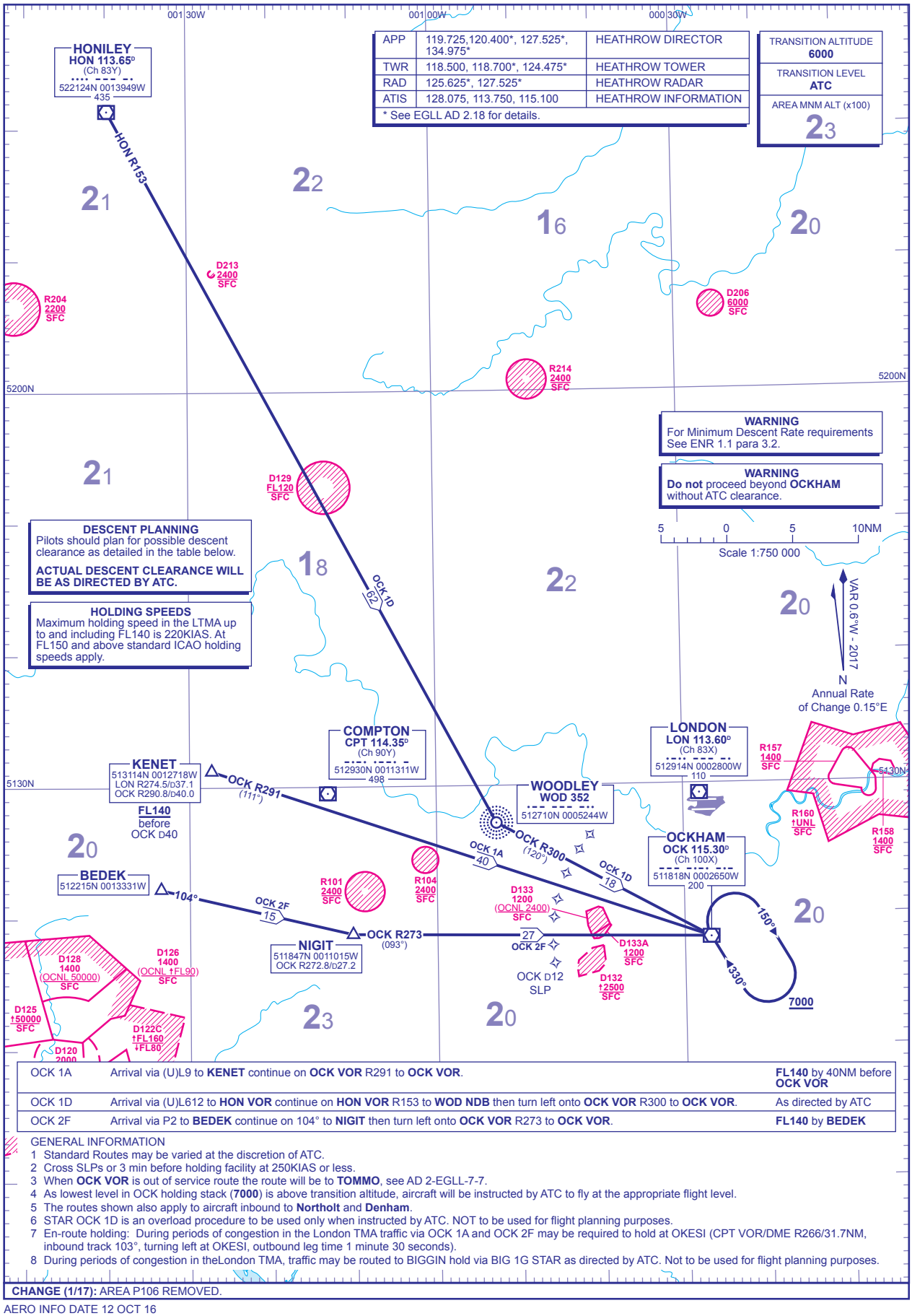
CHANGE (3/17): LAM 3A STAR TEXT, AIRWAY UP7 REPLACED BY P7. LAM VOR RECALIBRATED. LAM VOR RADIALS. HOLDS.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via OCKHAM (North and West)



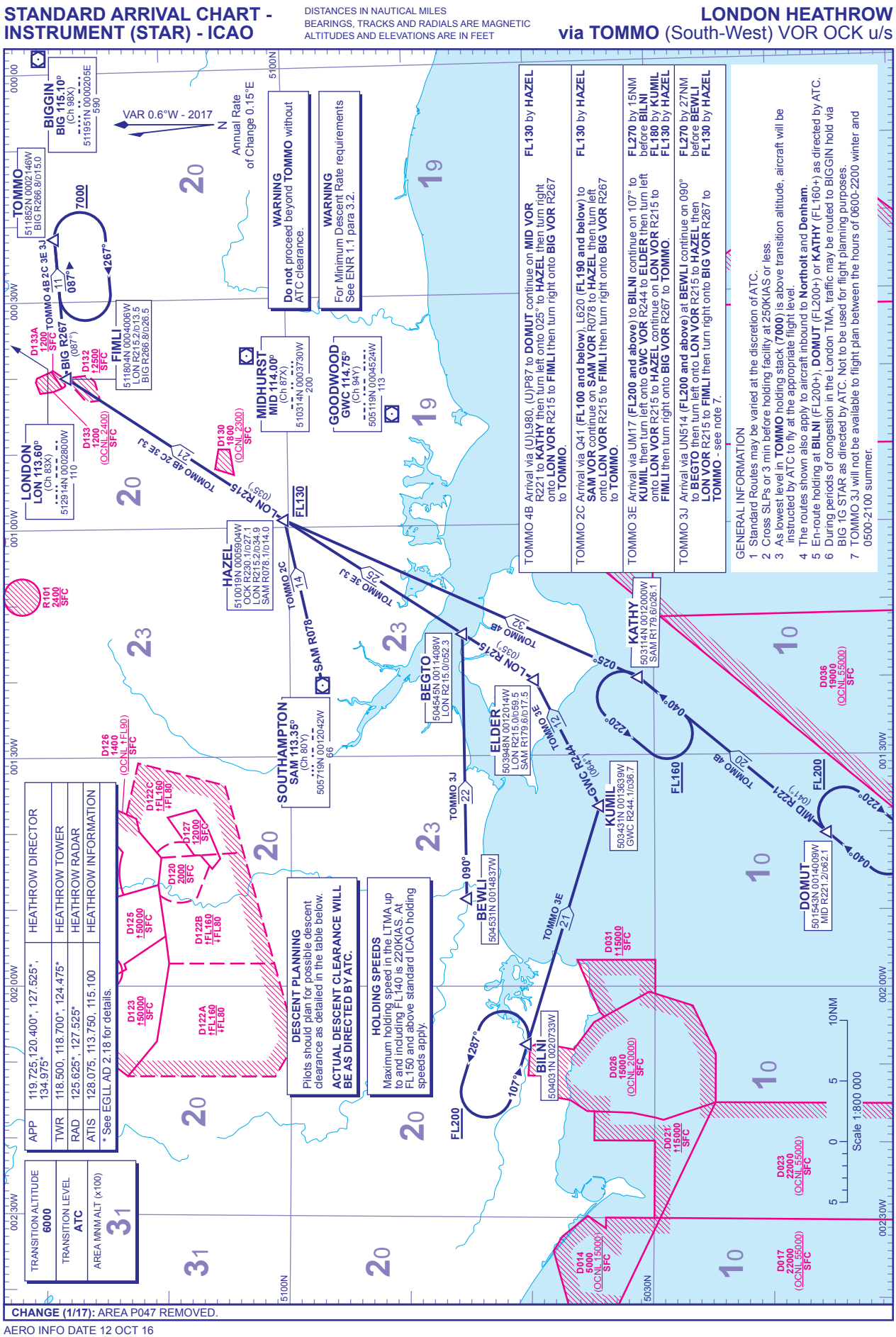
OCK 1A	Arrival via (U)L9 to **KENET** continue on **OCK VOR** R291 to **OCK VOR**.	**FL140** by 40NM before **OCK VOR**
OCK 1D	Arrival via (U)L612 to **HON VOR** continue on **HON VOR** R153 to **WOD NDB** then turn left onto **OCK VOR** R300 to **OCK VOR**.	As directed by ATC
OCK 2F	Arrival via P2 to **BEDEK** continue on 104° to **NIGIT** then turn left onto **OCK VOR** R273 to **OCK VOR**.	**FL140** by **BEDEK**

GENERAL INFORMATION

1 Standard Routes may be varied at the discretion of ATC.
2 Cross SLPs or 3 min before holding facility at 250KIAS or less.
3 When **OCK VOR** is out of service route the route will be to **TOMMO**, see AD 2-EGLL-7-7.
4 As lowest level in OCK holding stack (**7000**) is above transition altitude, aircraft will be instructed by ATC to fly at the appropriate flight level.
5 The routes shown also apply to aircraft inbound to **Northolt** and **Denham**.
6 STAR OCK 1D is an overload procedure to be used only when instructed by ATC. NOT to be used for flight planning purposes.
7 En-route holding: During periods of congestion in the London TMA traffic via OCK 1A and OCK 2F may be required to hold at OKESI (CPT VOR/DME R266/31.7NM, inbound track 103°, turning left at OKESI, outbound leg time 1 minute 30 seconds).
8 During periods of congestion in theLondon TMA, traffic may be routed to BIGGIN hold via BIG 1G STAR as directed by ATC. Not to be used for flight planning purposes.

CHANGE (1/17): AREA P106 REMOVED.

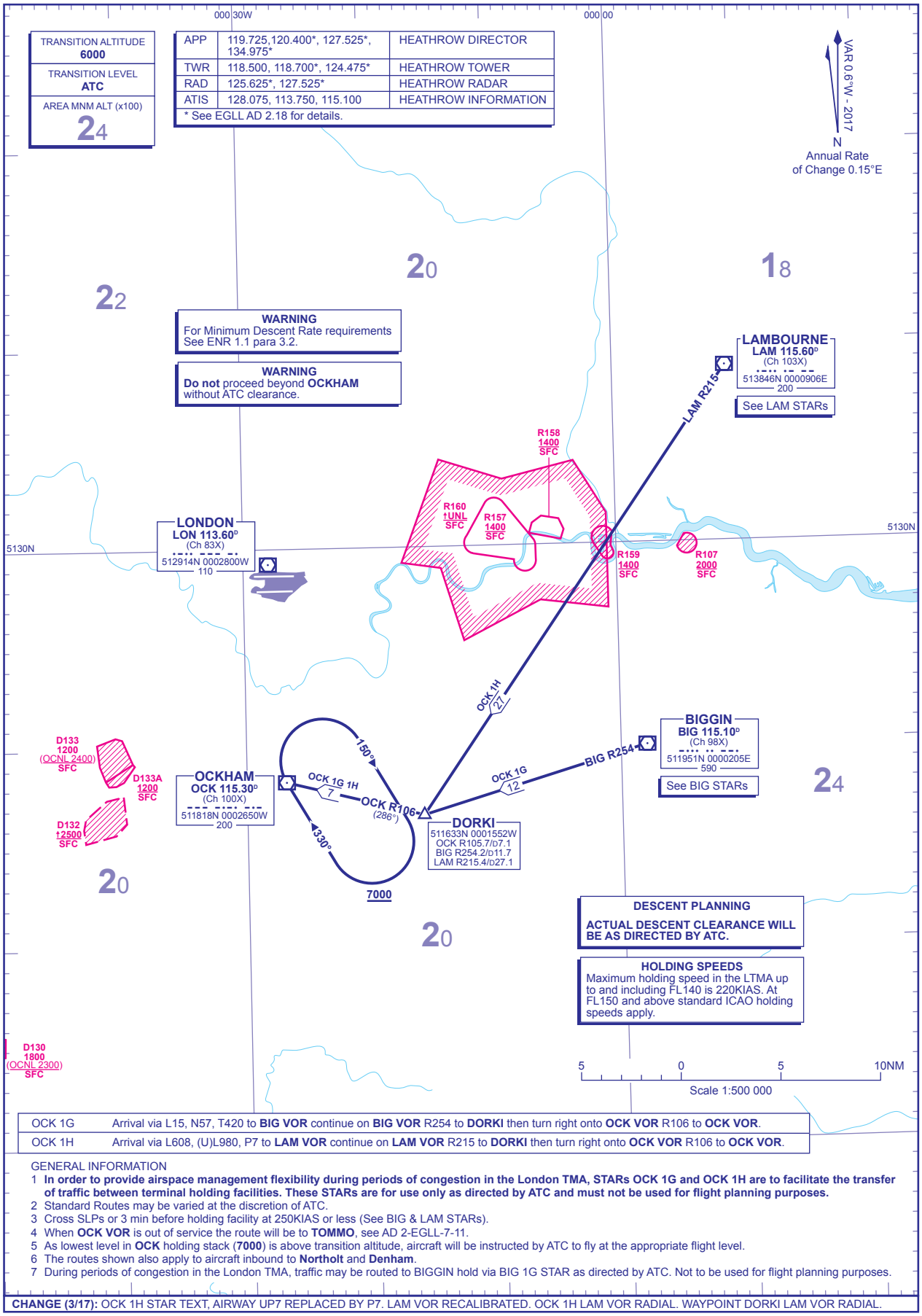
AERO INFO DATE 12 OCT 16


STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET
LONDON HEATHROW
via TOMMO (South-West) VOR OCK u/s
VAR 0.6°W - 2017
Annual Rate of Change 0.15°E
WARNING
Do not proceed beyond TOMMO without ATC clearance.
WARNING
For Minimum Descent Rate requirements See ENR 1.1 para 3.2.
TOMMO 4B Arrival via (U)L980, (U)P87 to DOMUT continue on MID VOR R221 to KATHY then turn left onto 025° to HAZEL then turn right onto LON VOR R215 to FIMLI then turn right onto BIG VOR R267 to TOMMO. FL130 by HAZEL
TOMMO 2C Arrival via Q41 (FL100 and below), L620 (FL190 and below) to SAM VOR continue on SAM VOR R078 to HAZEL then turn left onto LON VOR R215 to FIMLI then turn right onto BIG VOR R267 to TOMMO. FL130 by HAZEL
TOMMO 3E Arrival via UM17 (FL200 and above) to BILNI continue on 107° to KUMIL then turn left onto GWC VOR R244 to ELDER then turn left onto LON VOR R215 to HAZEL continue on LON VOR R215 to FIMLI then turn right onto BIG VOR R267 to TOMMO. FL270 by 15NM before BILNI FL180 by KUMIL FL130 by HAZEL
TOMMO 3J Arrival via UN514 (FL200 and above) at BEWLI continue on 090° to BEGTO then turn left onto LON VOR R215 to HAZEL then LON VOR R215 to FIMLI then turn right onto BIG VOR R267 to TOMMO - see note 7. FL270 by 27NM before BEWLI FL130 by HAZEL
GENERAL INFORMATION
1 Standard Routes may be varied at the discretion of ATC.
2 Cross SLPs or 3 min before holding facility at 250KIAS or less.
3 As lowest level in TOMMO holding stack (7000) is above transition altitude, aircraft will be instructed by ATC to fly at the appropriate flight level.
4 The routes shown also apply to aircraft inbound to Northolt and Denham.
5 En-route holding at BILNI (FL200+), DOMUT (FL200+) or KATHY (FL160+) as directed by ATC.
6 During periods of congestion in the London TMA, traffic may be routed to BIGGIN hold via BIG 1G STAR as directed by ATC. Not to be used for flight planning purposes.
7 TOMMO 3J will not be available to flight plan between the hours of 0600-2200 winter and 0500-2100 summer.
TRANSITION ALTITUDE 6000
TRANSITION LEVEL ATC
AREA MNM ALT (x100) 31
APP 119.725,120.400*, 127.525*, 134.975*
TWR 118.500, 118.700*, 124.475*
RAD 125.625*, 127.525*
ATIS 128.075, 113.750, 115.100
* See EGLL AD 2.18 for details.
HEATHROW DIRECTOR
HEATHROW TOWER
HEATHROW RADAR
HEATHROW INFORMATION
DESCENT PLANNING
Pilots should plan for possible descent clearance as detailed in the table below.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.
HOLDING SPEEDS
Maximum holding speed in the LTMA up to and including FL140 is 220KIAS. At FL150 and above standard ICAO holding speeds apply.
BIGGIN BIG 115.10° (Ch 98X) 511951N 0000205E 590
TOMMO 511852N 0002146W BIG R266.8/0/15.0
LONDON LON 113.60° (Ch 83X) 512914N 0002800W 110
FIMLI 511804N 0004006W LON R215.2/0/13.5 BIG R266.8/0/26.5
MIDHURST MID 114.00° (Ch 87X) 510314N 0000730W 200
GOODWOOD GWC 114.75° (Ch 94Y) 505119N 0004524W 113
HAZEL 510019N 0005904W OCK R230.1/0/27.1 LON R215.2/0/34.9 SAM R078.1/0/14.0
SOUTHAMPTON SAM 113.35° (Ch 80Y) 505719N 0012042W 66
BEGTO 504545N 0011408W LON R215.0/0/52.3
ELDER 503948N 0012014W LON R215.0/0/59.5 SAM R179.6/0/17.5
KATHY 503114N 0012000W SAM R179.6/0/26.1
KUMIL 503431N 0013639W GWC R244.1/0/36.7
BEWLI 504531N 0014837W
BILNI 504031N 0020733W
DOMUT 501543N 0014009W MID R221.2/0/2.1
FL130
FL160
FL200
TOMMO 4B
TOMMO 2C
TOMMO 3E
TOMMO 3J
LON R215 (035°)
SAM R078
MID R221 (041°)
GWC R244 (064°)
090°
107°
287°
025°
040°
220°
267°
087°
Scale 1:800 000
10NM
CHANGE (1/17): AREA P047 REMOVED.
AERO INFO DATE 12 OCT 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via OCKHAM (east)



OCK 1G	Arrival via L15, N57, T420 to **BIG VOR** continue on **BIG VOR** R254 to **DORKI** then turn right onto **OCK VOR** R106 to **OCK VOR**.
OCK 1H	Arrival via L608, (U)L980, P7 to **LAM VOR** continue on **LAM VOR** R215 to **DORKI** then turn right onto **OCK VOR** R106 to **OCK VOR**.

GENERAL INFORMATION

1 **In order to provide airspace management flexibility during periods of congestion in the London TMA, STARs OCK 1G and OCK 1H are to facilitate the transfer of traffic between terminal holding facilities. These STARs are for use only as directed by ATC and must not be used for flight planning purposes.**
2 Standard Routes may be varied at the discretion of ATC.
3 Cross SLPs or 3 min before holding facility at 250KIAS or less (See BIG & LAM STARs).
4 When **OCK VOR** is out of service the route will be to **TOMMO**, see AD 2-EGLL-7-11.
5 As lowest level in **OCK** holding stack (**7000**) is above transition altitude, aircraft will be instructed by ATC to fly at the appropriate flight level.
6 The routes shown also apply to aircraft inbound to **Northolt** and **Denham**.
7 During periods of congestion in the London TMA, traffic may be routed to BIGGIN hold via BIG 1G STAR as directed by ATC. Not to be used for flight planning purposes.

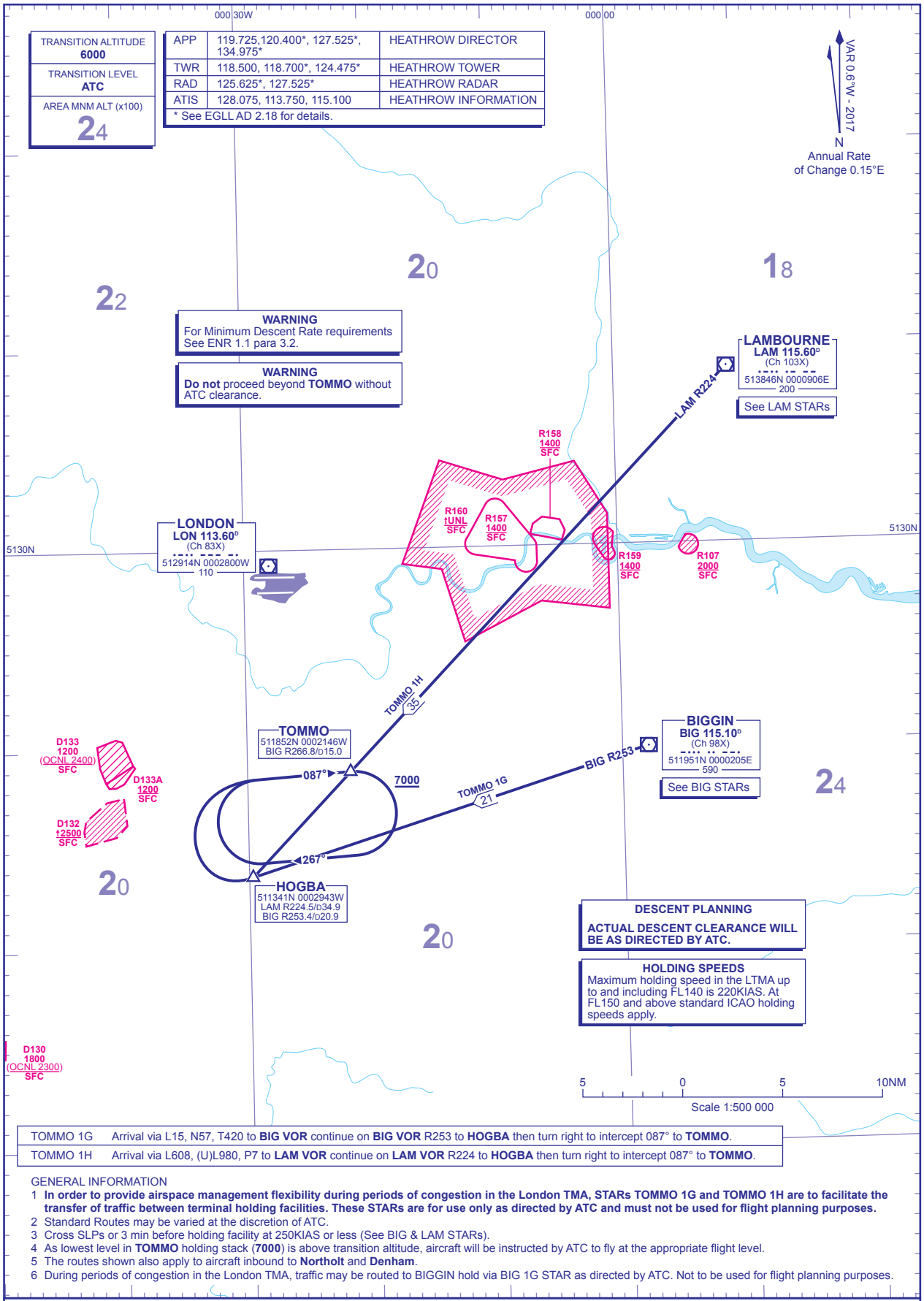
CHANGE (3/17): OCK 1H STAR TEXT, AIRWAY UP7 REPLACED BY P7. LAM VOR RECALIBRATED. OCK 1H LAM VOR RADIAL. WAYPOINT DORKI LAM VOR RADIAL.

AERO INFO DATE 01 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW via TOMMO (east) VOR OCK u/s



TOMMO 1G	Arrival via L15, N57, T420 to **BIG VOR** continue on **BIG VOR** R253 to **HOGBA** then turn right to intercept 087° to **TOMMO**.
TOMMO 1H	Arrival via L608, (U)L980, P7 to **LAM VOR** continue on **LAM VOR** R224 to **HOGBA** then turn right to intercept 087° to **TOMMO**.

GENERAL INFORMATION

1 **In order to provide airspace management flexibility during periods of congestion in the London TMA, STARs TOMMO 1G and TOMMO 1H are to facilitate the transfer of traffic between terminal holding facilities. These STARs are for use only as directed by ATC and must not be used for flight planning purposes.**
2 Standard Routes may be varied at the discretion of ATC.
3 Cross SLPs or 3 min before holding facility at 250KIAS or less (See BIG & LAM STARs).
4 As lowest level in **TOMMO** holding stack (**7000**) is above transition altitude, aircraft will be instructed by ATC to fly at the appropriate flight level.
5 The routes shown also apply to aircraft inbound to **Northolt** and **Denham**.
6 During periods of congestion in the London TMA, traffic may be routed to BIGGIN hold via BIG 1G STAR as directed by ATC. Not to be used for flight planning purposes.

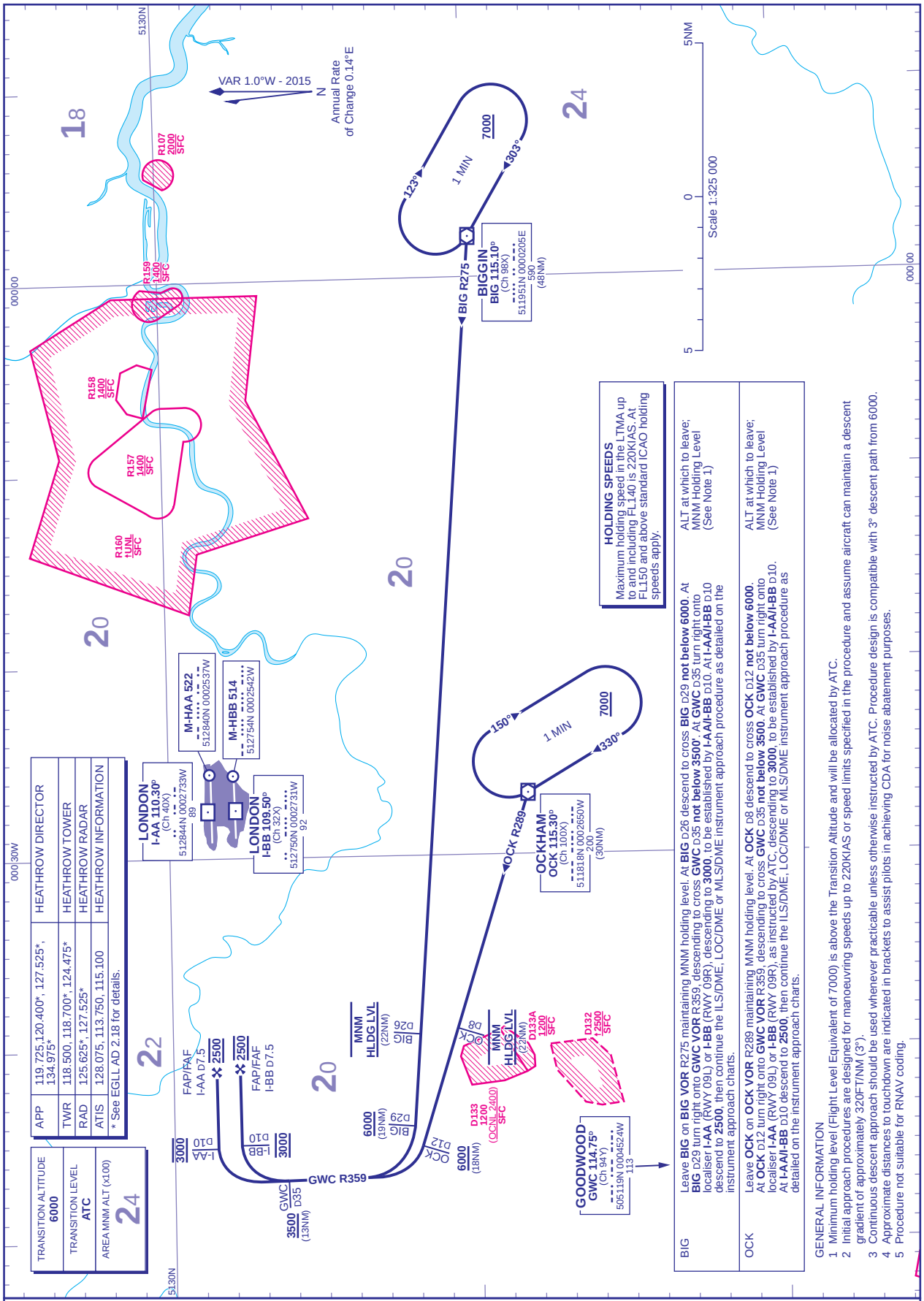
CHANGE (3/17): TOMMO 1H STAR TEXT, AIRWAY UP7 REPLACED BY P7. LAM VOR RECALIBRATED. TOMMO 1H LAM VOR RADIAL. WAYPOINT HOGBA RADIAL.

AERO INFO DATE 01 DEC 16

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 09L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via BIG and OCK



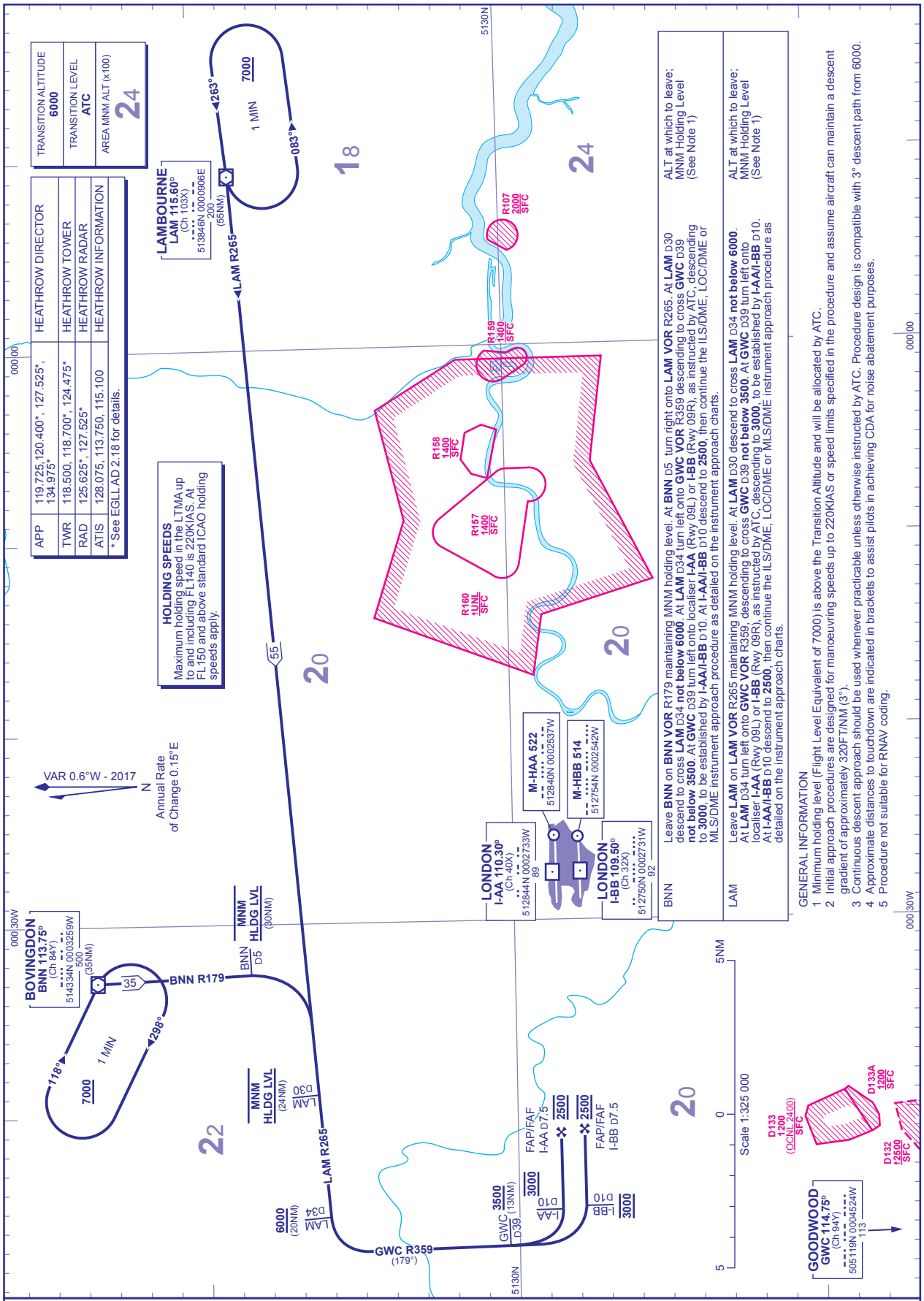
CHANGE (10/15): MAG VAR. RADIALS.

AERO INFO DATE 30 JUN 15

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 09L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via BNN and LAM



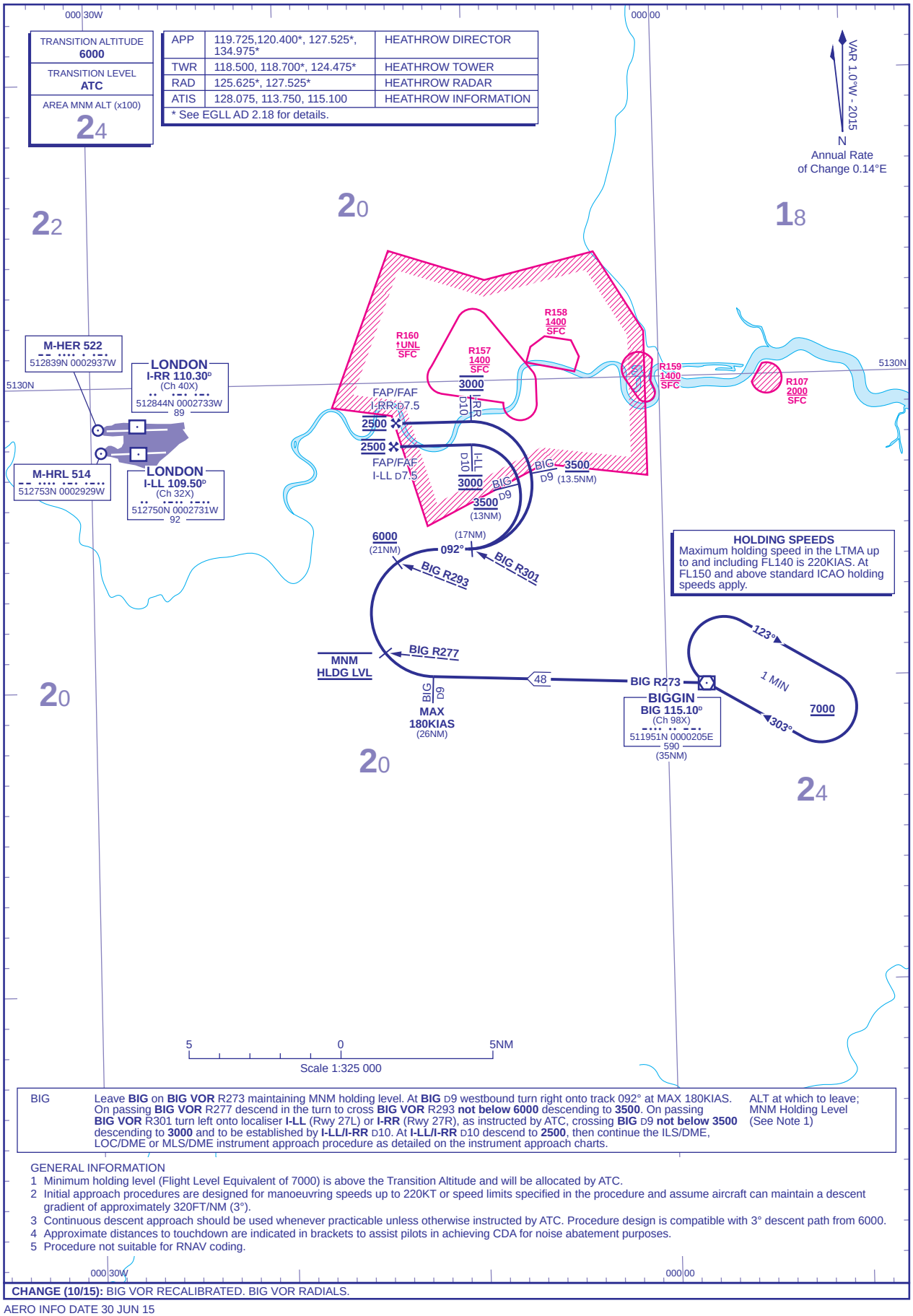
CHANGE (3/17): MAG VAR. ANNUAL RATE OF CHANGE. LAM VOR RECALIBRATED. LAM HOLD. LAM VOR RADIAL.

AERO INFO DATE 02 DEC 16

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 27L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via BIG



BIG	Leave **BIG** on **BIG VOR** R273 maintaining MNM holding level. At **BIG** D9 westbound turn right onto track 092° at MAX 180KIAS. On passing **BIG VOR** R277 descend in the turn to cross **BIG VOR** R293 **not below 6000** descending to **3500**. On passing **BIG VOR** R301 turn left onto localiser **I-LL** (Rwy 27L) or **I-RR** (Rwy 27R), as instructed by ATC, crossing **BIG** D9 **not below 3500** descending to **3000** and to be established by **I-LL/I-RR** D10. At **I-LL/I-RR** D10 descend to **2500**, then continue the ILS/DME, LOC/DME or MLS/DME instrument approach procedure as detailed on the instrument approach charts.	ALT at which to leave; MNM Holding Level (See Note 1)

GENERAL INFORMATION

1 Minimum holding level (Flight Level Equivalent of 7000) is above the Transition Altitude and will be allocated by ATC.
2 Initial approach procedures are designed for manoeuvring speeds up to 220KT or speed limits specified in the procedure and assume aircraft can maintain a descent gradient of approximately 320FT/NM (3°).
3 Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000.
4 Approximate distances to touchdown are indicated in brackets to assist pilots in achieving CDA for noise abatement purposes.
5 Procedure not suitable for RNAV coding.

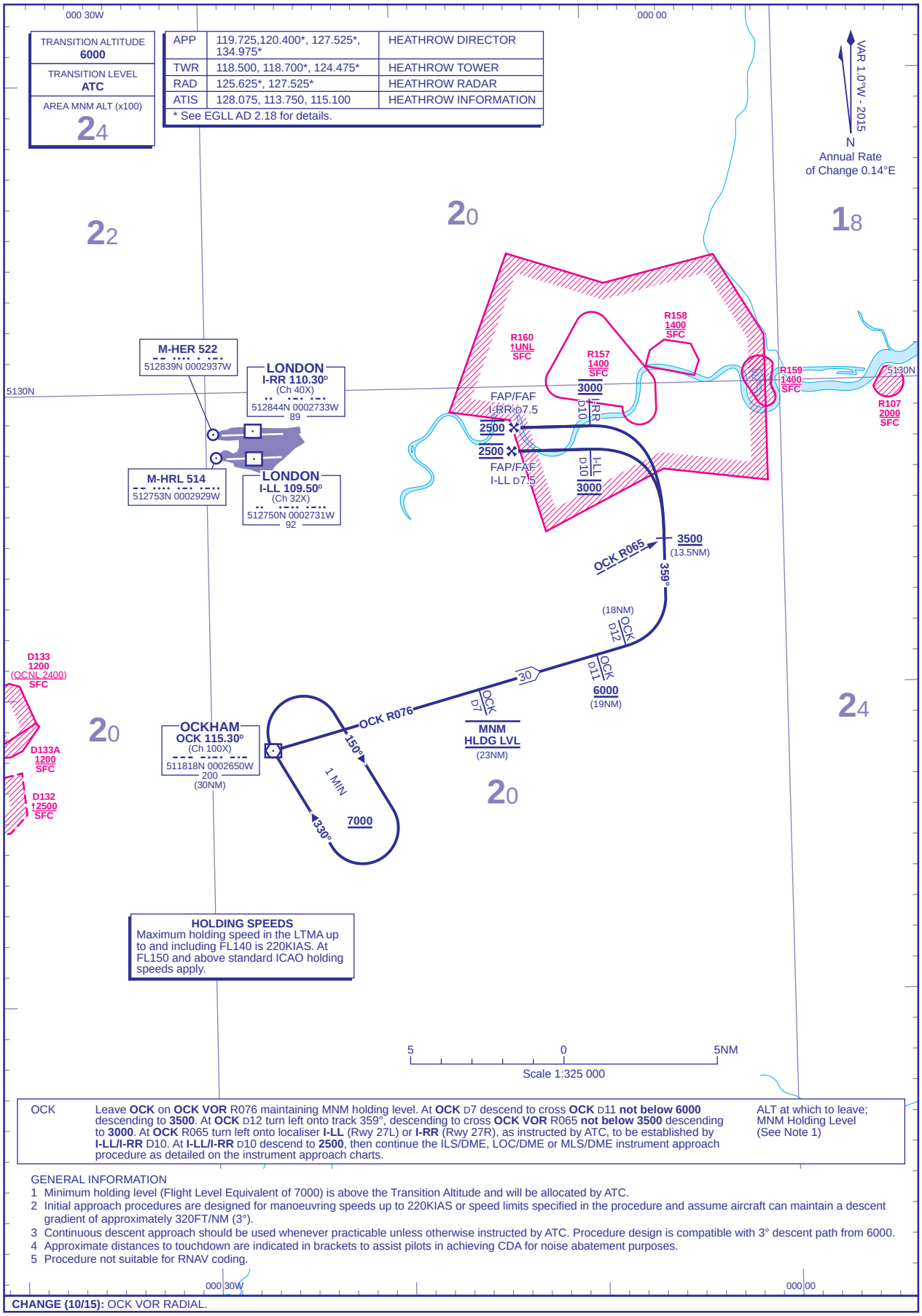
CHANGE (10/15): BIG VOR RECALIBRATED. BIG VOR RADIALS.

AERO INFO DATE 30 JUN 15

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 27L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via OCK



OCK	Leave **OCK** on **OCK VOR** R076 maintaining MNM holding level. At **OCK** D7 descend to cross **OCK** D11 **not below 6000** descending to **3500**. At **OCK** D12 turn left onto track 359°, descending to cross **OCK VOR** R065 **not below 3500** descending to **3000**. At **OCK** R065 turn left onto localiser **I-LL** (Rwy 27L) or **I-RR** (Rwy 27R), as instructed by ATC, to be established by **I-LL/I-RR** D10. At **I-LL/I-RR** D10 descend to **2500**, then continue the ILS/DME, LOC/DME or MLS/DME instrument approach procedure as detailed on the instrument approach charts.	ALT at which to leave; MNM Holding Level (See Note 1)

GENERAL INFORMATION

1 Minimum holding level (Flight Level Equivalent of 7000) is above the Transition Altitude and will be allocated by ATC.
2 Initial approach procedures are designed for manoeuvring speeds up to 220KIAS or speed limits specified in the procedure and assume aircraft can maintain a descent gradient of approximately 320FT/NM (3°).
3 Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000.
4 Approximate distances to touchdown are indicated in brackets to assist pilots in achieving CDA for noise abatement purposes.
5 Procedure not suitable for RNAV coding.

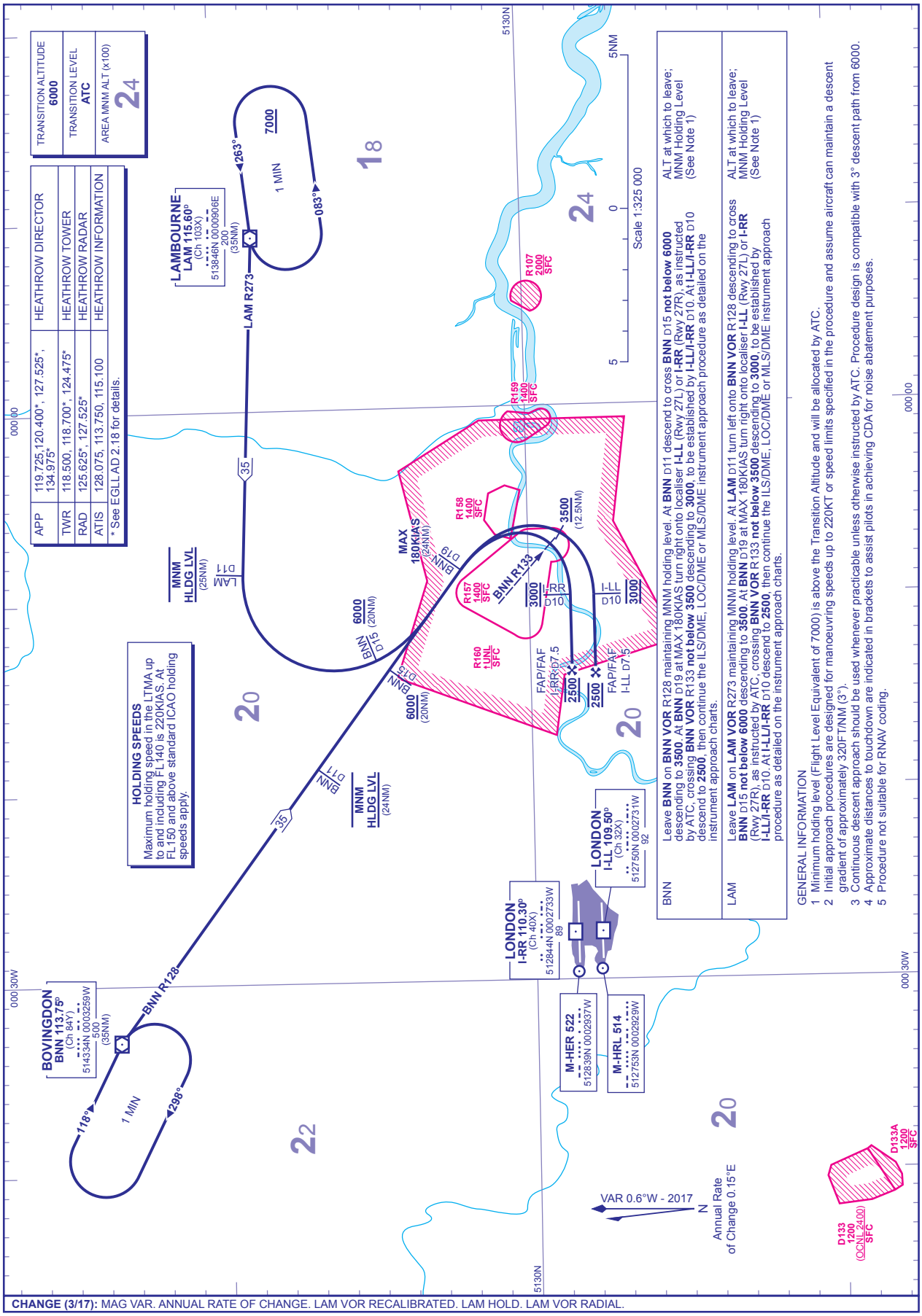
CHANGE (10/15): OCK VOR RADIAL.

AERO INFO DATE 30 JUN 15

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 27L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via BNN and LAM



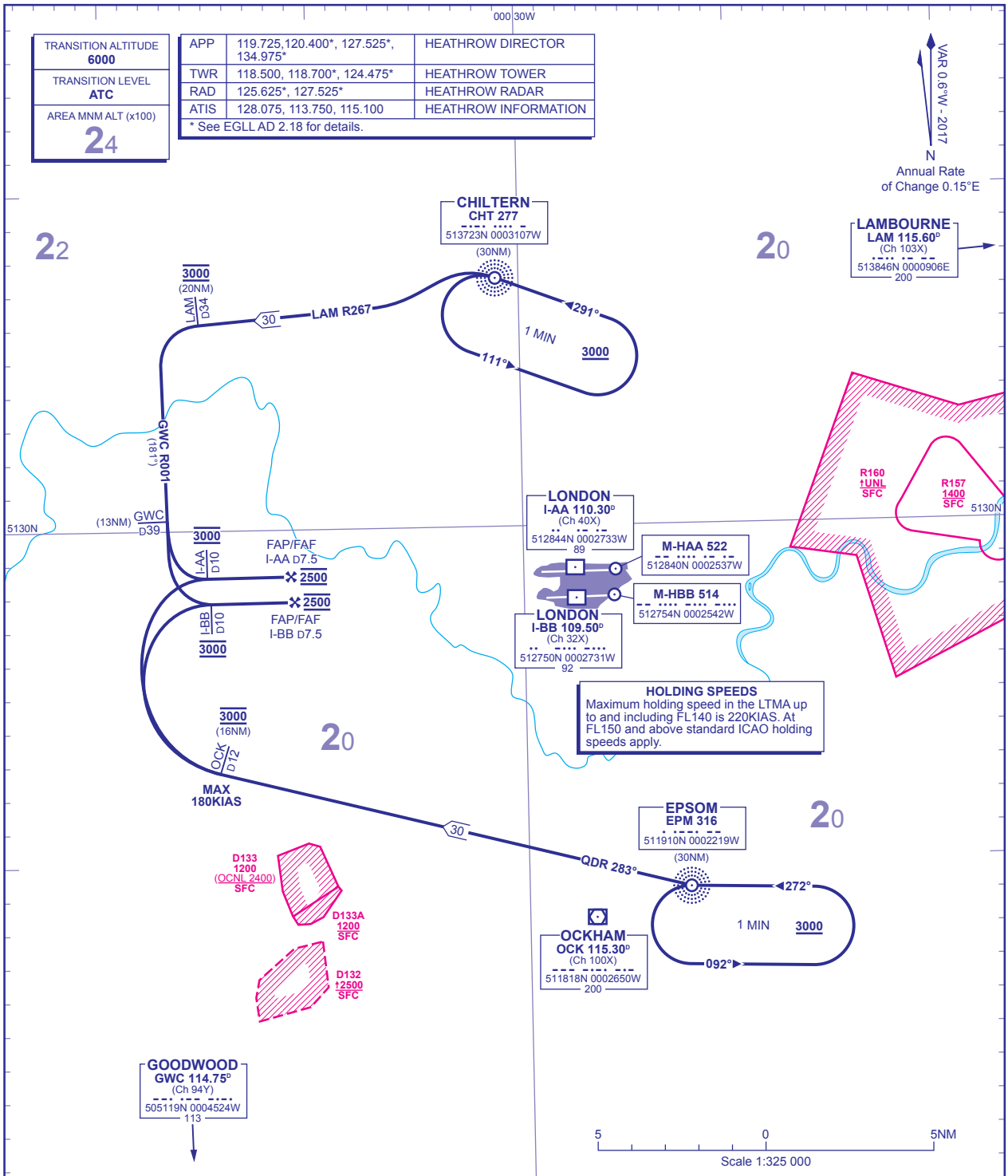
CHANGE (3/17): MAG VAR. ANNUAL RATE OF CHANGE. LAM VOR RECALIBRATED. LAM HOLD. LAM VOR RADIAL.

AERO INFO DATE 02 DEC 16

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 09L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via CHT and EPM



CHT	Leave **CHT NDB** on **LAM VOR** R267 maintaining **3000**. At **LAM** D34 turn left onto **GWC VOR** R001. At **GWC** D39 turn left onto localiser **I-AA** (Rwy 09L) or **I-BB** (Rwy 09R), to be established by **I-AA/I-BB** D10. At **I-AA/I-BB** D10 descend to **2500**, then continue the ILS/DME, LOC/DME or MLS/DME instrument approach procedure as detailed on the instrument approach charts.	Level at which to leave; **3000**
EPM	Leave **EPM NDB** on QDR 283° maintaining **3000**. At **OCK** D12, at MAX 180KIAS, turn right onto localiser **I-AA** (Rwy 09L) or **I-BB** (Rwy 09R) to be established by **I-AA/I-BB** D10. At **I-AA/I-BB** D10 descend to **2500**, then continue the ILS/DME, LOC/DME or MLS/DME instrument approach procedure as detailed on the instrument approach charts.	Level at which to leave; **3000**

GENERAL INFORMATION
1 Minimum holding level (Flight Level Equivalent of 7000) is above the Transition Altitude and will be allocated by ATC.
2 Initial approach procedures are designed for manoeuvring speeds up to 220KIAS or speed limits specified in the procedure and assume aircraft can maintain a descent gradient of approximately 320FT/NM (3°).
3 Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000.
4 Approximate distances to touchdown are indicated in brackets to assist pilots in achieving CDA for noise abatement purposes.
5 Procedure not suitable for RNAV coding.

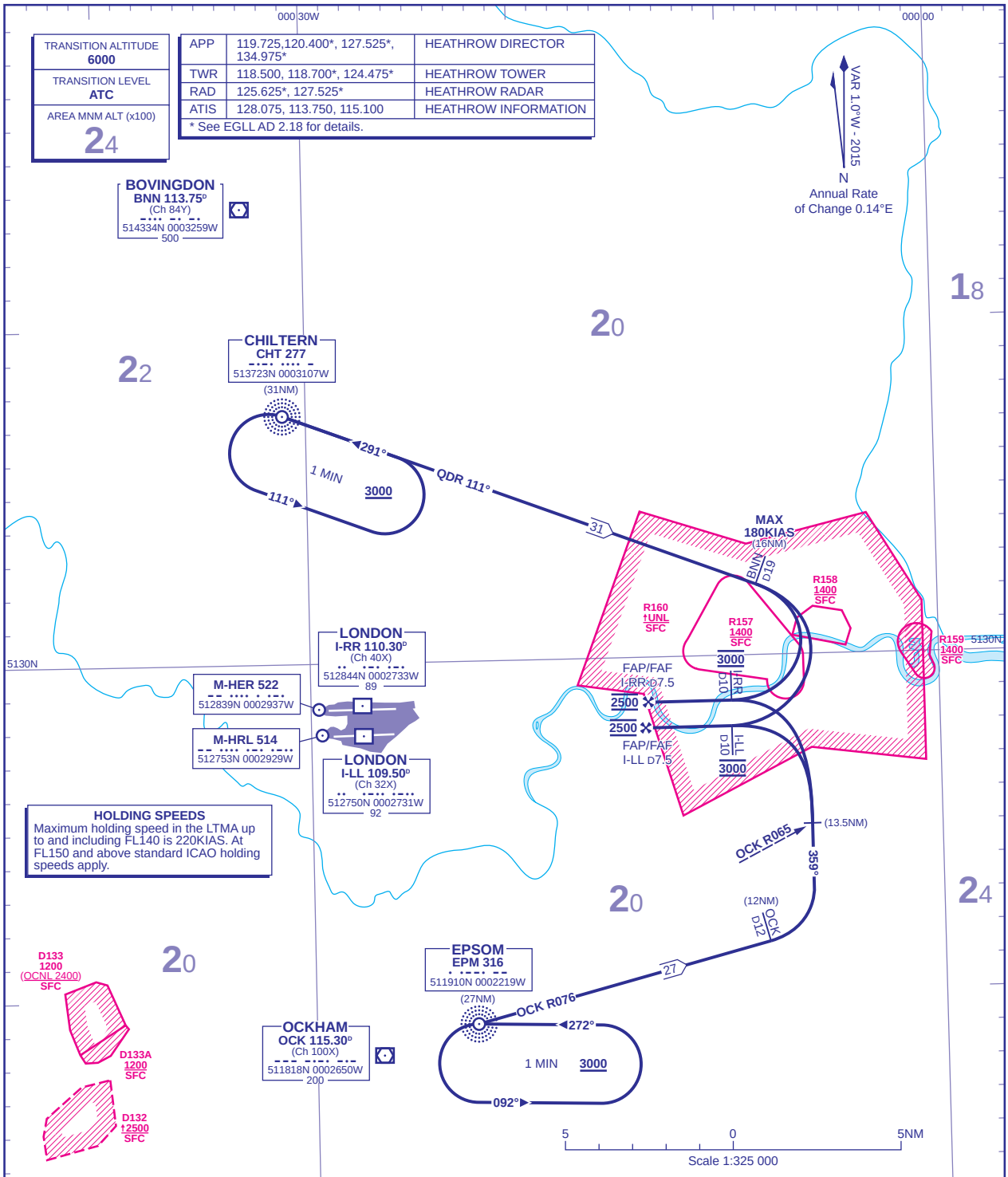
CHANGE (3/17): MAG VAR, ANNUAL RATE OF CHANGE. LAM VOR RECALIBRATED. ARRIVAL FROM CHT LAM VOR RADIAL.

AERO INFO DATE 02 DEC 16

INITIAL APPROACH PROCEDURES
ILS or MLS RWY 27L/R Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON HEATHROW
via CHT and EPM



CHT	Leave **CHT NDB** on QDR 111° maintaining **3000**. At **BNN** D19, at MAX 180KIAS, turn right onto localiser **I-LL** (Rwy 27L) or **I-RR** (Rwy 27R), to be established by **I-LL/I-RR** D10. At **I-LL/I-RR** D10 descend to **2500**, then continue the ILS/DME, LOC/DME or MLS/DME instrument approach procedure as detailed on the instrument approach charts.	Level at which to leave; **3000**
EPM	Leave **EPM NDB** on **OCK VOR** R076 maintaining **3000**. At **OCK** D12 turn left onto track 359°. At **OCK VOR** R065 turn left onto localiser **I-LL** (Rwy 27L) or **I-RR** (Rwy 27R) to be established by **I-LL/I-RR** D10. At **I-LL/I-RR** D10 descend to **2500**, then continue the ILS/DME, LOC/DME or MLS/DME instrument approach procedure as detailed on the instrument approach charts.	Level at which to leave; **3000**

GENERAL INFORMATION

1 Minimum holding level (Flight Level Equivalent of 7000) is above the Transition Altitude and will be allocated by ATC.
2 Initial approach procedures are designed for manoeuvring speeds up to 220KT or speed limits specified in the procedure and assume aircraft can maintain a descent gradient of approximately 320FT/NM (3°).
3 Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000.
4 Approximate distances to touchdown are indicated in brackets to assist pilots in achieving CDA for noise abatement purposes.
5 Procedure not suitable for RNAV coding.

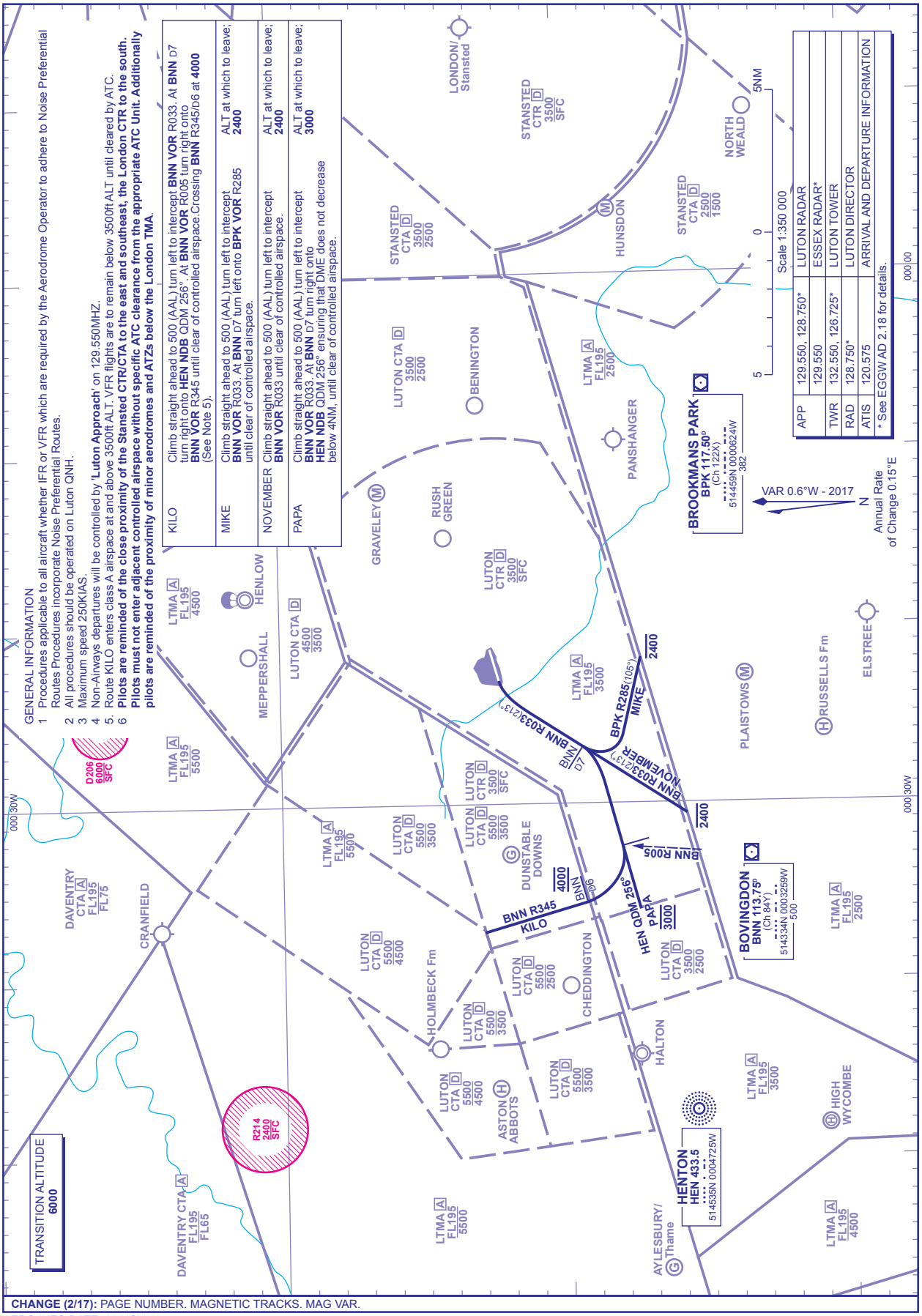
CHANGE (10/15): OCK VOR RADIAL.

AERO INFO DATE 30 JUN 15

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON
NON-AIRWAY DEPARTURES
RWY 26



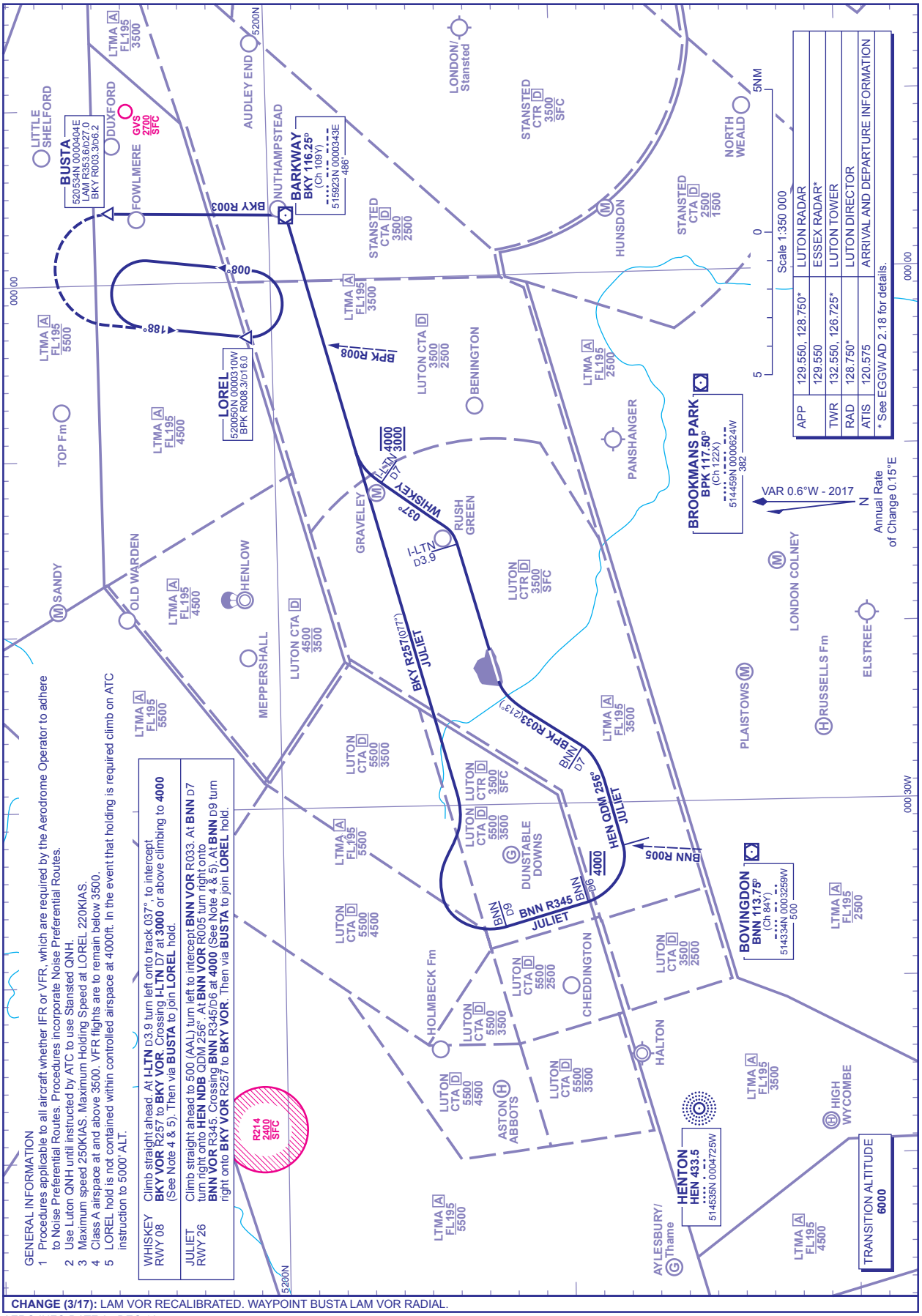
CHANGE (2/17): PAGE NUMBER. MAGNETIC TRACKS. MAG VAR.

AERO INFO DATE 09 NOV 16

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON NON-AIRWAY DEPARTURES to Stansted



GENERAL INFORMATION
1 Procedures applicable to all aircraft whether IFR or VFR, which are required by the Aerodrome Operator to adhere to Noise Preferential Routes. Procedures incorporate Noise Preferential Routes.
2 Use Luton QNH until instructed by ATC to use Stansted QNH.
3 Maximum speed 250KIAS. Maximum Holding Speed at LOREL 220KIAS.
4 Class A airspace at and above 3500. VFR flights are to remain below 3500.
5 LOREL hold is not contained within controlled airspace at 4000ft. In the event that holding is required climb on ATC instruction to 5000' ALT.

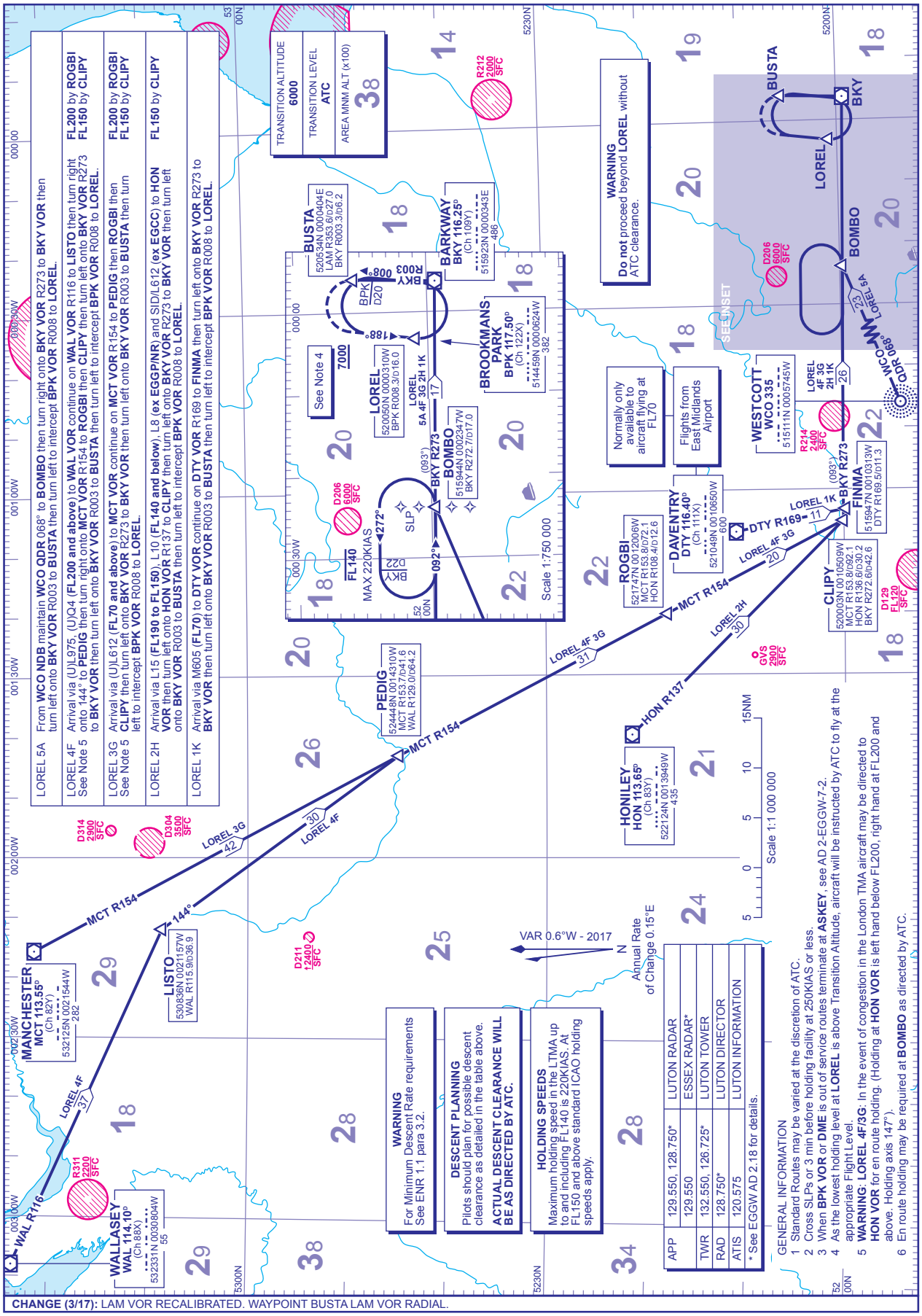
WHISKEY RWY 08	Climb straight ahead. At **I-LTN** D3.9 turn left onto track 037°, to intercept **BKY VOR** R257 to **BKY VOR**. Crossing **I-LTN** D7 at **3000** or above climbing to **4000** (See Note 4 & 5). Then via **BUSTA** to join **LOREL** hold.
JULIET RWY 26	Climb straight ahead to 500 (AAL) turn left to intercept **BNN VOR** R033. At **BNN** D7 turn right onto **HEN NDB** QDM 256°. At **BNN VOR** R005 turn right onto **BNN VOR** R345. Crossing **BNN** R345/d6 at **4000** (See Note 4 & 5). At **BNN** D9 turn right onto **BKY VOR** R257 to **BKY VOR**. Then via **BUSTA** to join **LOREL** hold.

CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.
AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON via LOREL (north)



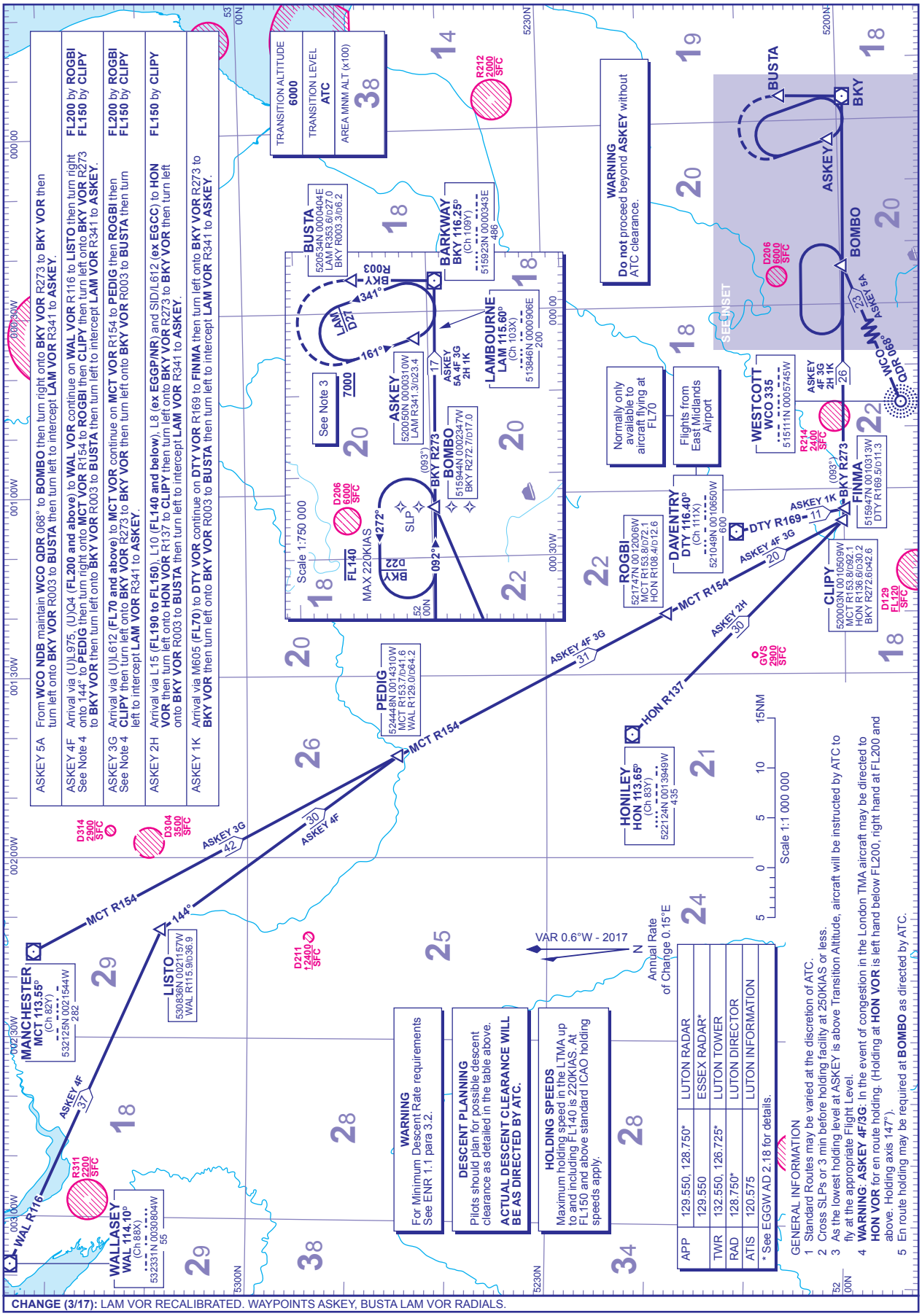
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON
via ASKEY (north) VOR BPK u/s



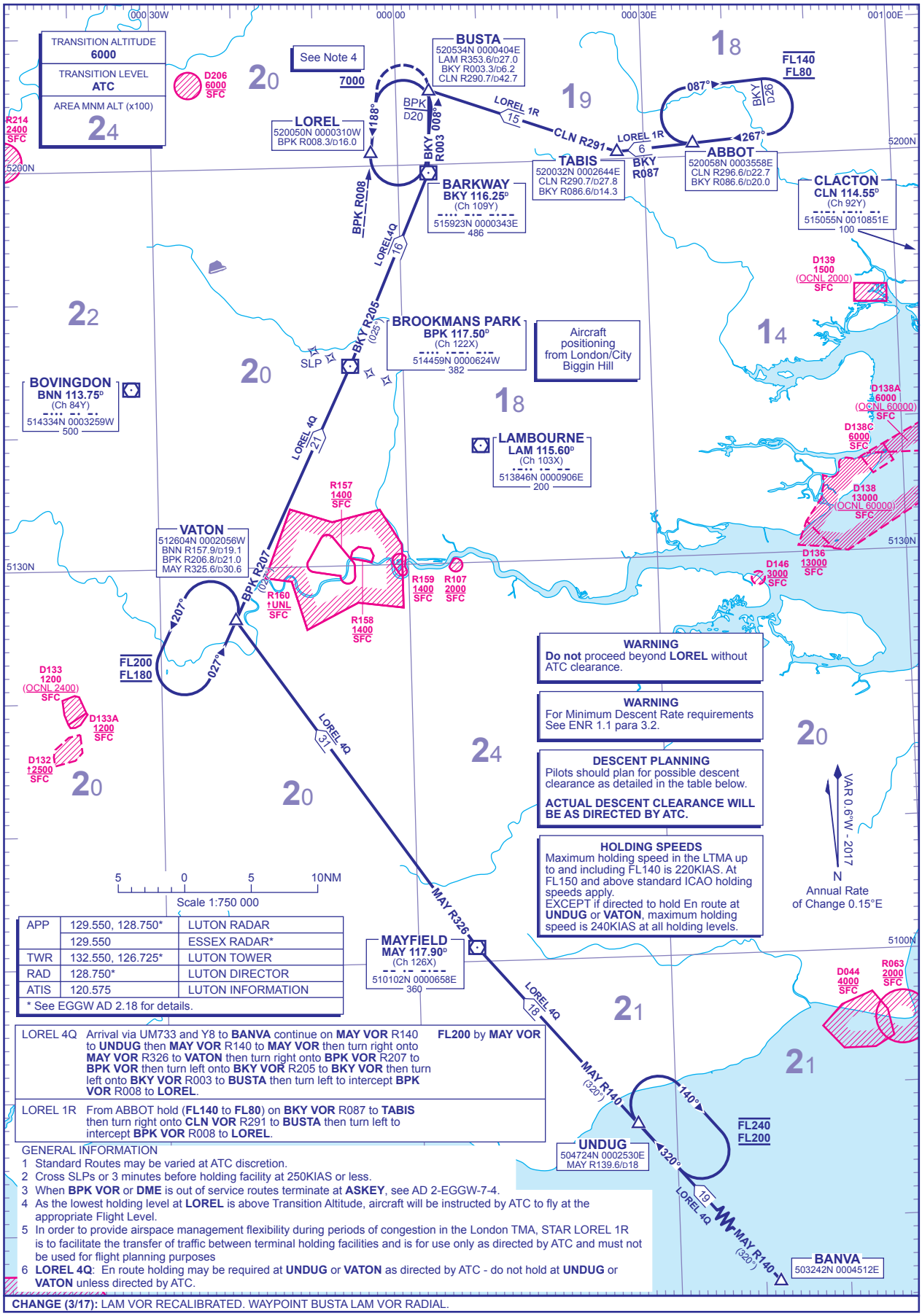
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS ASKEY, BUSTA LAM VOR RADIALS.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON via LOREL (south & east)



APP	129.550, 128.750*	LUTON RADAR
	129.550	ESSEX RADAR*
TWR	132.550, 126.725*	LUTON TOWER
RAD	128.750*	LUTON DIRECTOR
ATIS	120.575	LUTON INFORMATION

* See EGGW AD 2.18 for details.

LOREL 4Q	Arrival via UM733 and Y8 to **BANVA** continue on **MAY VOR** R140 to **UNDUG** then **MAY VOR** R140 to **MAY VOR** then turn right onto **MAY VOR** R326 to **VATON** then turn right onto **BPK VOR** R207 to **BPK VOR** then turn left onto **BKY VOR** R205 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**. **FL200** by **MAY VOR**
LOREL 1R	From ABBOT hold (**FL140** to **FL80**) on **BKY VOR** R087 to **TABIS** then turn right onto **CLN VOR** R291 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**.

GENERAL INFORMATION

1 Standard Routes may be varied at ATC discretion.
2 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
3 When **BPK VOR** or **DME** is out of service routes terminate at **ASKEY**, see AD 2-EGGW-7-4.
4 As the lowest holding level at **LOREL** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
5 In order to provide airspace management flexibility during periods of congestion in the London TMA, STAR LOREL 1R is to facilitate the transfer of traffic between terminal holding facilities and is for use only as directed by ATC and must not be used for flight planning purposes
6 **LOREL 4Q**: En route holding may be required at **UNDUG** or **VATON** as directed by ATC - do not hold at **UNDUG** or **VATON** unless directed by ATC.

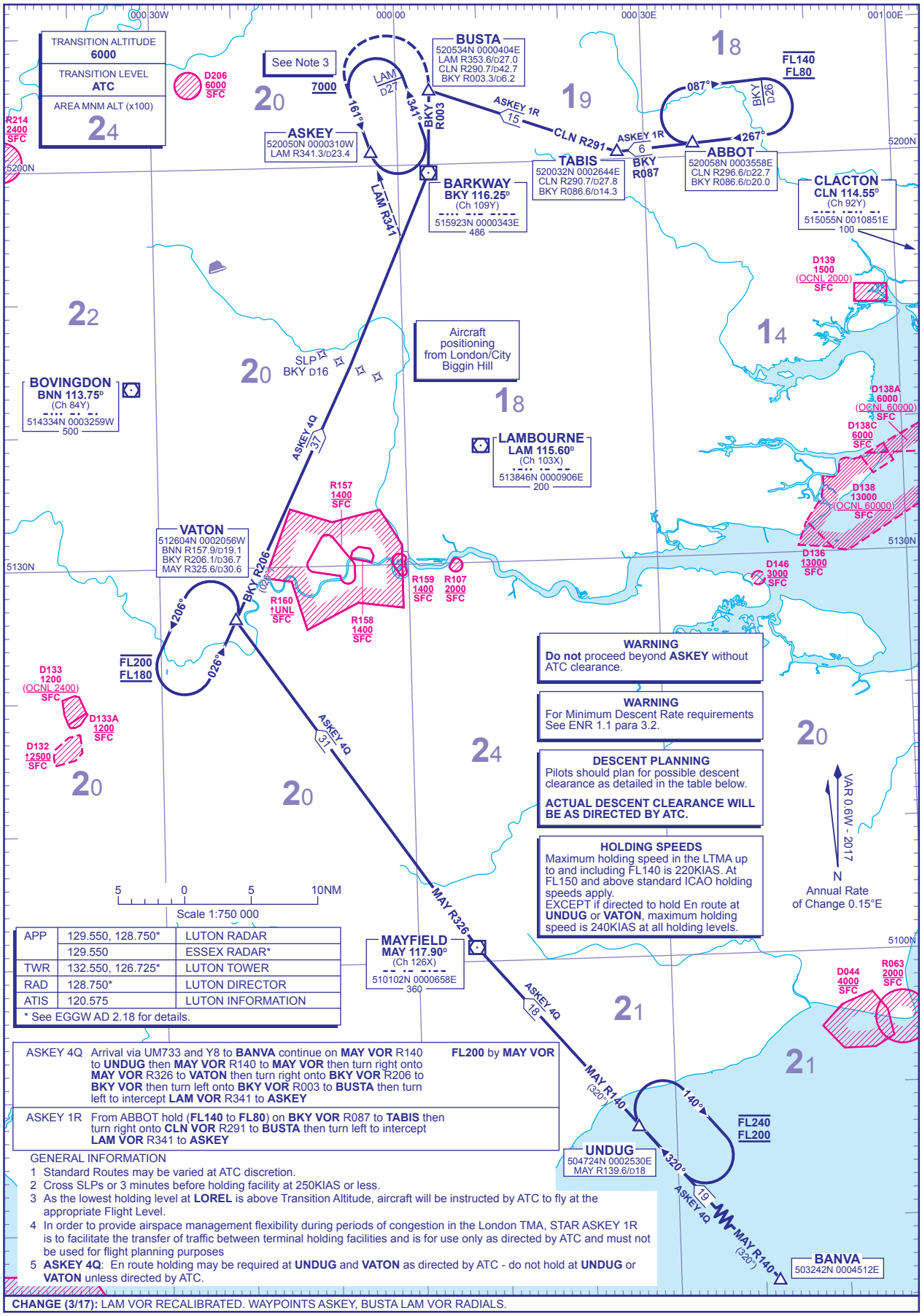
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON
via ASKEY (south) VOR BPK u/s (4Q,1R)

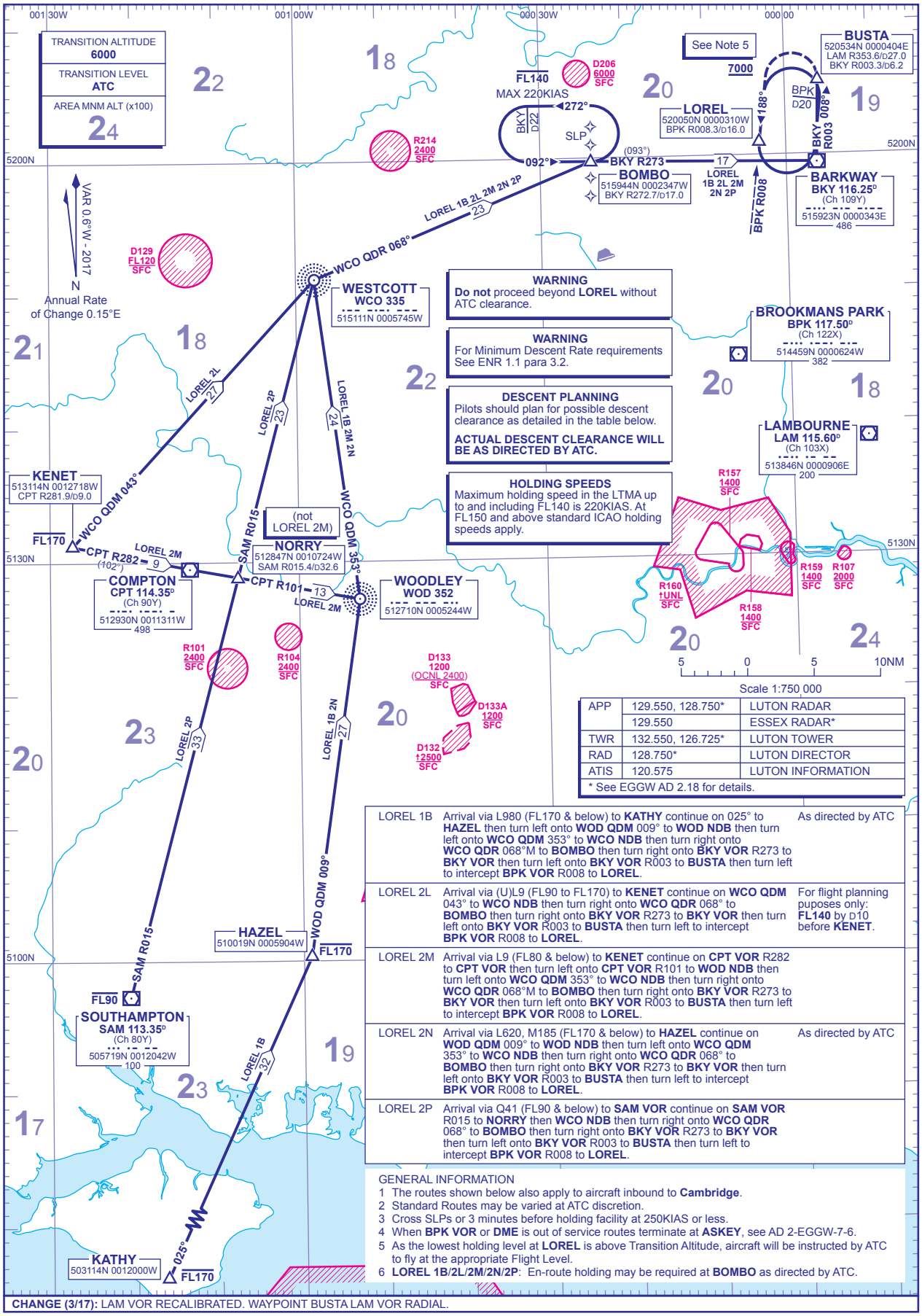


AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON via LOREL (southwest)



APP	129.550, 128.750*	LUTON RADAR
	129.550	ESSEX RADAR*
TWR	132.550, 126.725*	LUTON TOWER
RAD	128.750*	LUTON DIRECTOR
ATIS	120.575	LUTON INFORMATION

* See EGGW AD 2.18 for details.

LOREL 1B	Arrival via L980 (FL170 & below) to **KATHY** continue on 025° to **HAZEL** then turn left onto **WOD QDM** 009° to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068°M to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**.	As directed by ATC
LOREL 2L	Arrival via (U)L9 (FL90 to FL170) to **KENET** continue on **WCO QDM** 043° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**.	For flight planning puposes only: **FL140** by D10 before **KENET**.
LOREL 2M	Arrival via L9 (FL80 & below) to **KENET** continue on **CPT VOR** R282 to **CPT VOR** then turn left onto **CPT VOR** R101 to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068°M to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**.	
LOREL 2N	Arrival via L620, M185 (FL170 & below) to **HAZEL** continue on **WOD QDM** 009° to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**.	As directed by ATC
LOREL 2P	Arrival via Q41 (FL90 & below) to **SAM VOR** continue on **SAM VOR** R015 to **NORRY** then **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **BPK VOR** R008 to **LOREL**.	

GENERAL INFORMATION
1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at ATC discretion.
3 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
4 When **BPK VOR** or **DME** is out of service routes terminate at **ASKEY**, see AD 2-EGGW-7-6.
5 As the lowest holding level at **LOREL** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
6 **LOREL 1B/2L/2M/2N/2P**: En-route holding may be required at **BOMBO** as directed by ATC.

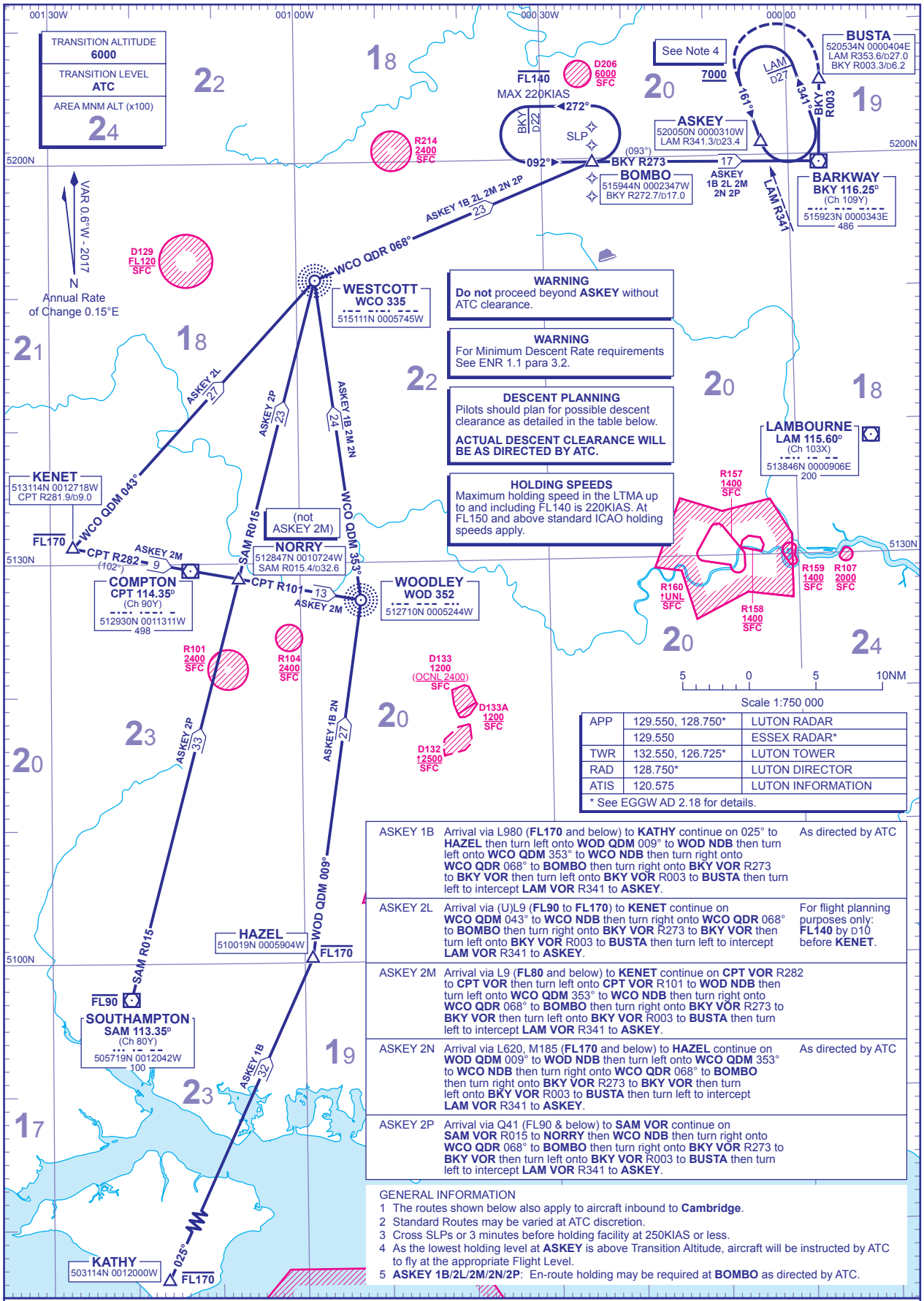
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON
via ASKEY (southwest) VOR BPK u/s



APP	129.550, 128.750*	LUTON RADAR
	129.550	ESSEX RADAR*
TWR	132.550, 126.725*	LUTON TOWER
RAD	128.750*	LUTON DIRECTOR
ATIS	120.575	LUTON INFORMATION

* See EGGW AD 2.18 for details.

ASKEY 1B	Arrival via L980 (**FL170** and below) to **KATHY** continue on 025° to **HAZEL** then turn left onto **WOD QDM** 009° to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	As directed by ATC
ASKEY 2L	Arrival via (U)L9 (**FL90** to **FL170**) to **KENET** continue on **WCO QDM** 043° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	For flight planning purposes only: **FL140** by D10 before **KENET**.
ASKEY 2M	Arrival via L9 (**FL80** and below) to **KENET** continue on **CPT VOR** R282 to **CPT VOR** then turn left onto **CPT VOR** R101 to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	
ASKEY 2N	Arrival via L620, M185 (**FL170** and below) to **HAZEL** continue on **WOD QDM** 009° to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	As directed by ATC
ASKEY 2P	Arrival via Q41 (FL90 & below) to **SAM VOR** continue on **SAM VOR** R015 to **NORRY** then **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	

GENERAL INFORMATION
1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at ATC discretion.
3 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
4 As the lowest holding level at **ASKEY** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
5 **ASKEY 1B/2L/2M/2N/2P**: En-route holding may be required at **BOMBO** as directed by ATC.

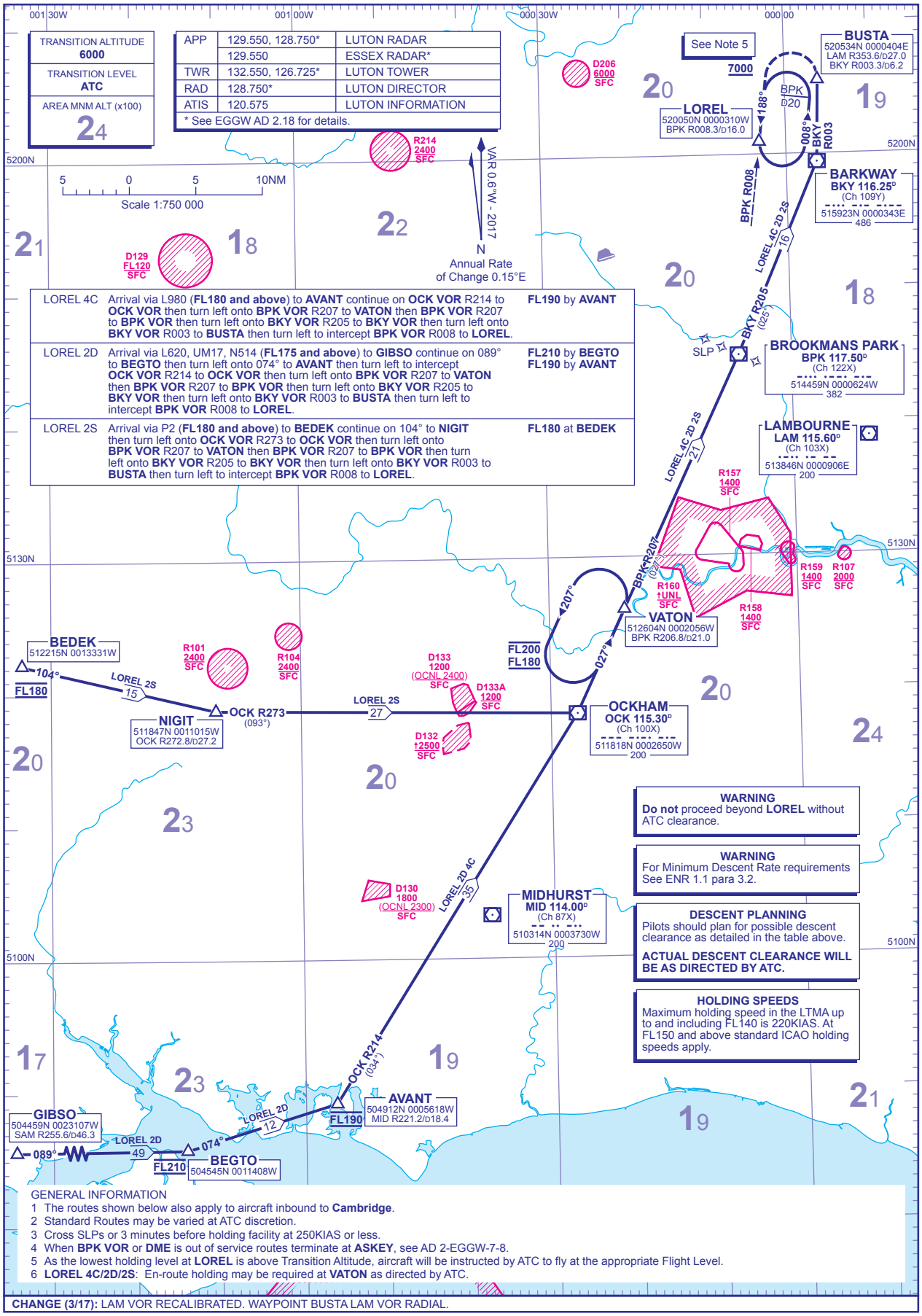
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS ASKEY, BUSTA LAM VOR RADIALS.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON via LOREL (south)

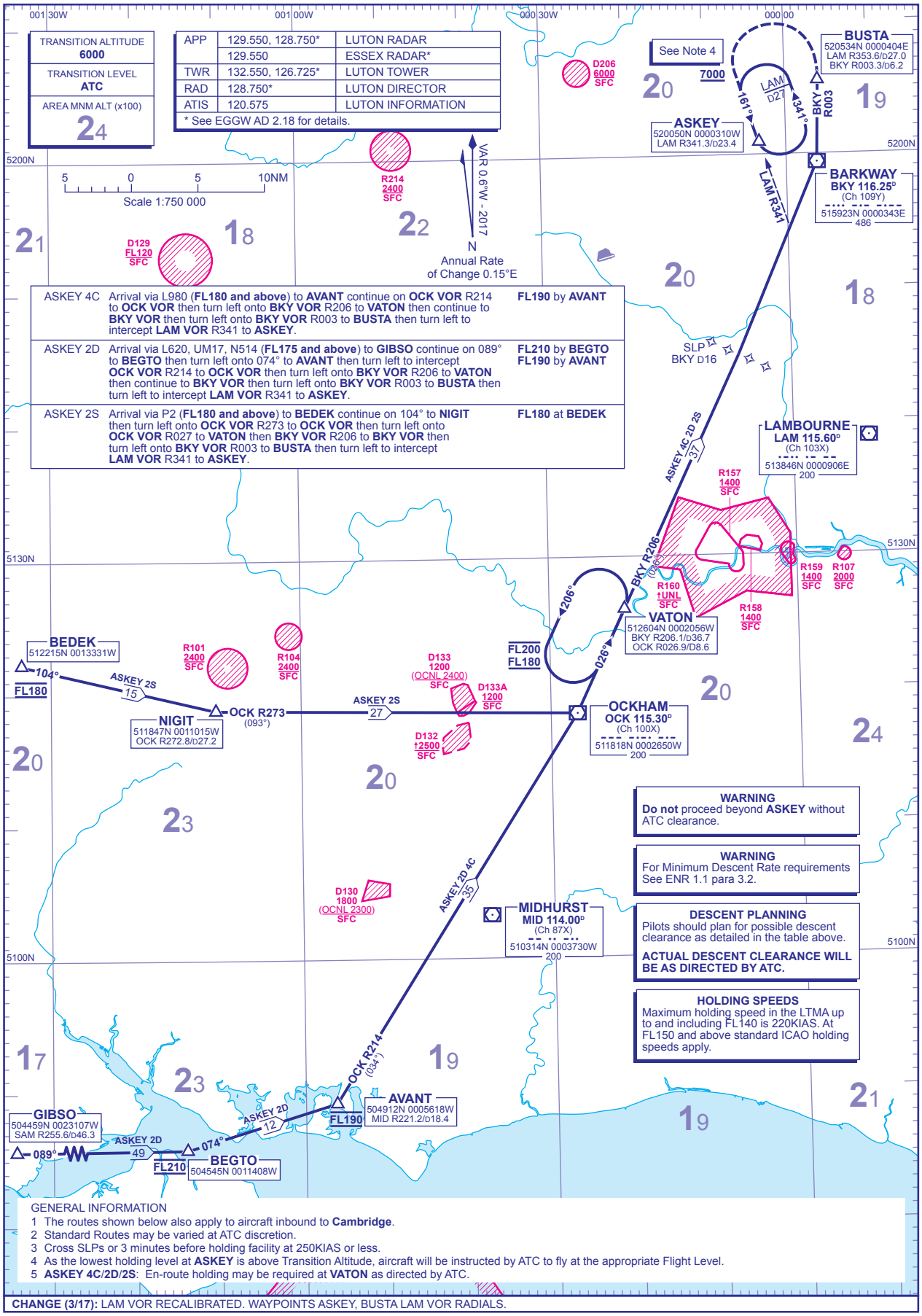


AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON
via ASKEY (south) VOR BPK u/s (4C,2D,2S)



GENERAL INFORMATION

1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at ATC discretion.
3 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
4 As the lowest holding level at **ASKEY** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
5 **ASKEY 4C/2D/2S**: En-route holding may be required at **VATON** as directed by ATC.

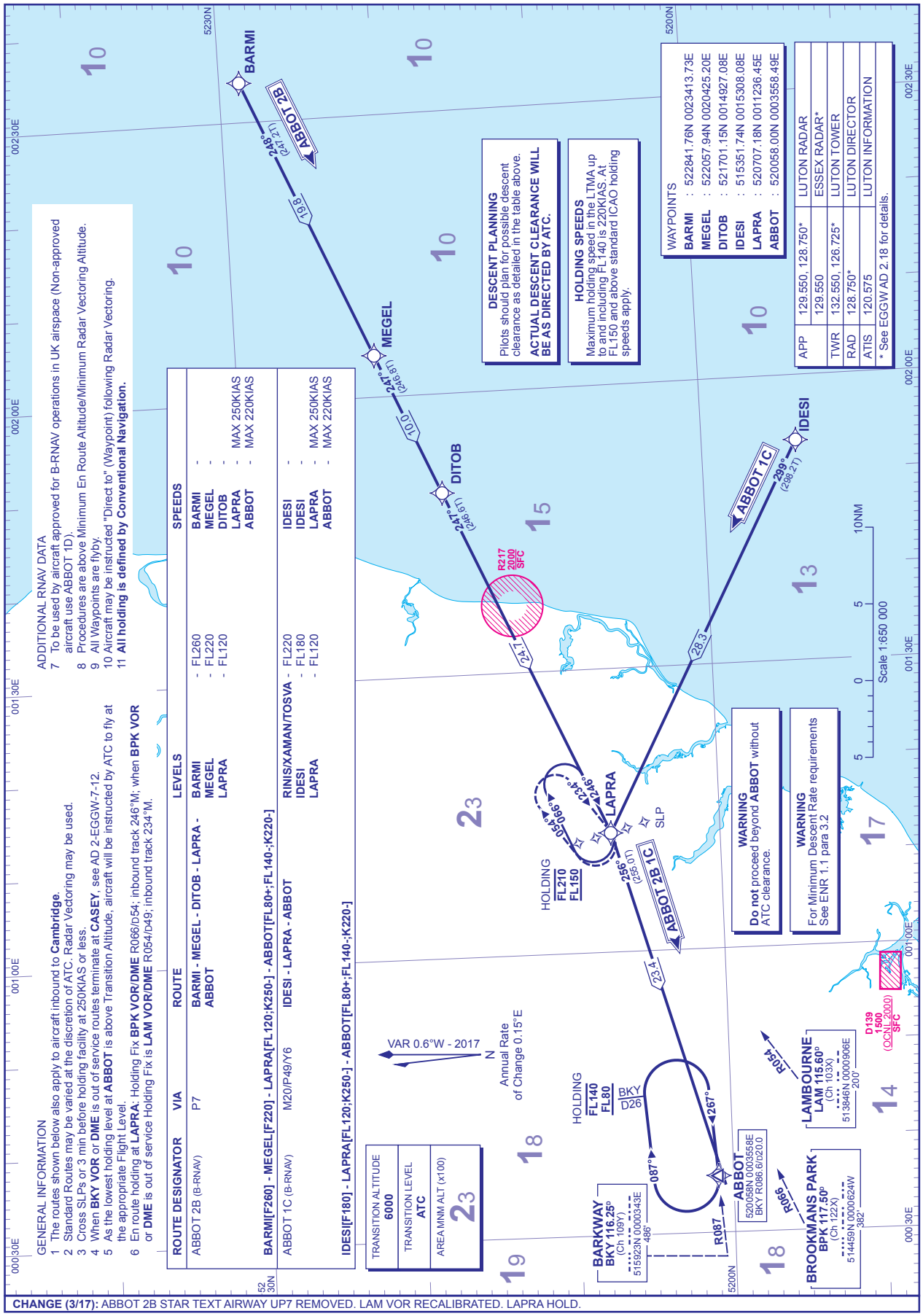
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS ASKEY, BUSTA LAM VOR RADIALS.

AERO INFO DATE 05 DEC 16

B-RNAV STAR via ABBOT (northeast)

DISTANCES IN NAUTICAL MILES
TRACKS ARE TRUE (T) AND MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON



ROUTE DESIGNATOR	VIA	ROUTE	LEVELS		SPEEDS	
ABBOT 2B (B-RNAV)	P7	BARMI - MEGEL - DITOB - LAPRA - ABBOT	BARMI MEGEL LAPRA	- FL260 - FL220 - FL120	BARMI - MEGEL - DITOB - LAPRA - MAX 250KIAS ABBOT - MAX 220KIAS	
BARMI[F260] - MEGEL[F220] - LAPRA[FL120;K250-] - ABBOT[FL80+;FL140-;K220-]						
ABBOT 1C (B-RNAV)	M20/P49/Y6	IDESI - LAPRA - ABBOT	RINIS/KAMAN/TOSVA IDESI LAPRA	- FL220 - FL180 - FL120	IDESI - IDESI - LAPRA - MAX 250KIAS ABBOT - MAX 220KIAS	
IDESI[F180] - LAPRA[FL120;K250-] - ABBOT[FL80+;FL140-;K220-]						

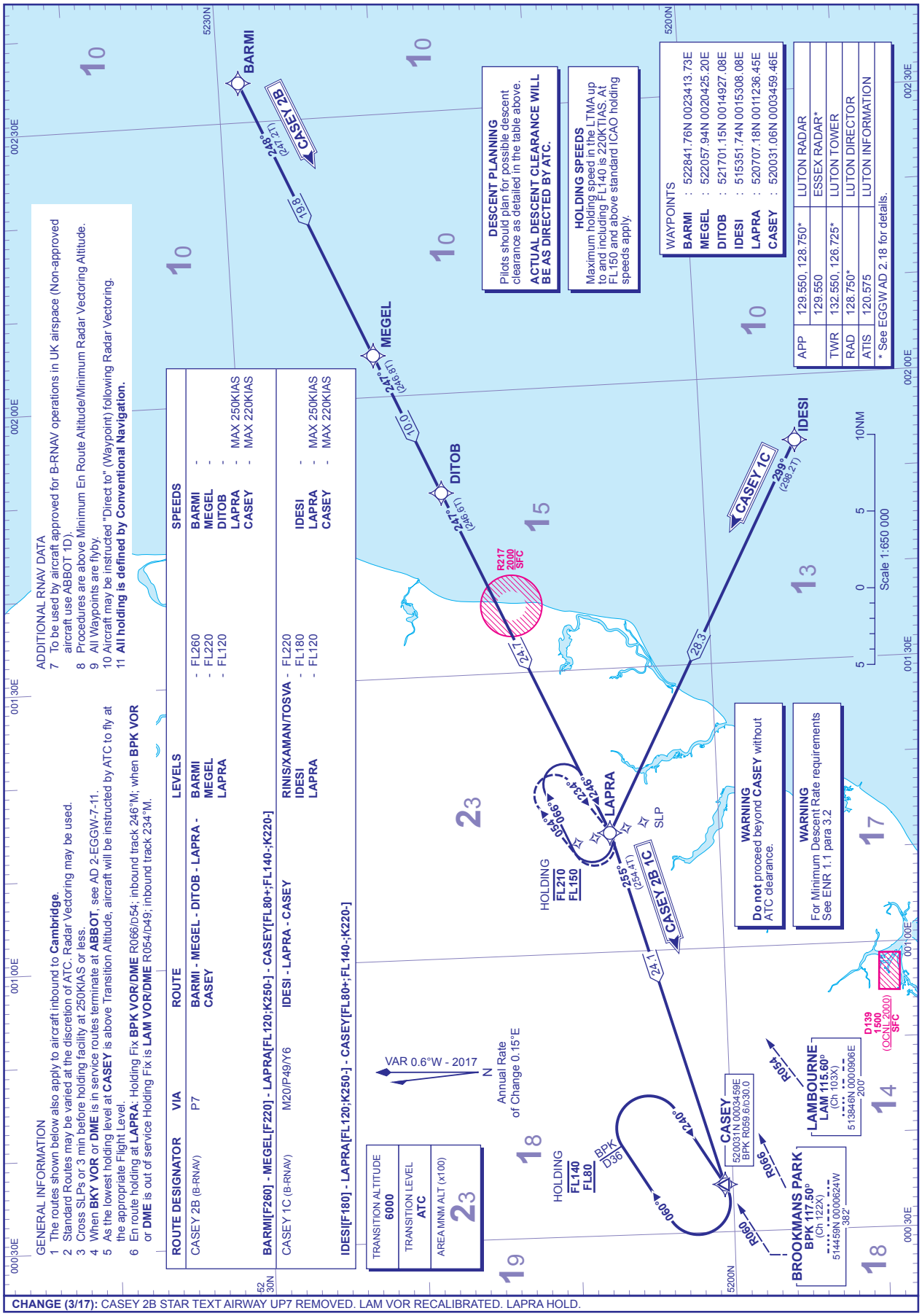
CHANGE (3/17): ABBOT 2B STAR TEXT AIRWAY UP7 REMOVED. LAM VOR RECALIBRATED. LAPRA HOLD.

AERO INFO DATE 05 DEC 16

B-RNAV STAR
via CASEY (northeast) VOR/DME BKY u/s

DISTANCES IN NAUTICAL MILES
TRACKS ARE TRUE (T) AND MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON



DESCENT PLANNING
Pilots should plan for possible descent clearance as detailed in the table above.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

HOLDING SPEEDS
Maximum holding speed in the LTMA up to and including FL140 is 220KTIAS. At FL150 and above standard ICAO holding speeds apply.

WAYPOINTS

BARMI	522841.76N 0023413.73E
MEGEL	522057.94N 0020425.20E
DITOB	521701.15N 0014927.08E
IDESI	515351.74N 0015308.08E
LAPRA	520707.18N 0011236.45E
CASEY	520031.06N 0003459.46E

APP	129.550, 128.750*	LUTON RADAR
	129.550	ESSEX RADAR*
TWR	132.550, 126.725*	LUTON TOWER
RAD	128.750*	LUTON DIRECTOR
ATIS	120.575	LUTON INFORMATION

* See EGGW AD 2.18 for details.

WARNING
Do not proceed beyond **CASEY** without ATC clearance.

WARNING
For Minimum Descent Rate requirements See ENR 1.1 para 3.2

GENERAL INFORMATION
1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at the discretion of ATC. Radar Vectoring may be used.
3 Cross SLPs or 3 min before holding facility at 250KIAS or less.
4 When **BKY VOR** or **DME** is in service routes terminate at **ABBOT**, see AD 2-EGGW-7-11.
5 As the lowest holding level at **CASEY** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
6 En route holding at **LAPRA**: Holding Fix **BPK VOR/DME** R066/D54; inbound track 246°M; when **BPK VOR** or **DME** is out of service Holding Fix is **LAM VOR/DME** R054/D49; inbound track 234°M.

ADDITIONAL RNAV DATA
7 To be used by aircraft approved for B-RNAV operations in UK airspace (Non-approved aircraft use ABBOT 1D).
8 Procedures are above Minimum En Route Altitude/Minimum Radar Vectoring Altitude.
9 All Waypoints are flyby.
10 Aircraft may be instructed "Direct to" (Waypoint) following Radar Vectoring.
11 **All holding is defined by Conventional Navigation.**

ROUTE DESIGNATOR	VIA	ROUTE	LEVELS		SPEEDS	
CASEY 2B (B-RNAV)	P7	**BARMI - MEGEL - DITOB - LAPRA - CASEY**	**BARMI**	- FL260	**BARMI**	-
			MEGEL	- FL220	**MEGEL**	-
			LAPRA	- FL120	**DITOB**	-
					LAPRA	- MAX 250KIAS
					CASEY	- MAX 220KIAS
BARMI[F260] - MEGEL[F220] - LAPRA[FL120;K250-] - CASEY[FL80+;FL140-;K220-]						
CASEY 1C (B-RNAV)	M20/P49/Y6	**IDESI - LAPRA - CASEY**	**RINIS/KAMAN/TOSVA**	- FL220	**IDESI**	-
			IDESI	- FL180	**LAPRA**	- MAX 250KIAS
			LAPRA	- FL120	**CASEY**	- MAX 220KIAS
IDESI[F180] - LAPRA[FL120;K250-] - CASEY[FL80+;FL140-;K220-]						

TRANSITION ALTITUDE **6000**
TRANSITION LEVEL **ATC**
AREA MNM ALT (x100) **23**

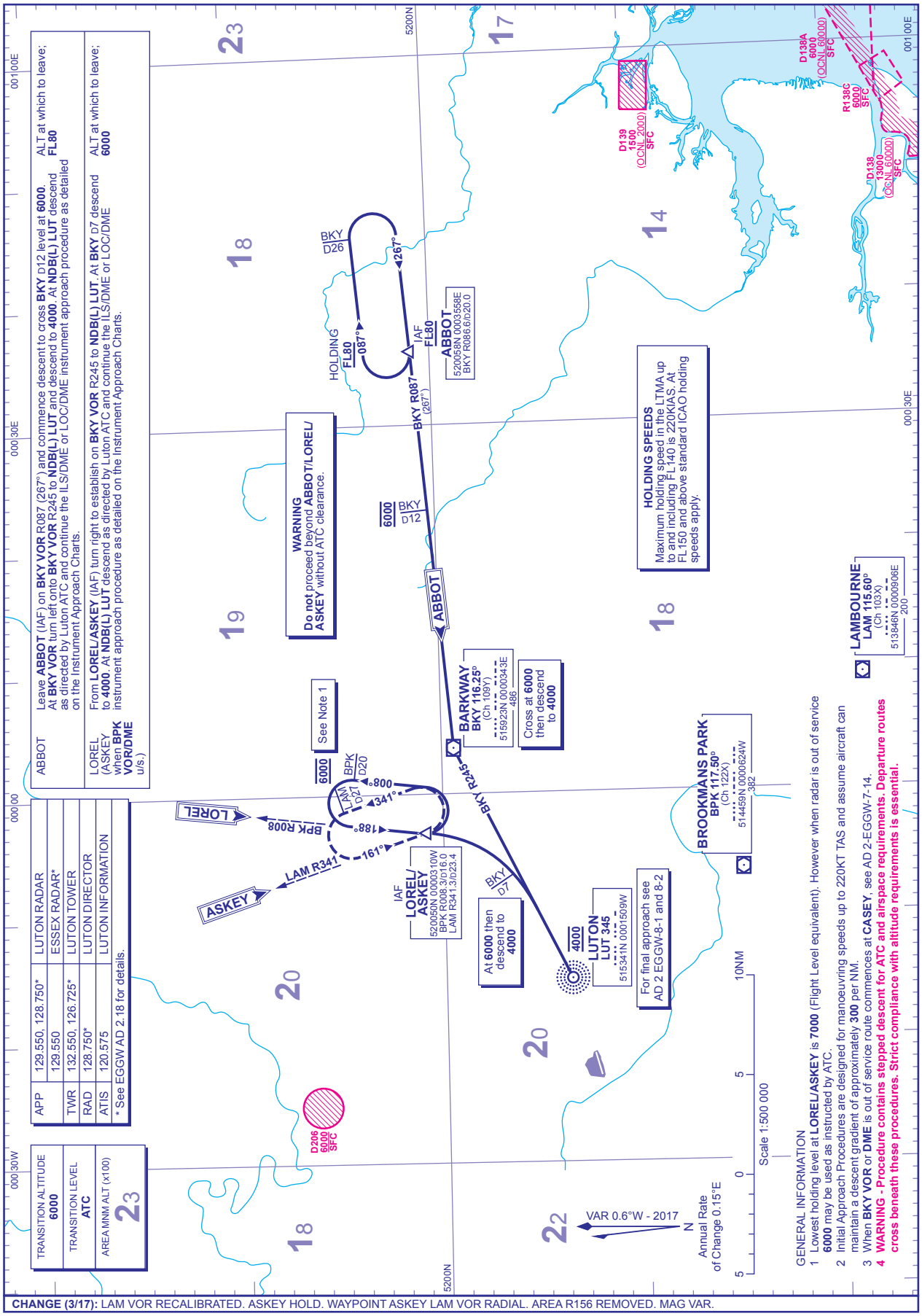
CHANGE (3/17): CASEY 2B STAR TEXT AIRWAY UP7 REMOVED. LAM VOR RECALIBRATED. LAPRA HOLD.

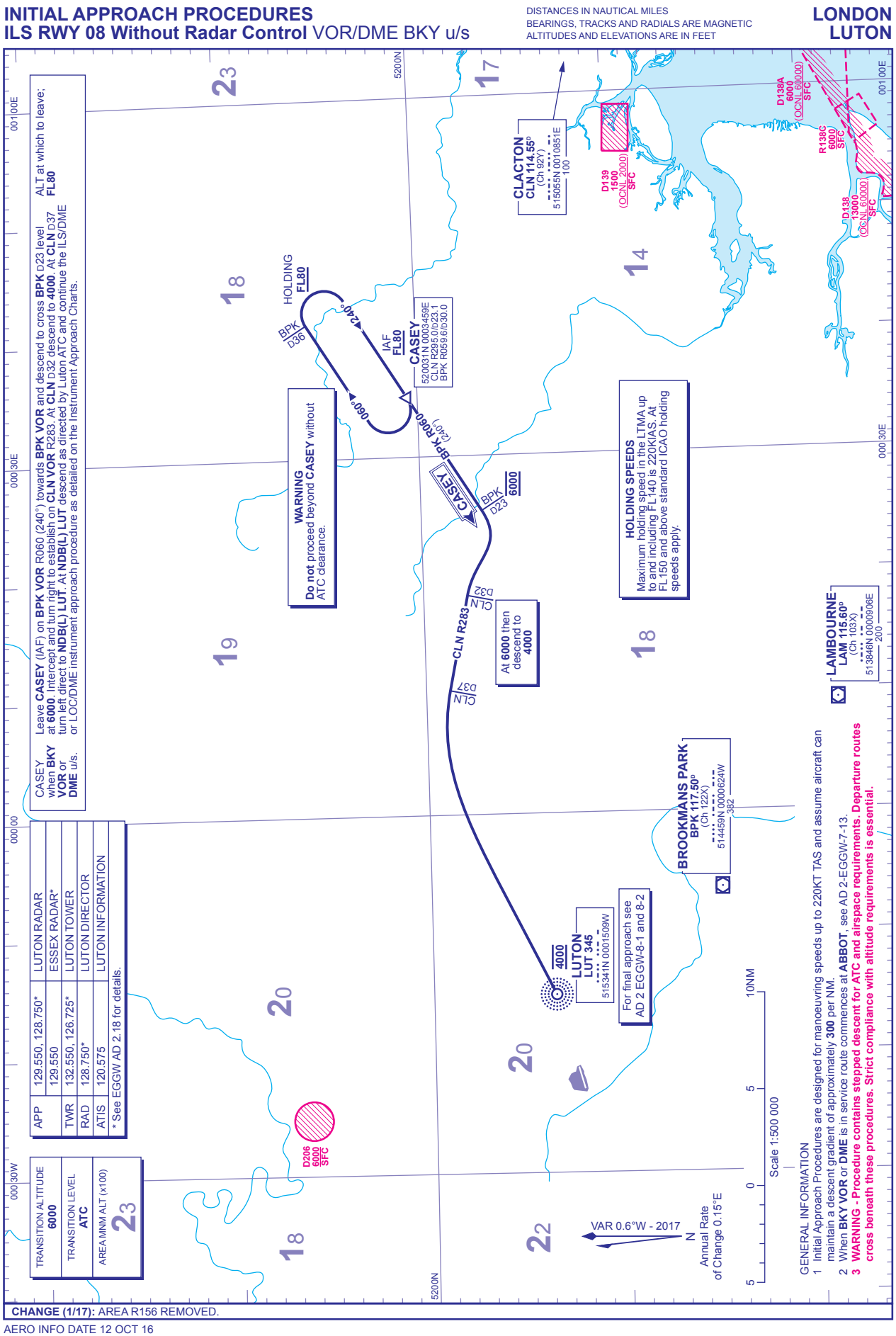
AERO INFO DATE 05 DEC 16

INITIAL APPROACH PROCEDURES
ILS RWY 08 Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON LUTON

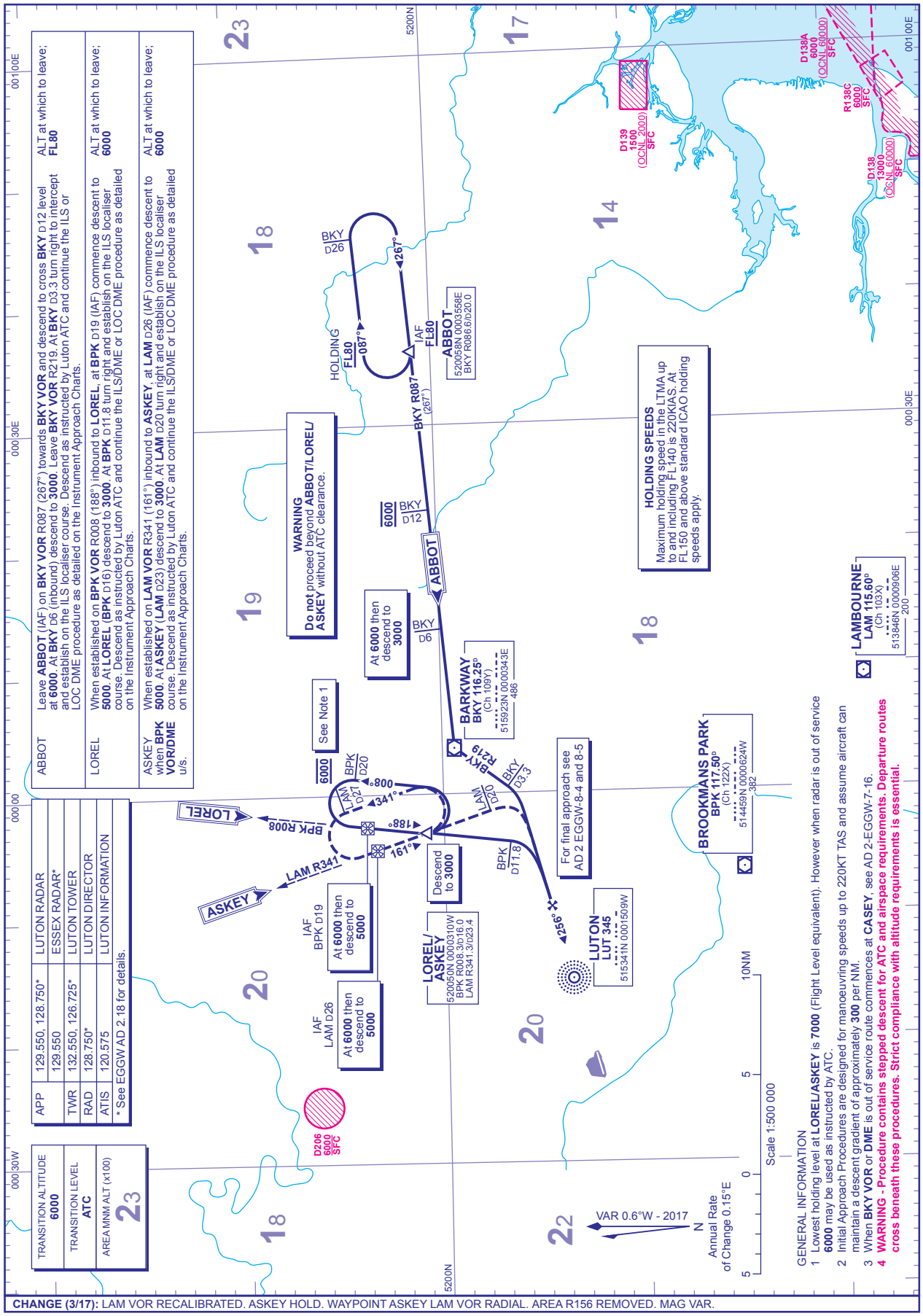



INITIAL APPROACH PROCEDURES
ILS RWY 08 Without Radar Control VOR/DME BKY u/s
DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET
LONDON
LUTON
CASEY when BKY VOR or DME u/s. Leave CASEY (IAF) on BPK VOR R060 (240°) towards BPK VOR and descend to cross BPK D23 level at 6000. Intercept and turn right to establish on CLN VOR R283. At CLN D32 descend to 4000. At CLN D37 turn left direct to NDB(L) LUT. At NDB(L) LUT descend as directed by Luton ATC and continue the ILS/DME or LOC/DME instrument approach procedure as detailed on the Instrument Approach Charts.
ALT at which to leave; FL80
TRANSITION ALTITUDE 6000
TRANSITION LEVEL ATC
AREA MNM ALT (x100) 23
APP 129.550, 128.750* LUTON RADAR
129.550 ESSEX RADAR*
TWR 132.550, 126.725* LUTON TOWER
RAD 128.750* LUTON DIRECTOR
ATIS 120.575 LUTON INFORMATION
* See EGGW AD 2.18 for details.
HOLDING FL80
BPK D36
240°
060°
IAF FL80
CASEY
520031N 0003459E
CLN R295.0/23.1
BPK R059.6/30.0
BPK R060 (240°)
CASEY
BPK D23 6000
CLN R283
CLN D32
CLN D37
At 6000 then descend to 4000
WARNING
Do not proceed beyond CASEY without ATC clearance.
HOLDING SPEEDS
Maximum holding speed in the LTMA up to and including FL140 is 220KIAS. At FL150 and above standard ICAO holding speeds apply.
CLACTON
CLN 114.55°
(Ch 92Y)
514055N 0010851E
100
D139 1500 (OCNL 2000) SFC
D138A 6000 (OCNL 6000) SFC
R136C 6000 SFC
D138 1000 (OCNL 6000) SFC
LAMBOURNE
LAM 115.60°
(Ch 103X)
513846N 0000906E
200
BROOKMANS PARK
BPK 117.50°
(Ch 122X)
514459N 0000624W
382
4000
LUTON
LUT 345
515341N 0001509W
For final approach see AD 2 EGGW-8-1 and 8-2
D206 6000 SFC
VAR 0.6°W - 2017
Annual Rate of Change 0.15°E
Scale 1:500 000
10NM
GENERAL INFORMATION
1 Initial Approach Procedures are designed for manoeuvring speeds up to 220KT TAS and assume aircraft can maintain a descent gradient of approximately 300 per NM.
2 When BKY VOR or DME is in service route commences at ABBOT, see AD 2-EGGW-7-13.
3 WARNING - Procedure contains stepped descent for ATC and airspace requirements. Departure routes cross beneath these procedures. Strict compliance with altitude requirements is essential.
CHANGE (1/17): AREA R156 REMOVED.
AERO INFO DATE 12 OCT 16

INITIAL APPROACH PROCEDURES
ILS RWY 26 Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

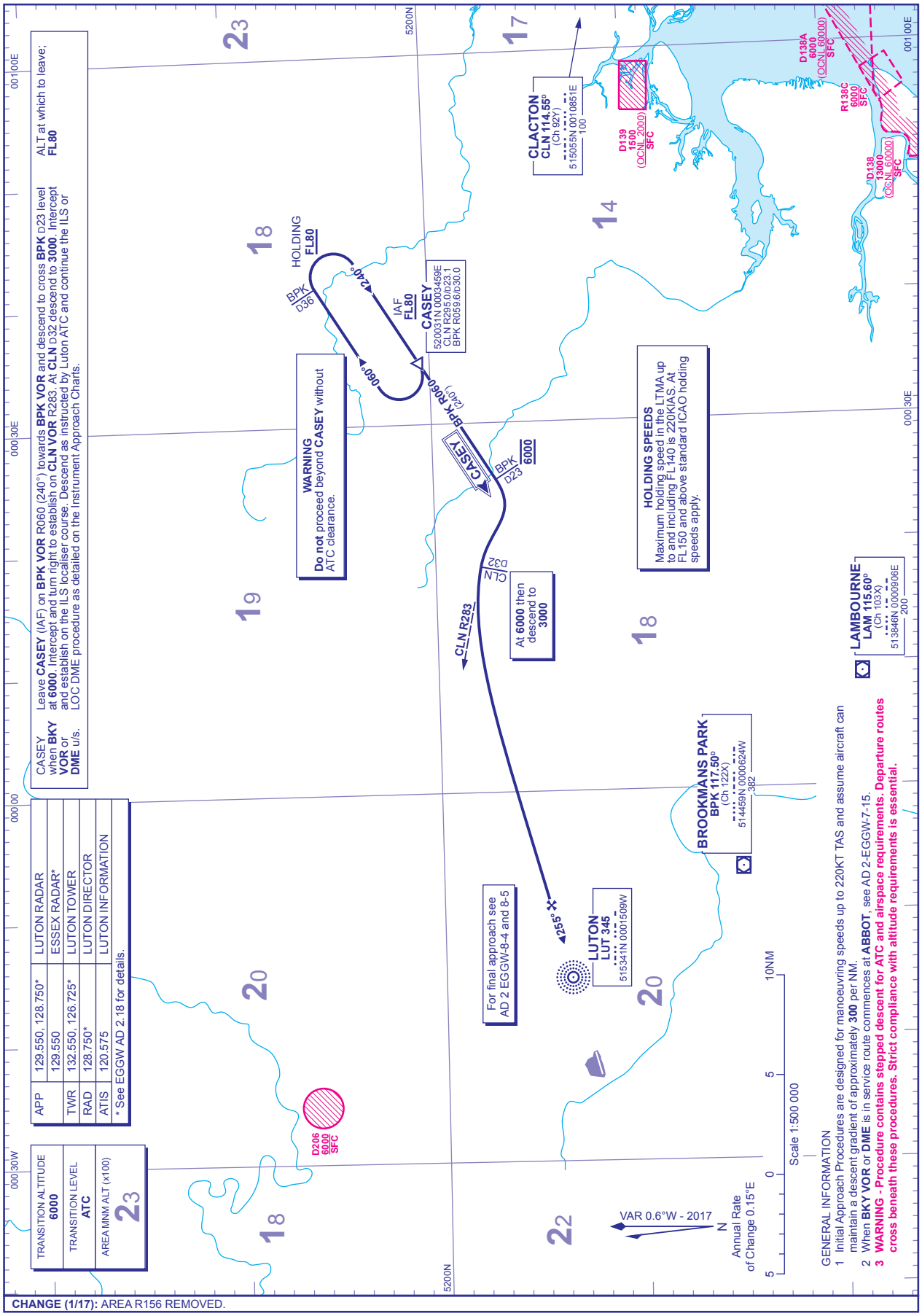
LONDON LUTON



INITIAL APPROACH PROCEDURES
ILS RWY 26 Without Radar Control VOR/DME BKY u/s

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

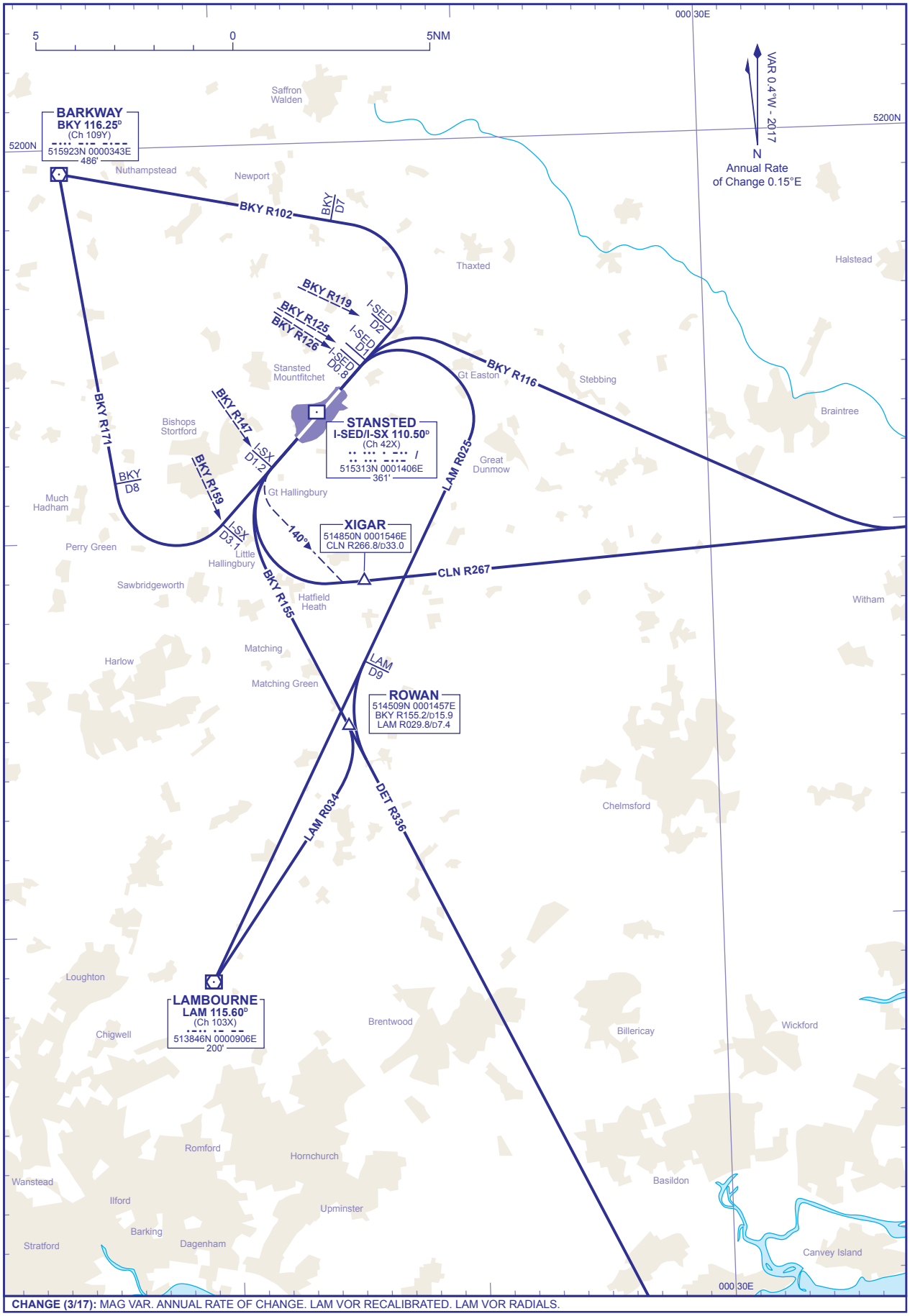
LONDON LUTON



CHANGE (1/17): AREA R156 REMOVED.

AERO INFO DATE 12 OCT 16

NOISE PREFERENTIAL ROUTEINGS — LONDON STANSTED



CHANGE (3/17): MAG VAR. ANNUAL RATE OF CHANGE. LAM VOR RECALIBRATED. LAM VOR RADIALS.

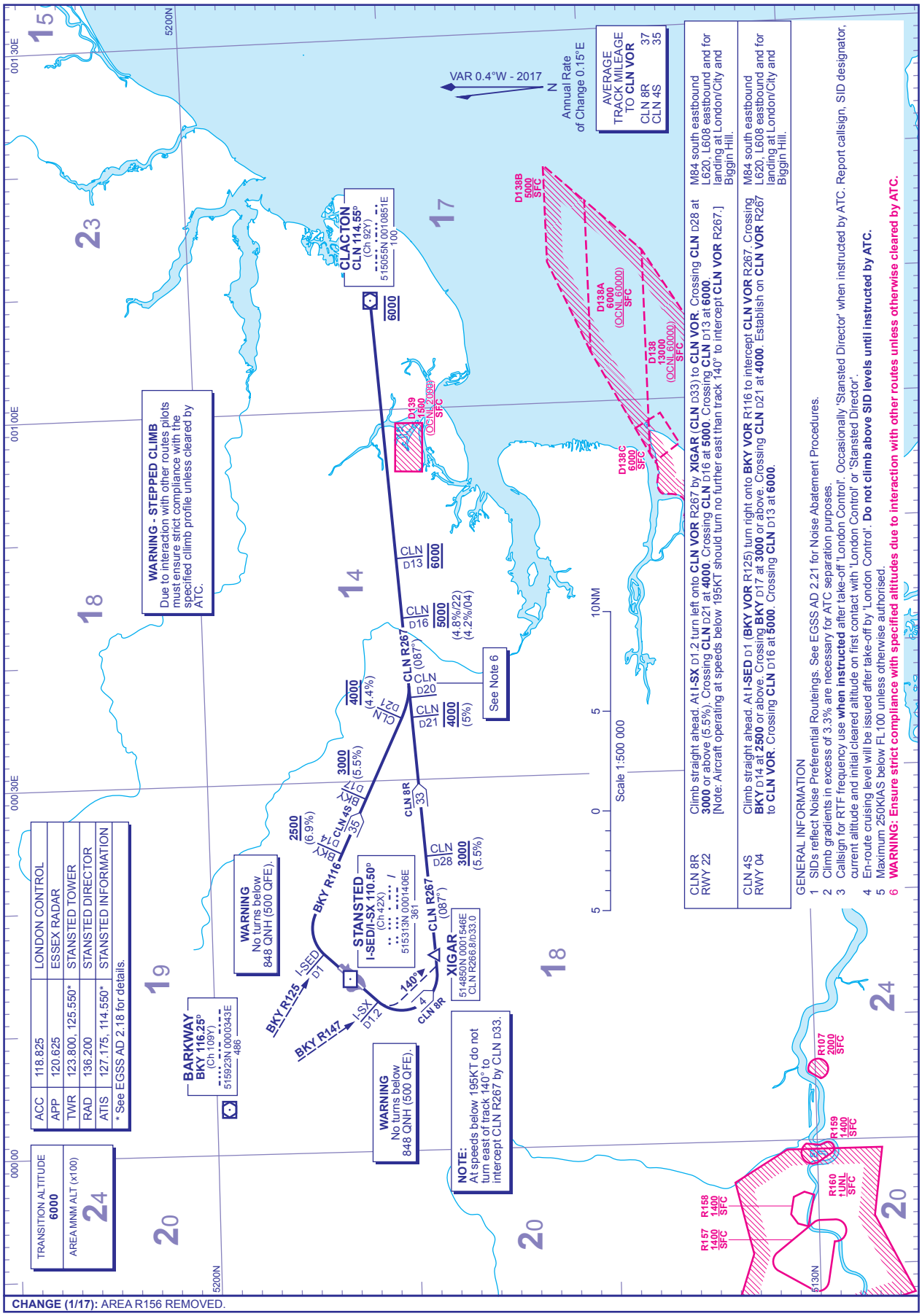
AERO INFO DATE 30 NOV 16

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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED CLACTON



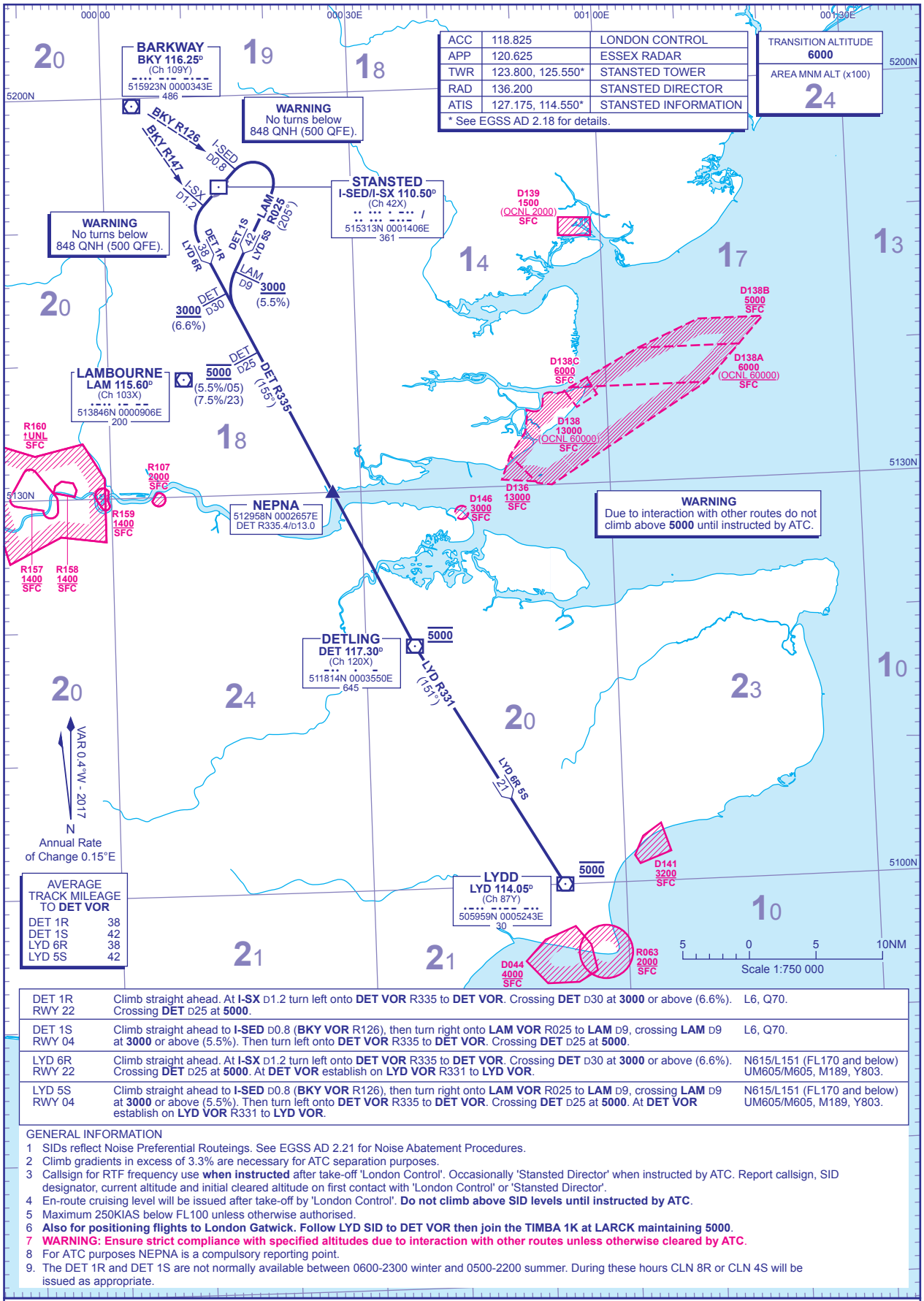
CHANGE (1/17): AREA R156 REMOVED.

AERO INFO DATE 12 OCT 16

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED DETLING/LYDD



DET 1R RWY 22	Climb straight ahead. At **I-SX** D1.2 turn left onto **DET VOR** R335 to **DET VOR**. Crossing **DET** D30 at **3000** or above (6.6%). Crossing **DET** D25 at **5000**.	L6, Q70.
DET 1S RWY 04	Climb straight ahead to **I-SED** D0.8 (**BKY VOR** R126), then turn right onto **LAM VOR** R025 to **LAM** D9, crossing **LAM** D9 at **3000** or above (5.5%). Then turn left onto **DET VOR** R335 to **DET VOR**. Crossing **DET** D25 at **5000**.	L6, Q70.
LYD 6R RWY 22	Climb straight ahead. At **I-SX** D1.2 turn left onto **DET VOR** R335 to **DET VOR**. Crossing **DET** D30 at **3000** or above (6.6%). Crossing **DET** D25 at **5000**. At **DET VOR** establish on **LYD VOR** R331 to **LYD VOR**.	N615/L151 (FL170 and below) UM605/M605, M189, Y803.
LYD 5S RWY 04	Climb straight ahead to **I-SED** D0.8 (**BKY VOR** R126), then turn right onto **LAM VOR** R025 to **LAM** D9, crossing **LAM** D9 at **3000** or above (5.5%). Then turn left onto **DET VOR** R335 to **DET VOR**. Crossing **DET** D25 at **5000**. At **DET VOR** establish on **LYD VOR** R331 to **LYD VOR**.	N615/L151 (FL170 and below) UM605/M605, M189, Y803.

GENERAL INFORMATION

1. SIDs reflect Noise Preferential Routeings. See EGSS AD 2.21 for Noise Abatement Procedures.
2. Climb gradients in excess of 3.3% are necessary for ATC separation purposes.
3. Callsign for RTF frequency use **when instructed** after take-off 'London Control'. Occasionally 'Stansted Director' when instructed by ATC. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control' or 'Stansted Director'.
4. En-route cruising level will be issued after take-off by 'London Control'. **Do not climb above SID levels until instructed by ATC**.
5. Maximum 250KIAS below FL100 unless otherwise authorised.
6. **Also for positioning flights to London Gatwick. Follow LYD SID to DET VOR then join the TIMBA 1K at LARCK maintaining 5000.**
7. **WARNING: Ensure strict compliance with specified altitudes due to interaction with other routes unless otherwise cleared by ATC.**
8. For ATC purposes NEPNA is a compulsory reporting point.
9. The DET 1R and DET 1S are not normally available between 0600-2300 winter and 0500-2200 summer. During these hours CLN 8R or CLN 4S will be issued as appropriate.

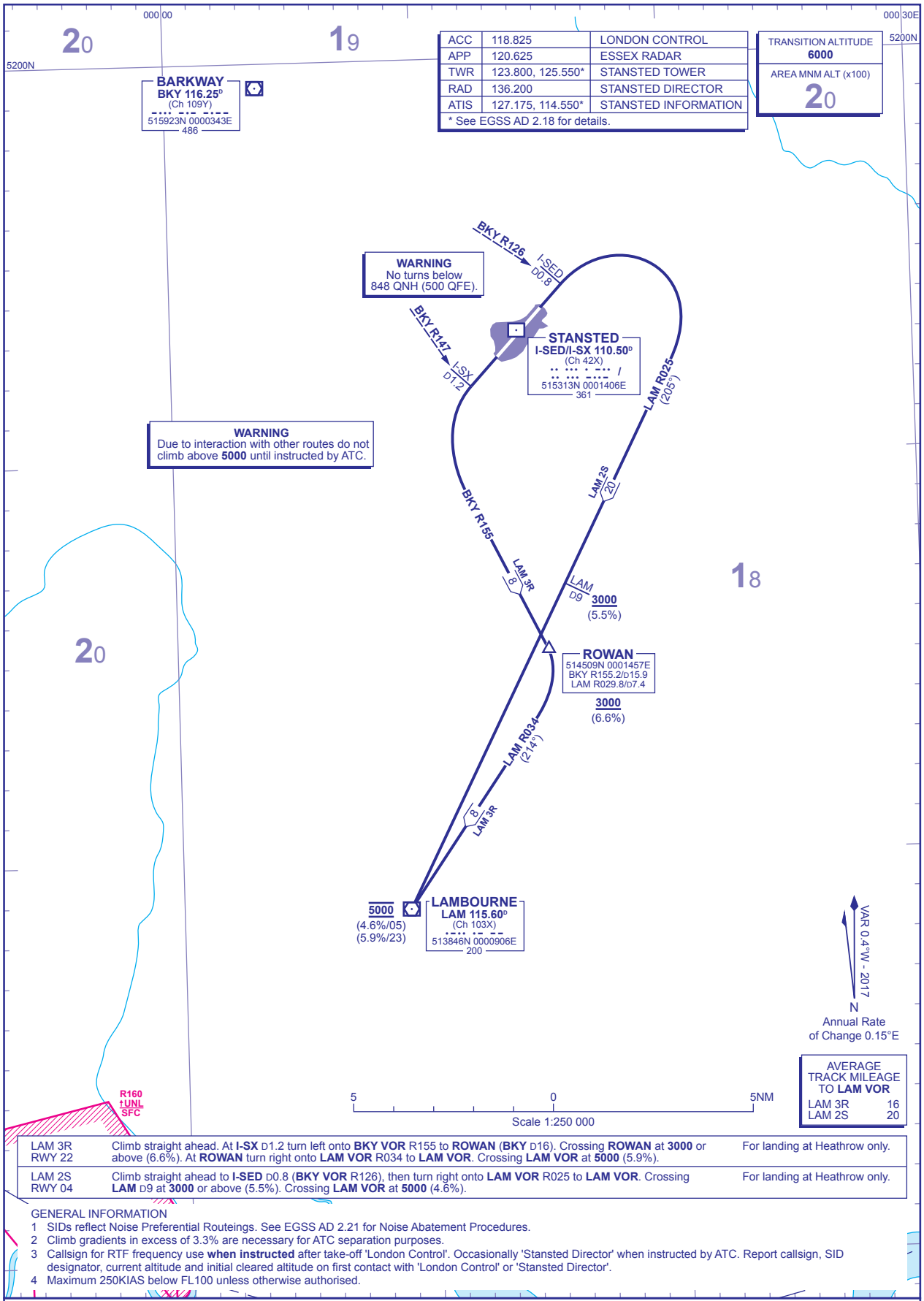
CHANGE (3/17): LAM VOR RECALIBRATED. DET 1S, LYD 5S LAM VOR RADIAL.

AERO INFO DATE 30 NOV 16

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED LAMBOURNE 3R 2S



LAM 3R RWY 22	Climb straight ahead. At **I-SX** D1.2 turn left onto **BKY VOR** R155 to **ROWAN** (**BKY** D16). Crossing **ROWAN** at **3000** or above (6.6%). At **ROWAN** turn right onto **LAM VOR** R034 to **LAM VOR**. Crossing **LAM VOR** at **5000** (5.9%).	For landing at Heathrow only.
LAM 2S RWY 04	Climb straight ahead to **I-SED** D0.8 (**BKY VOR** R126), then turn right onto **LAM VOR** R025 to **LAM VOR**. Crossing **LAM** D9 at **3000** or above (5.5%). Crossing **LAM VOR** at **5000** (4.6%).	For landing at Heathrow only.

GENERAL INFORMATION

1 SIDs reflect Noise Preferential Routeings. See EGSS AD 2.21 for Noise Abatement Procedures.
2 Climb gradients in excess of 3.3% are necessary for ATC separation purposes.
3 Callsign for RTF frequency use **when instructed** after take-off 'London Control'. Occasionally 'Stansted Director' when instructed by ATC. Report callsign, SID designator, current altitude and initial cleared altitude on first contact with 'London Control' or 'Stansted Director'.
4 Maximum 250KIAS below FL100 unless otherwise authorised.

CHANGE (3/17): MAG VAR. ANNUAL RATE OF CHANGE. LAM VOR RECALIBRATED. LAM VOR RADIALS.

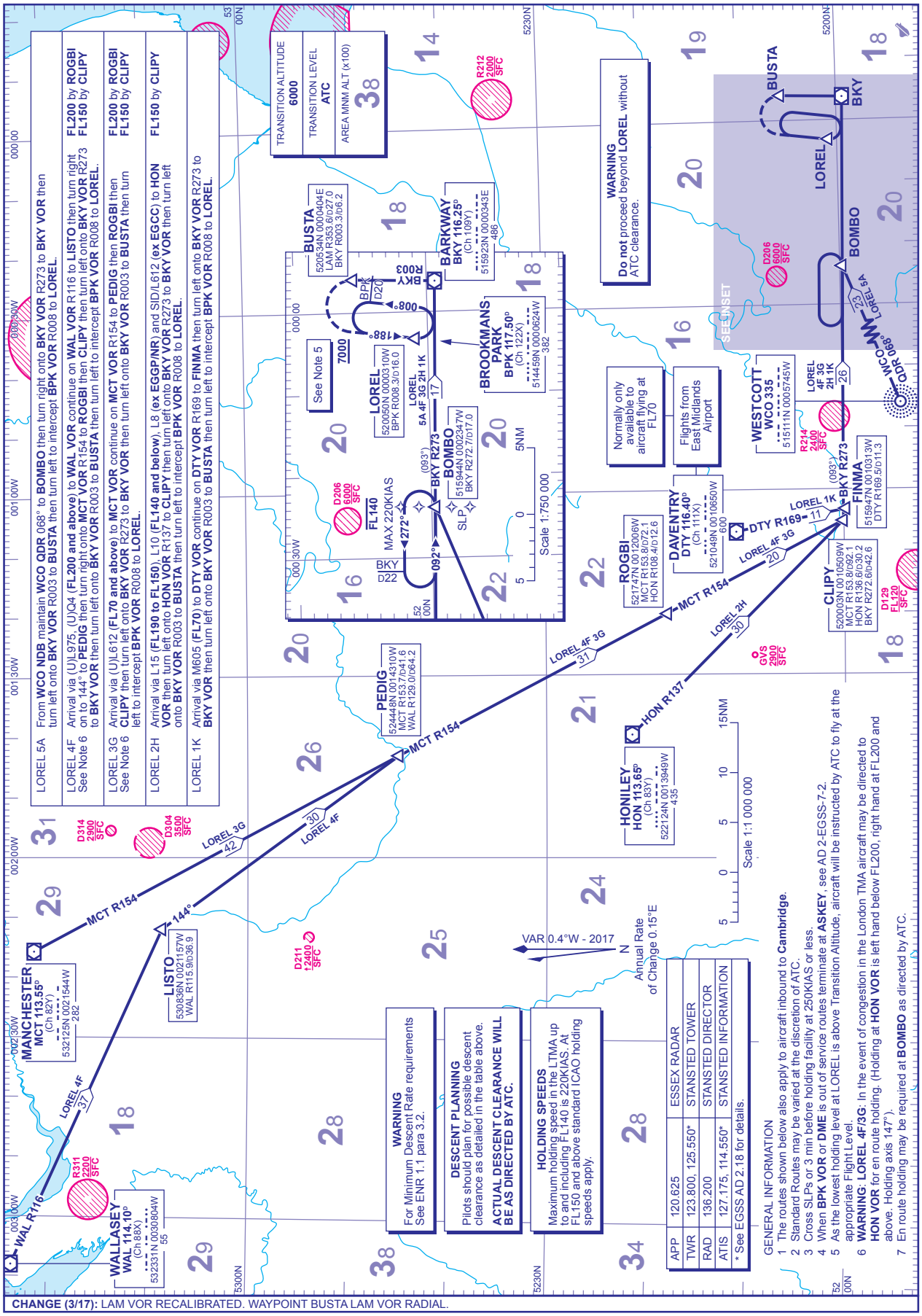
AERO INFO DATE 30 NOV 16

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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED via LOREL (north)



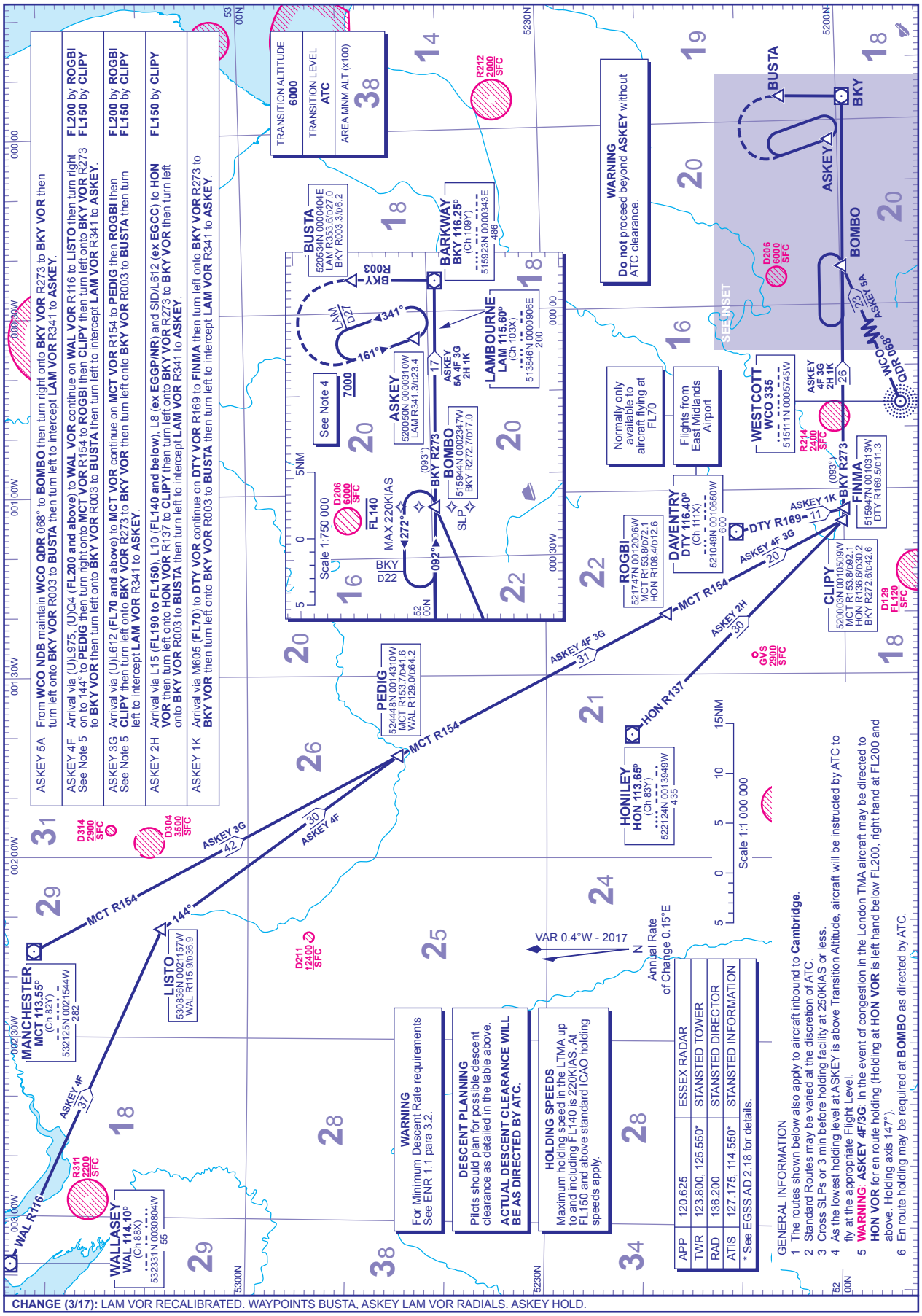
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.

AERO INFO DATE 02 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED
via ASKEY (north) VOR BPK u/s



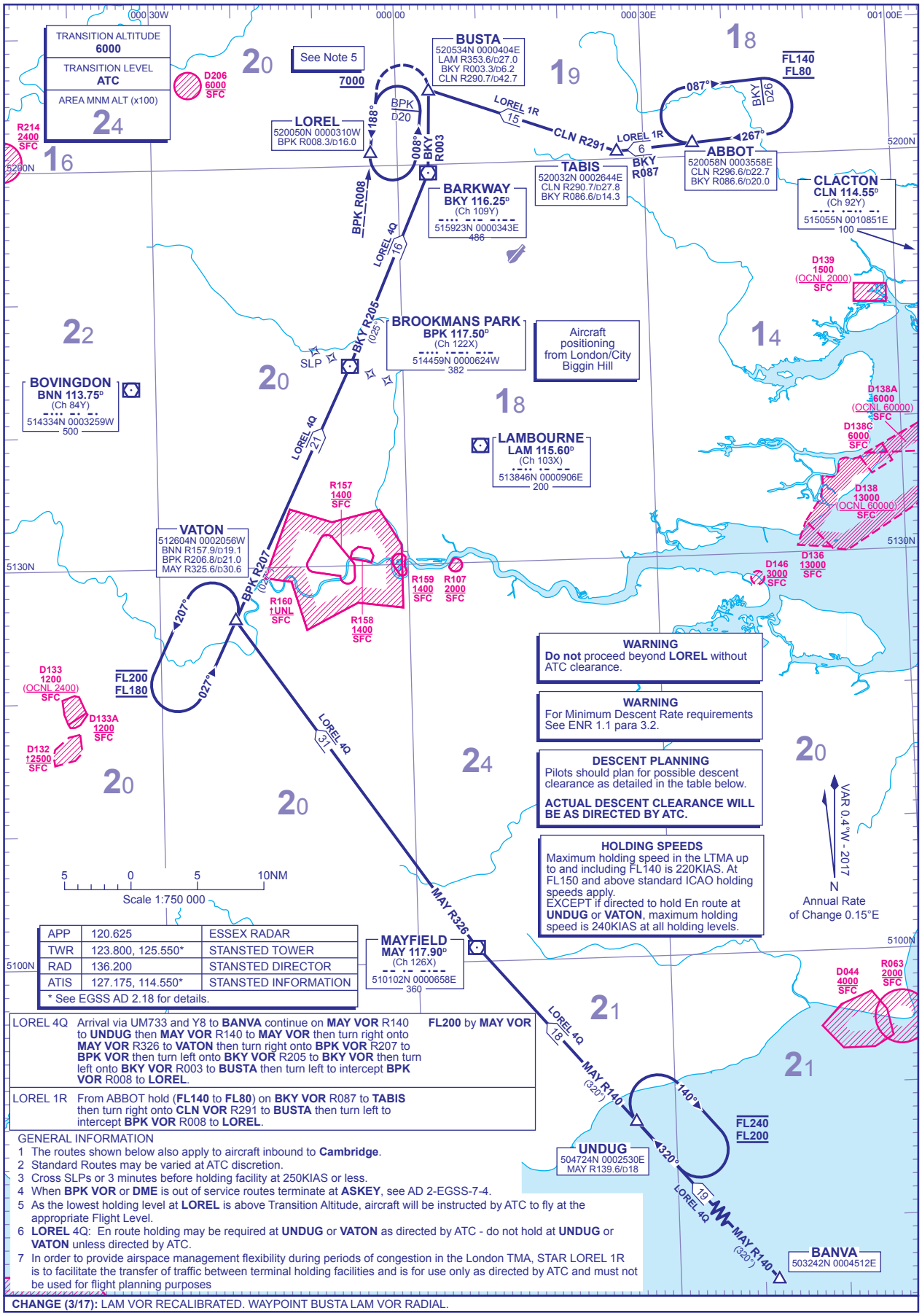
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS BUSTA, ASKEY LAM VOR RADIALS. ASKEY HOLD.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

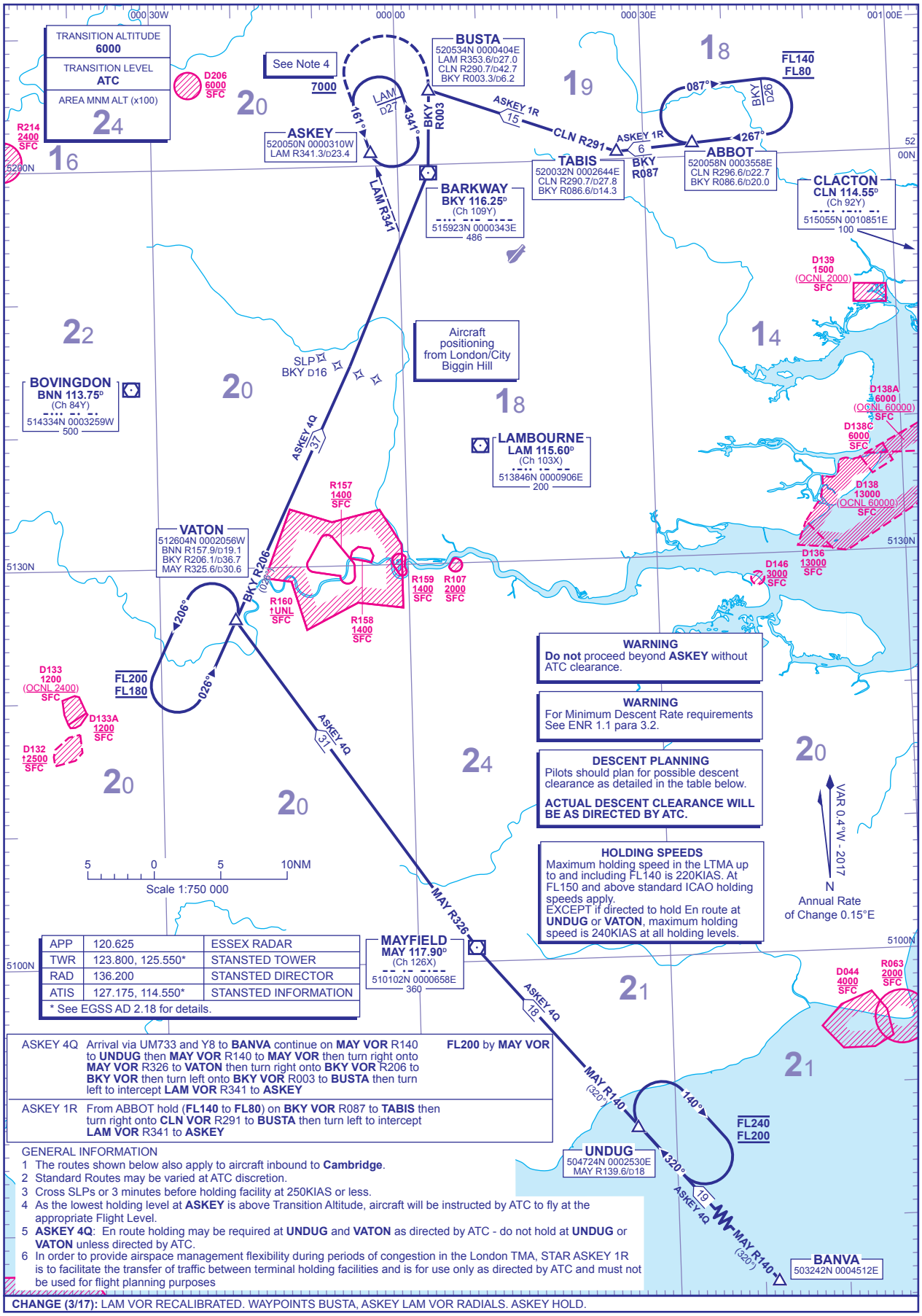
LONDON STANSTED via LOREL (south)



STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED
via ASKEY (south) VOR BPK u/s (4Q)



APP	120.625	ESSEX RADAR
TWR	123.800, 125.550*	STANSTED TOWER
RAD	136.200	STANSTED DIRECTOR
ATIS	127.175, 114.550*	STANSTED INFORMATION

* See EGSS AD 2.18 for details.

ASKEY 4Q	Arrival via UM733 and Y8 to **BANVA** continue on **MAY VOR** R140 to **UNDUG** then **MAY VOR** R140 to **MAY VOR** then turn right onto **MAY VOR** R326 to **VATON** then turn right onto **BKY VOR** R206 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY** FL200 by **MAY VOR**
ASKEY 1R	From ABBOT hold (**FL140** to **FL80**) on **BKY VOR** R087 to **TABIS** then turn right onto **CLN VOR** R291 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**

GENERAL INFORMATION

1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at ATC discretion.
3 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
4 As the lowest holding level at **ASKEY** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
5 **ASKEY 4Q**: En route holding may be required at **UNDUG** and **VATON** as directed by ATC - do not hold at **UNDUG** or **VATON** unless directed by ATC.
6 In order to provide airspace management flexibility during periods of congestion in the London TMA, STAR ASKEY 1R is to facilitate the transfer of traffic between terminal holding facilities and is for use only as directed by ATC and must not be used for flight planning purposes

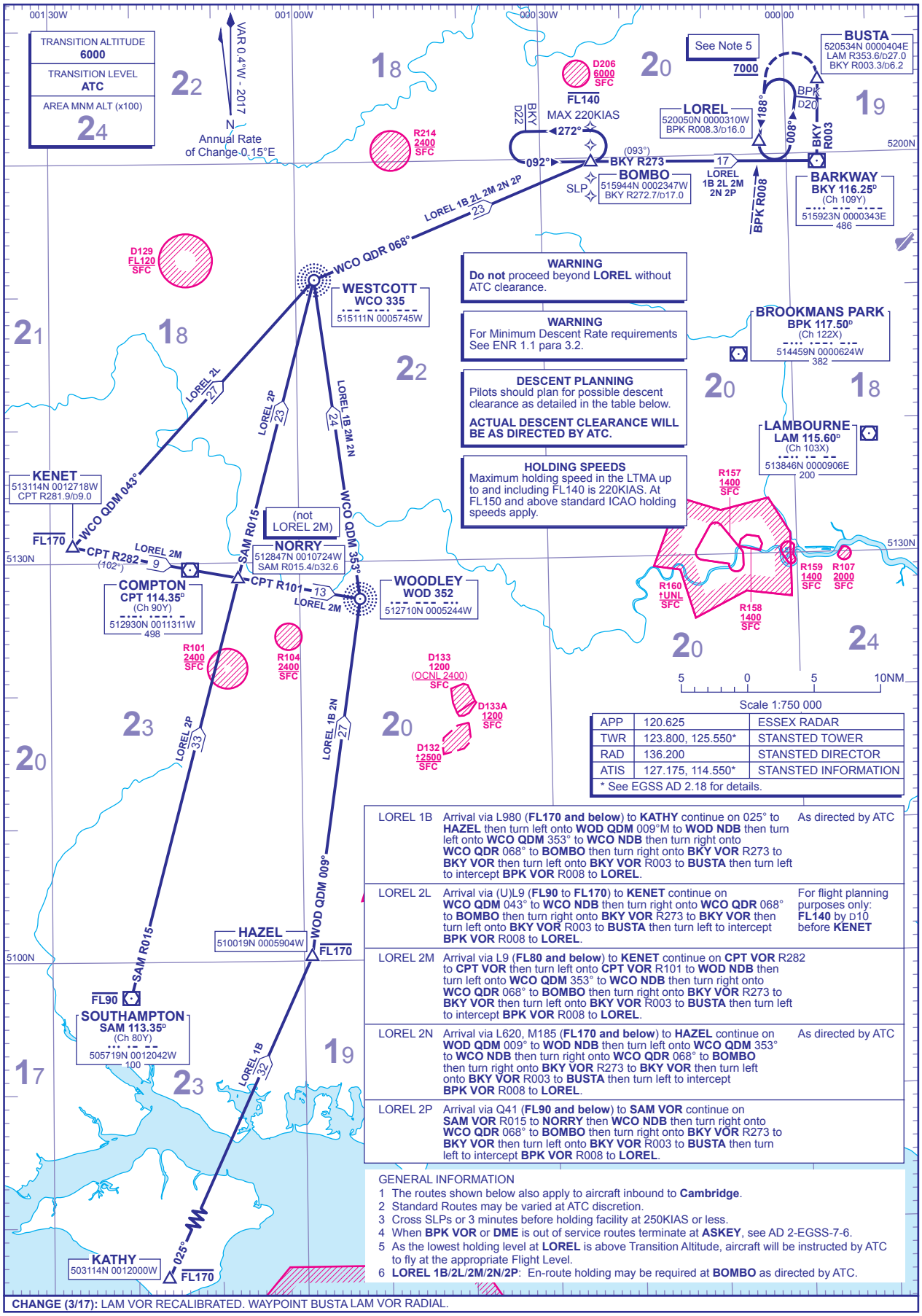
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS BUSTA, ASKEY LAM VOR RADIALS. ASKEY HOLD.

AERO INFO DATE 02 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED via LOREL (southwest)



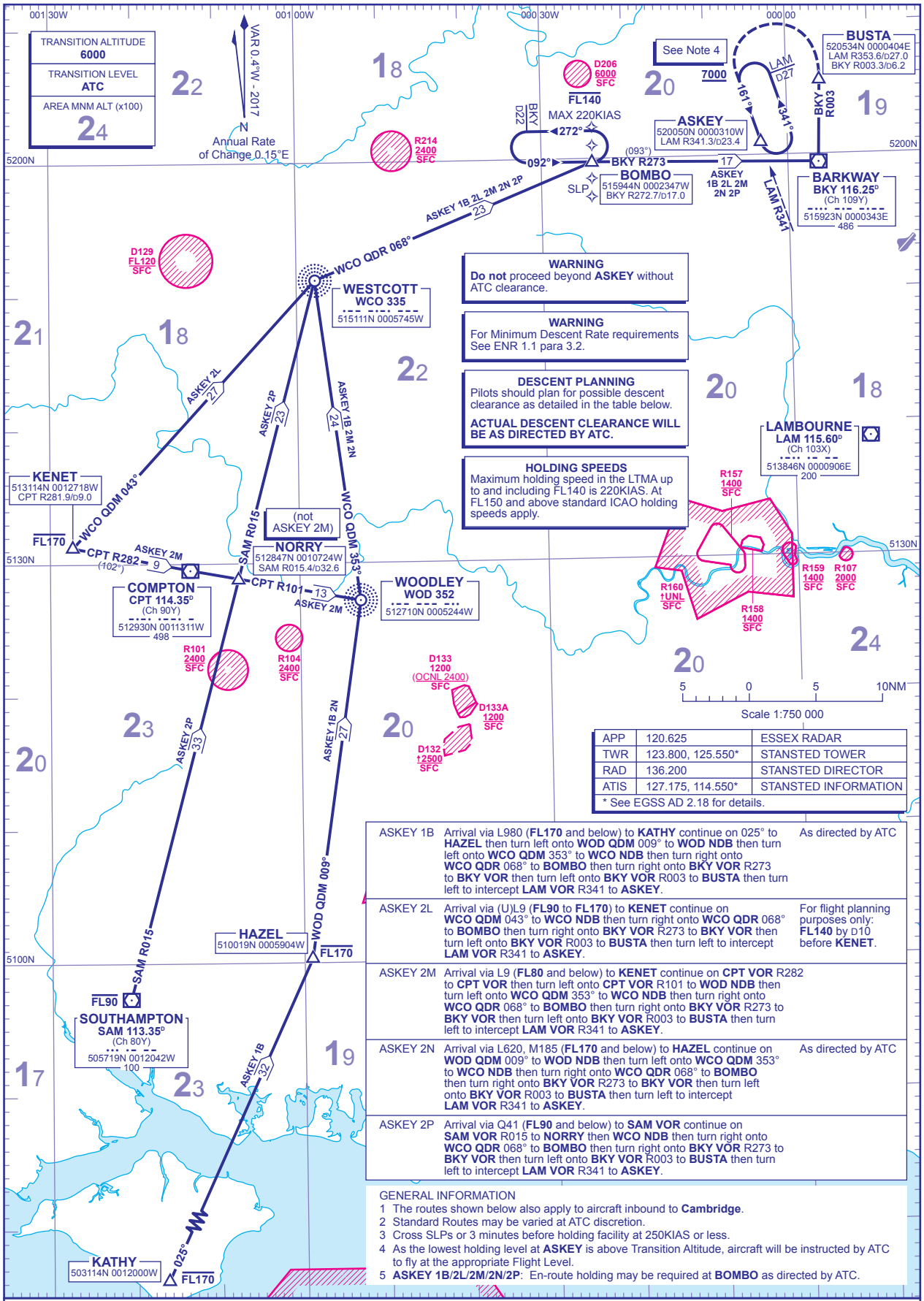
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.

AERO INFO DATE 02 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED
via ASKEY (southwest) VOR BPK u/s



APP	120.625	ESSEX RADAR
TWR	123.800, 125.550*	STANSTED TOWER
RAD	136.200	STANSTED DIRECTOR
ATIS	127.175, 114.550*	STANSTED INFORMATION

* See EGSS AD 2.18 for details.

ASKEY 1B	Arrival via L980 (**FL170** and below) to **KATHY** continue on 025° to **HAZEL** then turn left onto **WOD QDM** 009° to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	As directed by ATC
ASKEY 2L	Arrival via (U)L9 (**FL90** to **FL170**) to **KENET** continue on **WCO QDM** 043° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	For flight planning purposes only: **FL140** by D10 before **KENET**.
ASKEY 2M	Arrival via L9 (**FL80** and below) to **KENET** continue on **CPT VOR** R282 to **CPT VOR** then turn left onto **CPT VOR** R101 to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	
ASKEY 2N	Arrival via L620, M185 (**FL170** and below) to **HAZEL** continue on **WOD QDM** 009° to **WOD NDB** then turn left onto **WCO QDM** 353° to **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	As directed by ATC
ASKEY 2P	Arrival via Q41 (**FL90** and below) to **SAM VOR** continue on **SAM VOR** R015 to **NORRY** then **WCO NDB** then turn right onto **WCO QDR** 068° to **BOMBO** then turn right onto **BKY VOR** R273 to **BKY VOR** then turn left onto **BKY VOR** R003 to **BUSTA** then turn left to intercept **LAM VOR** R341 to **ASKEY**.	

GENERAL INFORMATION
1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at ATC discretion.
3 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
4 As the lowest holding level at **ASKEY** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
5 **ASKEY 1B/2L/2M/2N/2P**: En-route holding may be required at **BOMBO** as directed by ATC.

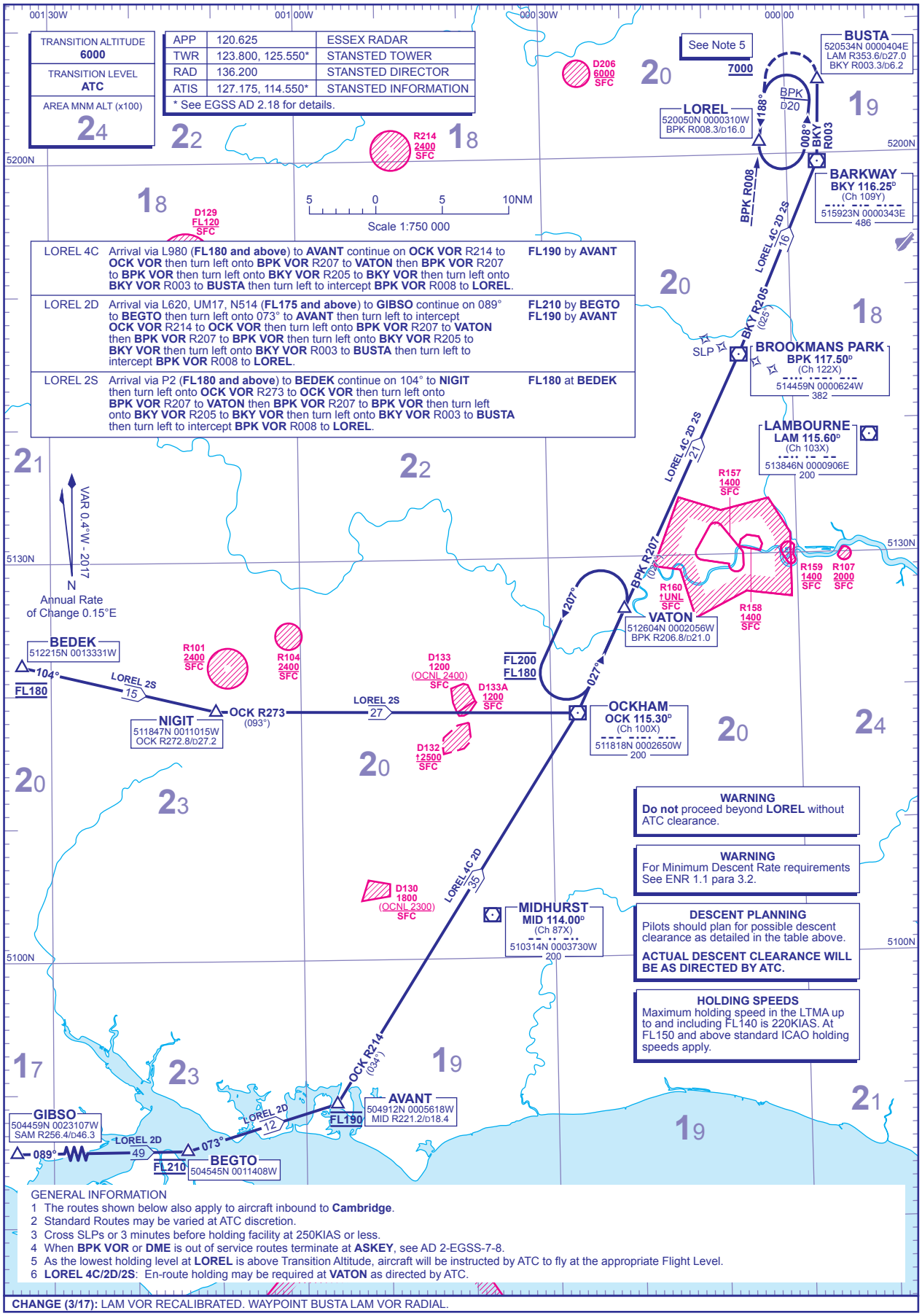
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS BUSTA, ASKEY LAM VOR RADIALS. ASKEY HOLD.

AERO INFO DATE 05 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED via LOREL (south)



GENERAL INFORMATION

1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at ATC discretion.
3 Cross SLPs or 3 minutes before holding facility at 250KIAS or less.
4 When **BPK VOR** or **DME** is out of service routes terminate at **ASKEY**, see AD 2-EGSS-7-8.
5 As the lowest holding level at **LOREL** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
6 **LOREL 4C/2D/2S**: En-route holding may be required at **VATON** as directed by ATC.

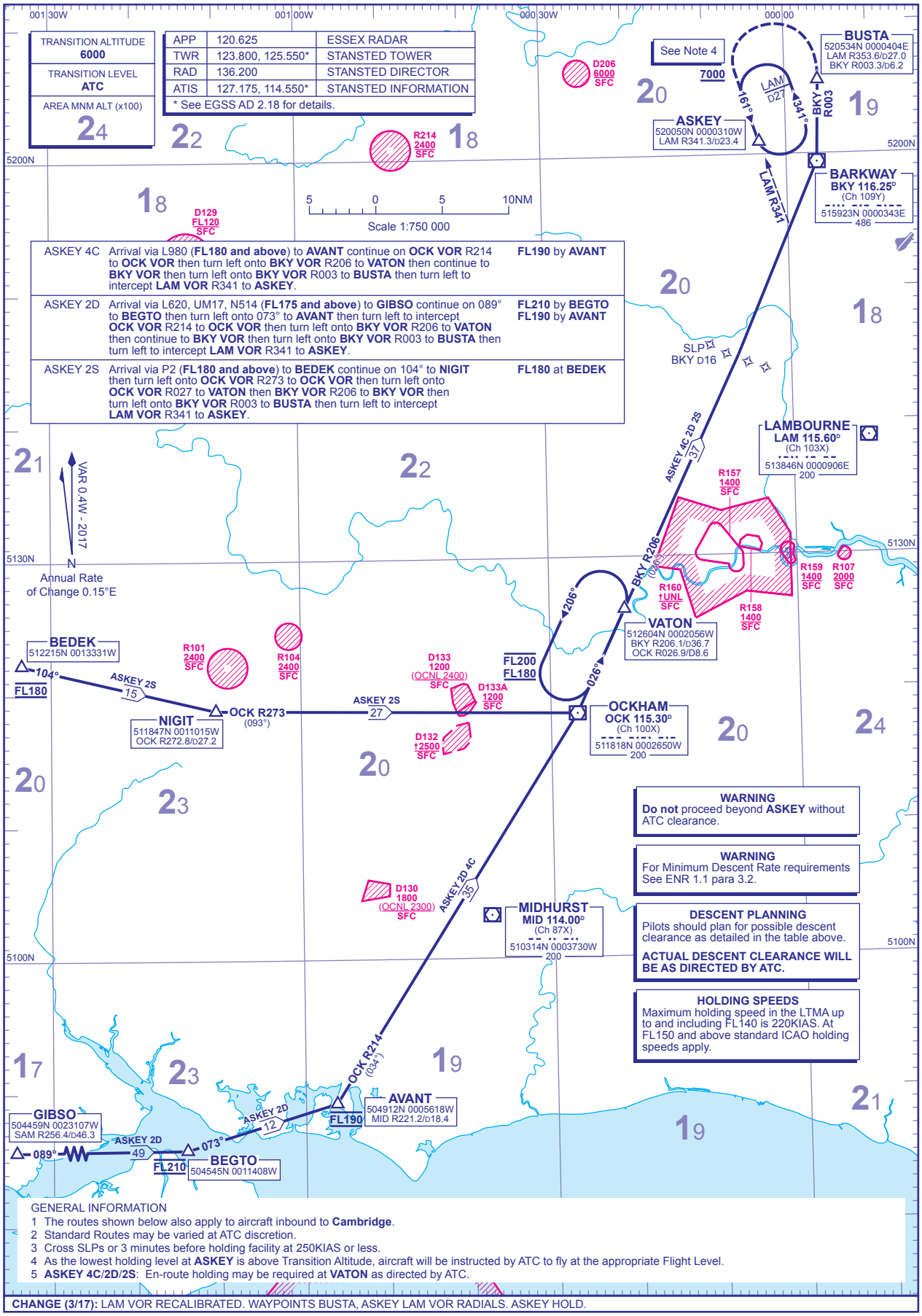
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINT BUSTA LAM VOR RADIAL.

AERO INFO DATE 02 DEC 16

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED
via ASKEY (south) VOR BPK u/s (4C,2D,2S)



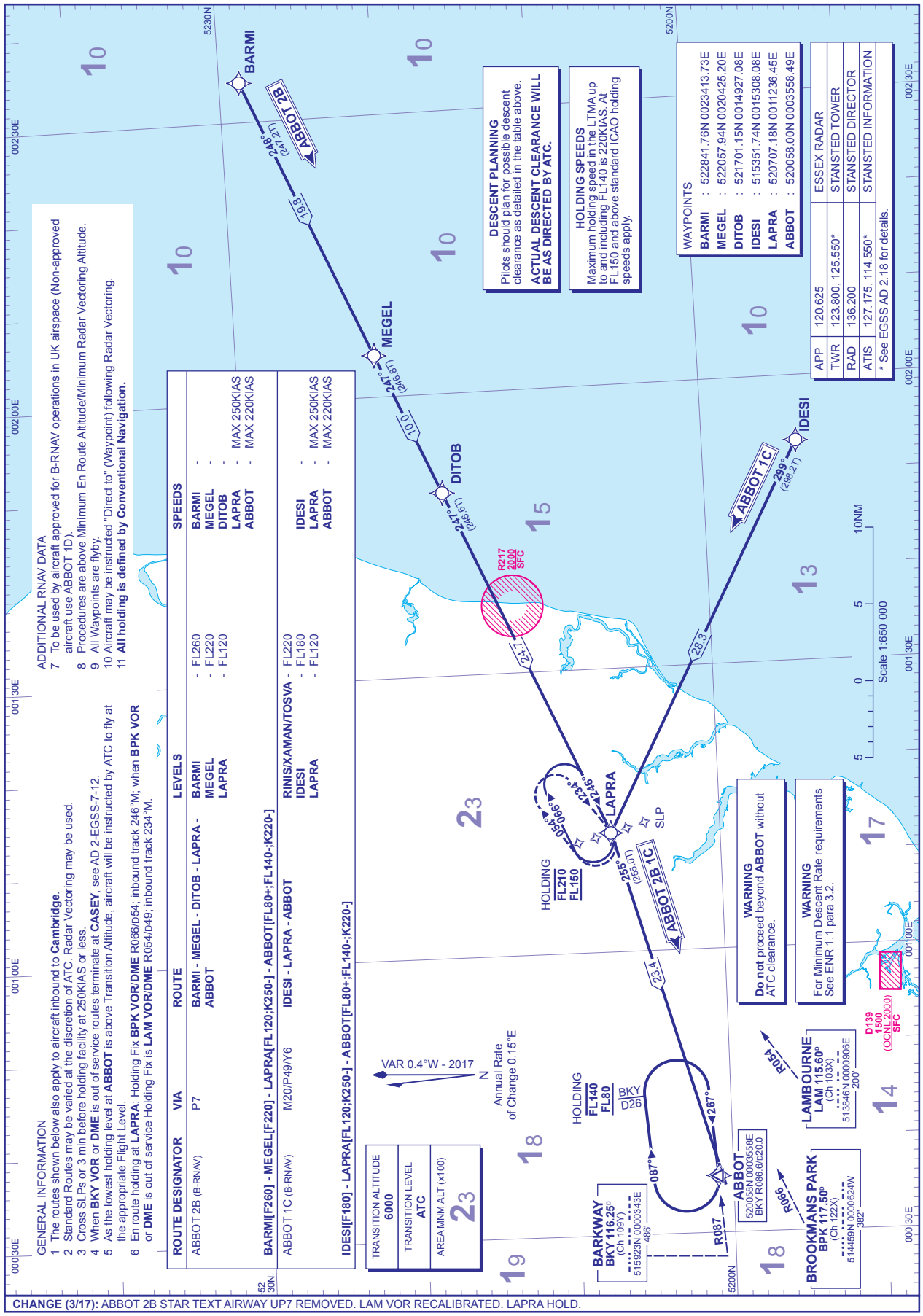
CHANGE (3/17): LAM VOR RECALIBRATED. WAYPOINTS BUSTA, ASKEY LAM VOR RADIALS. ASKEY HOLD.

AERO INFO DATE 05 DEC 16

B-RNAV STAR via ABBOT (northeast)

DISTANCES IN NAUTICAL MILES
TRACKS ARE TRUE (T) AND MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED



DESCENT PLANNING
Pilots should plan for possible descent clearance as detailed in the table above.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

HOLDING SPEEDS
Maximum holding speed in the LTMA up to and including FL140 is 220KIAS. At FL150 and above standard ICAO holding speeds apply.

WARNING
Do not proceed beyond **ABBOT** without ATC clearance.

WARNING
For Minimum Descent Rate requirements See ENR 1.1 para 3.2.

TRANSITION ALTITUDE **6000**
TRANSITION LEVEL **ATC**
AREA MNM ALT (x100) **23**

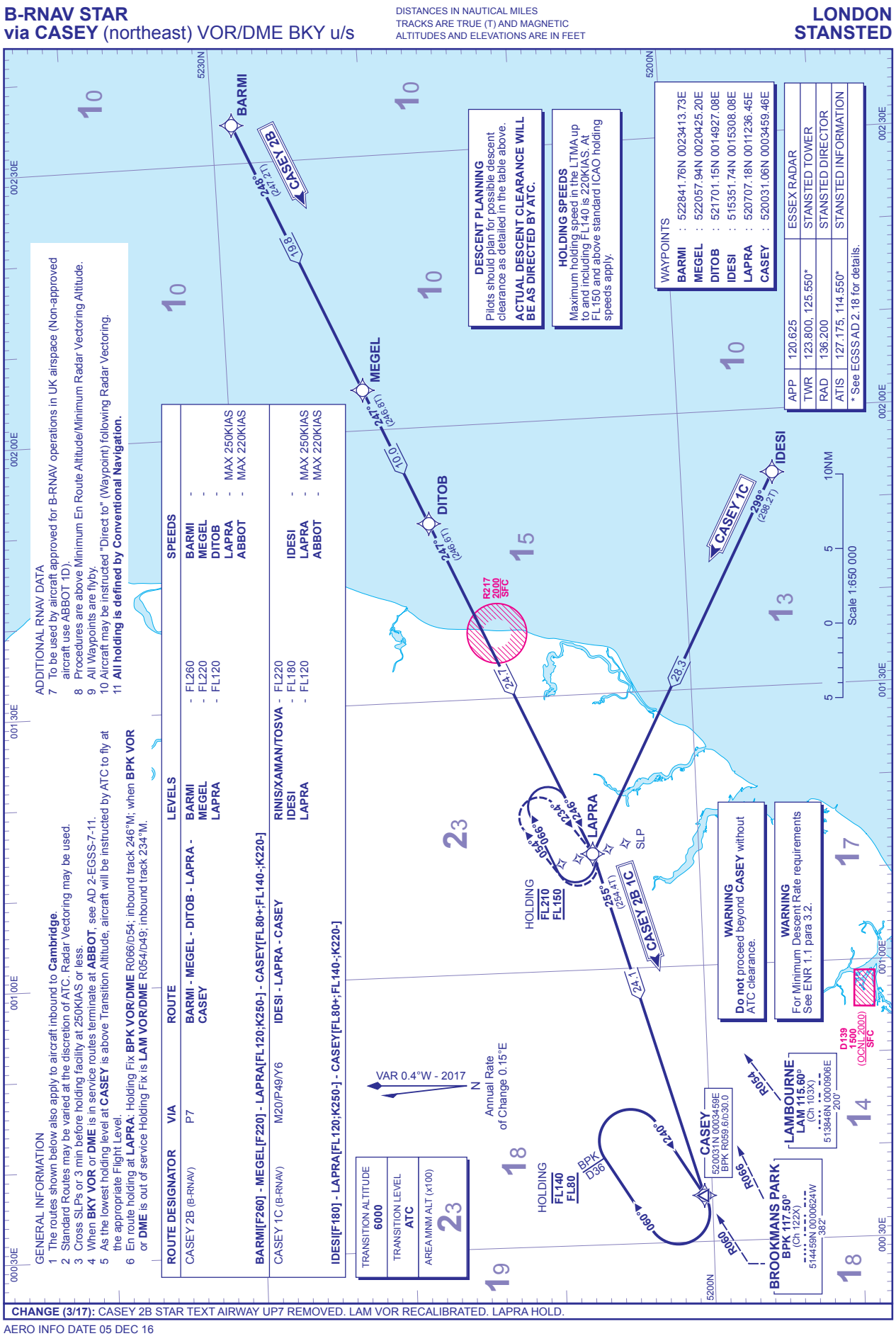
GENERAL INFORMATION
1 The routes shown below also apply to aircraft inbound to **Cambridge**.
2 Standard Routes may be varied at the discretion of ATC. Radar Vectoring may be used.
3 Cross SLPs or 3 min before holding facility at 250KIAS or less.
4 When **BKY VOR** or **DME** is out of service routes terminate at **CASEY**, see AD 2-EGSS-7-12.
5 As the lowest holding level at **ABBOT** is above Transition Altitude, aircraft will be instructed by ATC to fly at the appropriate Flight Level.
6 En route holding at **LAPRA**: Holding Fix **BPK VOR/DME** R066/D54; inbound track 246°M; when **BPK VOR** or **DME** is out of service Holding Fix is **LAM VOR/DME** R054/D49; inbound track 234°M.

ADDITIONAL RNAV DATA
7 To be used by aircraft approved for B-RNAV operations in UK airspace (Non-approved aircraft use ABBOT 1D).
8 Procedures are above Minimum En Route Altitude/Minimum Radar Vectoring Altitude.
9 All Waypoints are flyby.
10 Aircraft may be instructed "Direct to" (Waypoint) following Radar Vectoring.
11 **All holding is defined by Conventional Navigation.**

ROUTE DESIGNATOR	VIA	ROUTE	LEVELS		SPEEDS	
ABBOT 2B (B-RNAV)	P7	**BARMI - MEGEL - DITOB - LAPRA - ABBOT**	**BARMI**	- FL260	**BARMI**	-
			MEGEL	- FL220	**MEGEL**	-
			LAPRA	- FL120	**DITOB**	-
					LAPRA	- MAX 250KIAS
					ABBOT	- MAX 220KIAS
BARMI[F260] - MEGEL[F220] - LAPRA[FL120;K250-] - ABBOT[FL80+;FL140-;K220-]						
ABBOT 1C (B-RNAV)	M20/P49/Y6	**IDESI - LAPRA - ABBOT**	**RINIS/KAMAN/TOSVA**	- FL220	**IDESI**	-
			IDESI	- FL180	**LAPRA**	- MAX 250KIAS
			LAPRA	- FL120	**ABBOT**	- MAX 220KIAS
IDESI[F180] - LAPRA[FL120;K250-] - ABBOT[FL80+;FL140-;K220-]						

CHANGE (3/17): ABBOT 2B STAR TEXT AIRWAY UP7 REMOVED. LAM VOR RECALIBRATED. LAPRA HOLD.

AERO INFO DATE 02 DEC 16



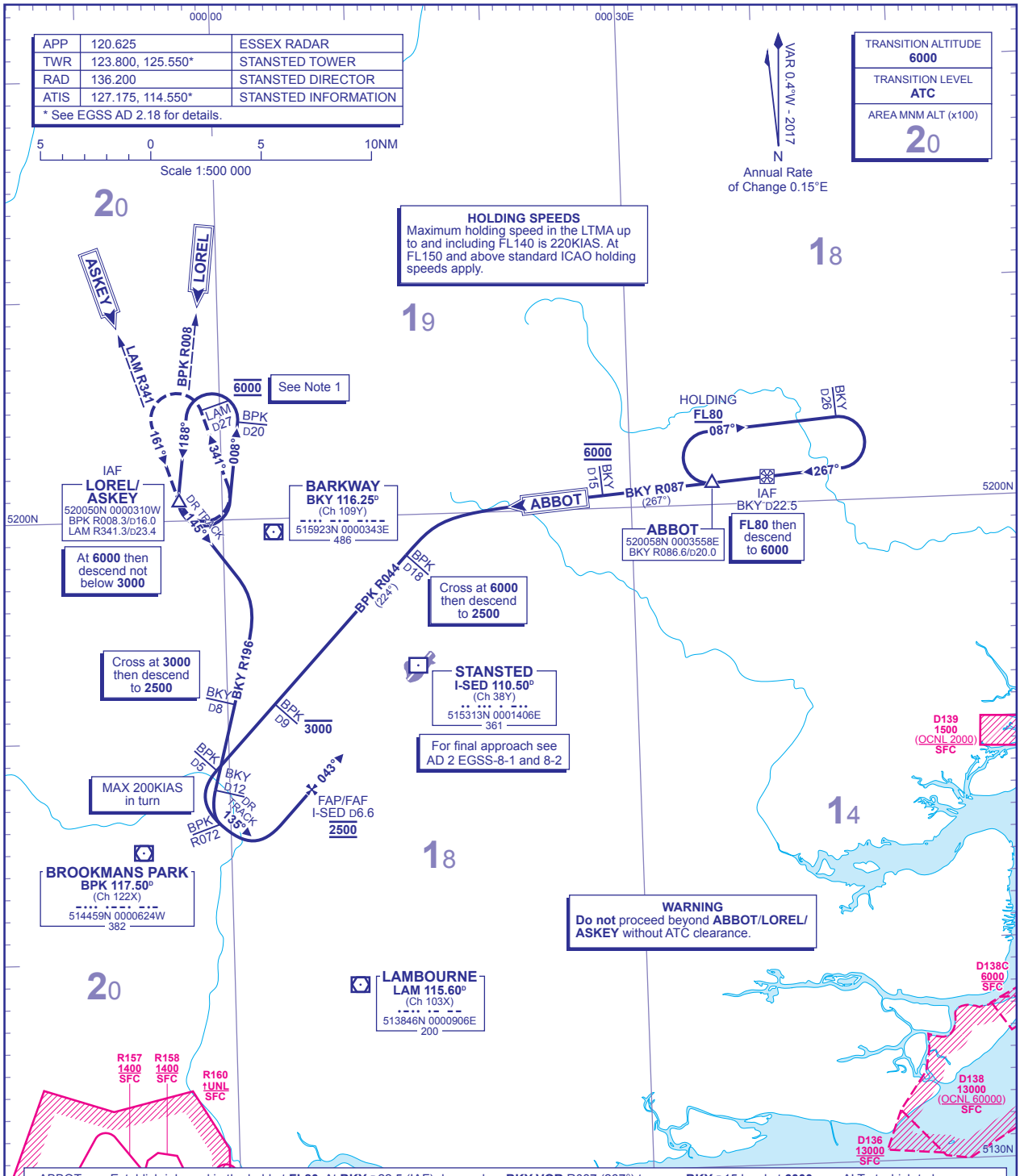
CHANGE (3/17): CASEY 2B STAR TEXT AIRWAY UP7 REMOVED. LAM VOR RECALIBRATED. LAPRA HOLD.

AERO INFO DATE 05 DEC 16

INITIAL APPROACH PROCEDURES
ILS RWY 04 Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED



ABBOT	Establish inbound in the hold at **FL80**. At **BKY** D22.5 (IAF) descend on **BKY VOR** R087 (267°) to cross **BKY** D15 level at **6000**. Intercept and establish on **BPK VOR** R044 (224°) maintaining **6000** to **BPK** D18, then descend to **2500**, crossing **BPK** D9 not above **3000**. At **BPK** D5 turn left onto DR track 135°, MAX 200KIAS, then from lead radial **BPK VOR** R072 turn left to establish on localizer at **2500** and continue the ILS/DME or LOC/DME instrument approach procedure as detailed on the Instrument Approach Charts.	ALT at which to leave; Descending to **6000**
LOREL (ASKEY when **BPK VOR/DME** u/s.)	Leave **LOREL** (IAF) on DR track 145° commencing descent not below **3000**. Intercept and establish on **BKY VOR** R196 Cross **BKY** D8 level at **3000**, then continue descent to **2500**. At **BKY** D12 turn left, MAX 200KIAS, to establish on localizer at **2500** and continue the ILS/DME or LOC/DME instrument approach procedureas detailed on the Instrument Approach Charts.	ALT at which to leave; **6000**

GENERAL INFORMATION

1 Lowest holding level at **LOREL/ASKEY** is **7000** (Flight Level equivalent). However when radar is out of service **6000** may be used as instructedby ATC.
2 Initial Approach Procedures are designed for manoeuvring speeds up to 220KIAS and assume aircraft can maintain a descent gradient of approximately **300** per NM.
3 When **BKY VOR** or **DME** is out of service routes commence at **CASEY**, see AD 2-EGSS-7-14.
4 **WARNING - Procedure contains stepped descent for ATC and airspace requirements. Departure routes cross beneath these procedures. Strict compliance with altitude requirements is essential.**

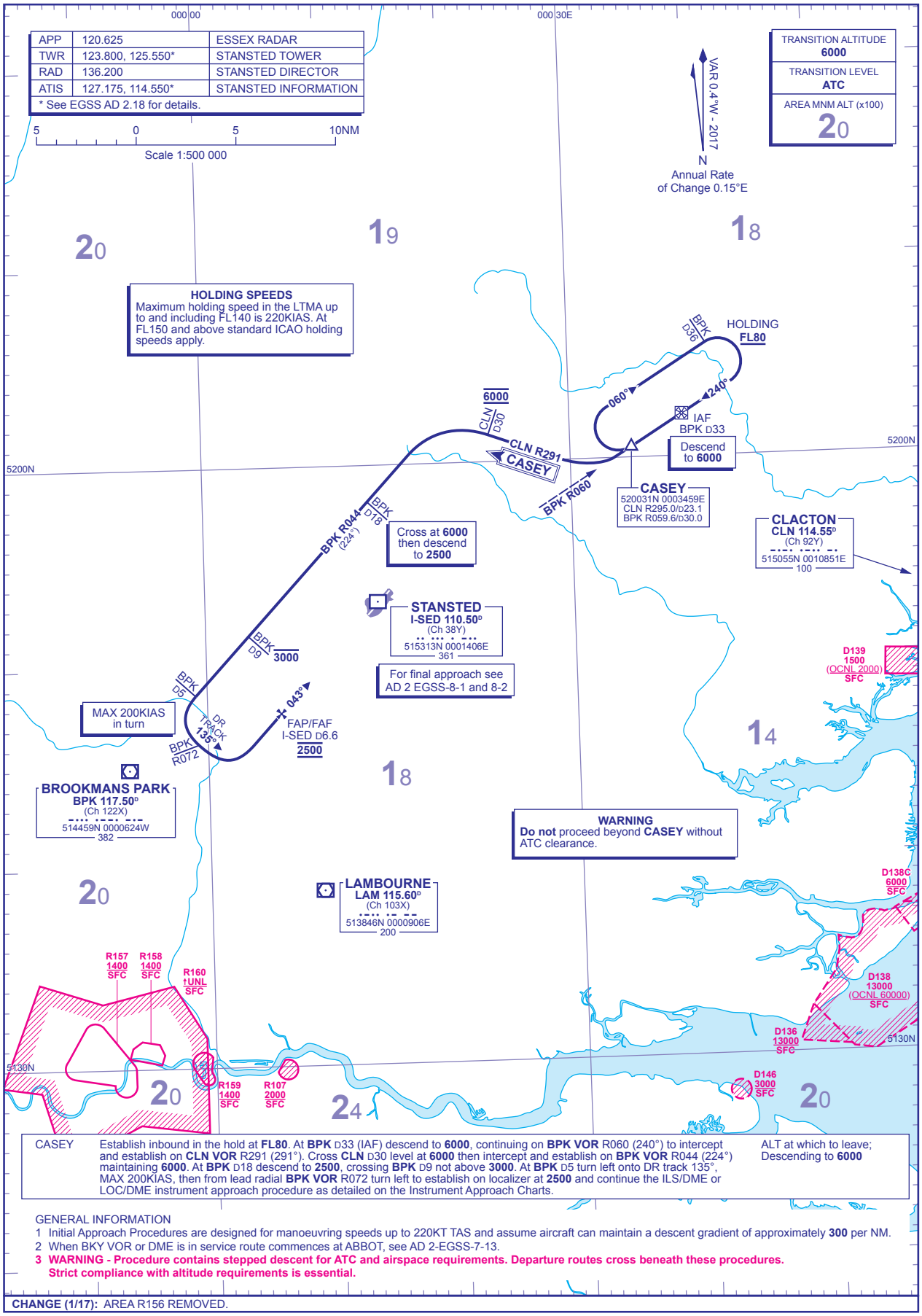
CHANGE (3/17): LAM VOR RECALIBRATED. LOREL/ASKEY LAM VOR RADIALS.

AERO INFO DATE 05 DEC 16

INITIAL APPROACH PROCEDURES
ILS RWY 04 Without Radar Control VOR/DME BKY u/s

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED



CASEY	Establish inbound in the hold at **FL80**. At **BPK** D33 (IAF) descend to **6000**, continuing on **BPK VOR** R060 (240°) to intercept and establish on **CLN VOR** R291 (291°). Cross **CLN** D30 level at **6000** then intercept and establish on **BPK VOR** R044 (224°) maintaining **6000**. At **BPK** D18 descend to **2500**, crossing **BPK** D9 not above **3000**. At **BPK** D5 turn left onto DR track 135°, MAX 200KIAS, then from lead radial **BPK VOR** R072 turn left to establish on localizer at **2500** and continue the ILS/DME or LOC/DME instrument approach procedure as detailed on the Instrument Approach Charts.	ALT at which to leave; Descending to **6000**

GENERAL INFORMATION

1 Initial Approach Procedures are designed for manoeuvring speeds up to 220KT TAS and assume aircraft can maintain a descent gradient of approximately **300** per NM.

2 When BKY VOR or DME is in service route commences at ABBOT, see AD 2-EGSS-7-13.

3 **WARNING - Procedure contains stepped descent for ATC and airspace requirements. Departure routes cross beneath these procedures. Strict compliance with altitude requirements is essential.**

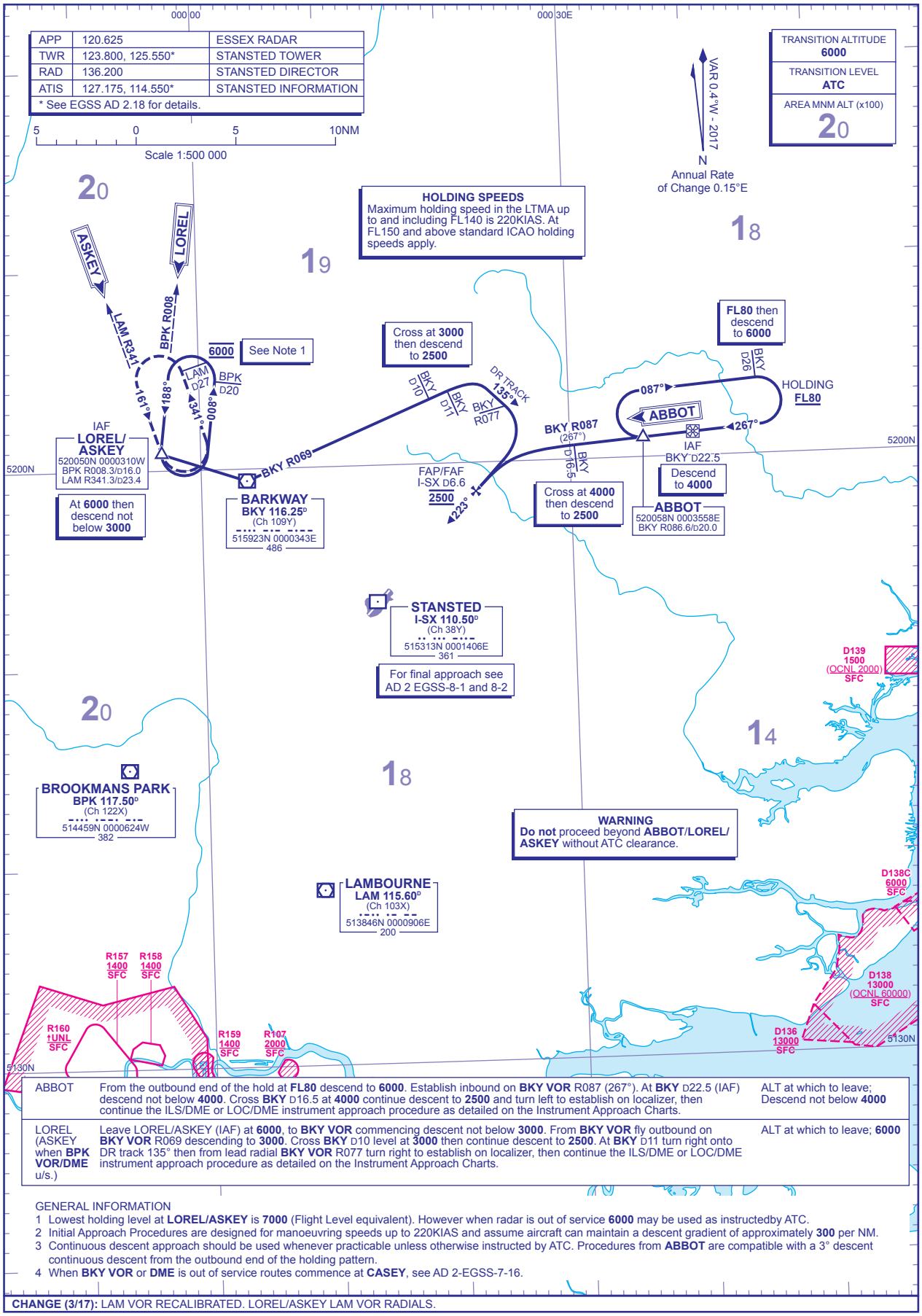
CHANGE (1/17): AREA R156 REMOVED.

AERO INFO DATE 12 OCT 16

INITIAL APPROACH PROCEDURES
ILS RWY 22 Without Radar Control

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED



ABBOT	From the outbound end of the hold at **FL80** descend to **6000**. Establish inbound on **BKY VOR** R087 (267°). At **BKY** D22.5 (IAF) descend not below **4000**. Cross **BKY** D16.5 at **4000** continue descent to **2500** and turn left to establish on localizer, then continue the ILS/DME or LOC/DME instrument approach procedure as detailed on the Instrument Approach Charts.	ALT at which to leave; Descend not below **4000**
LOREL (ASKEY when **BPK VOR/DME** u/s.)	Leave LOREL/ASKEY (IAF) at **6000**, to **BKY VOR** commencing descent not below **3000**. From **BKY VOR** fly outbound on **BKY VOR** R069 descending to **3000**. Cross **BKY** D10 level at **3000** then continue descent to **2500**. At **BKY** D11 turn right onto DR track 135° then from lead radial **BKY VOR** R077 turn right to establish on localizer, then continue the ILS/DME or LOC/DME instrument approach procedure as detailed on the Instrument Approach Charts.	ALT at which to leave; **6000**

GENERAL INFORMATION

1 Lowest holding level at **LOREL/ASKEY** is **7000** (Flight Level equivalent). However when radar is out of service **6000** may be used as instructedby ATC.
2 Initial Approach Procedures are designed for manoeuvring speeds up to 220KIAS and assume aircraft can maintain a descent gradient of approximately **300** per NM.
3 Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedures from **ABBOT** are compatible with a 3° descent continuous descent from the outbound end of the holding pattern.
4 When **BKY VOR** or **DME** is out of service routes commence at **CASEY**, see AD 2-EGSS-7-16.

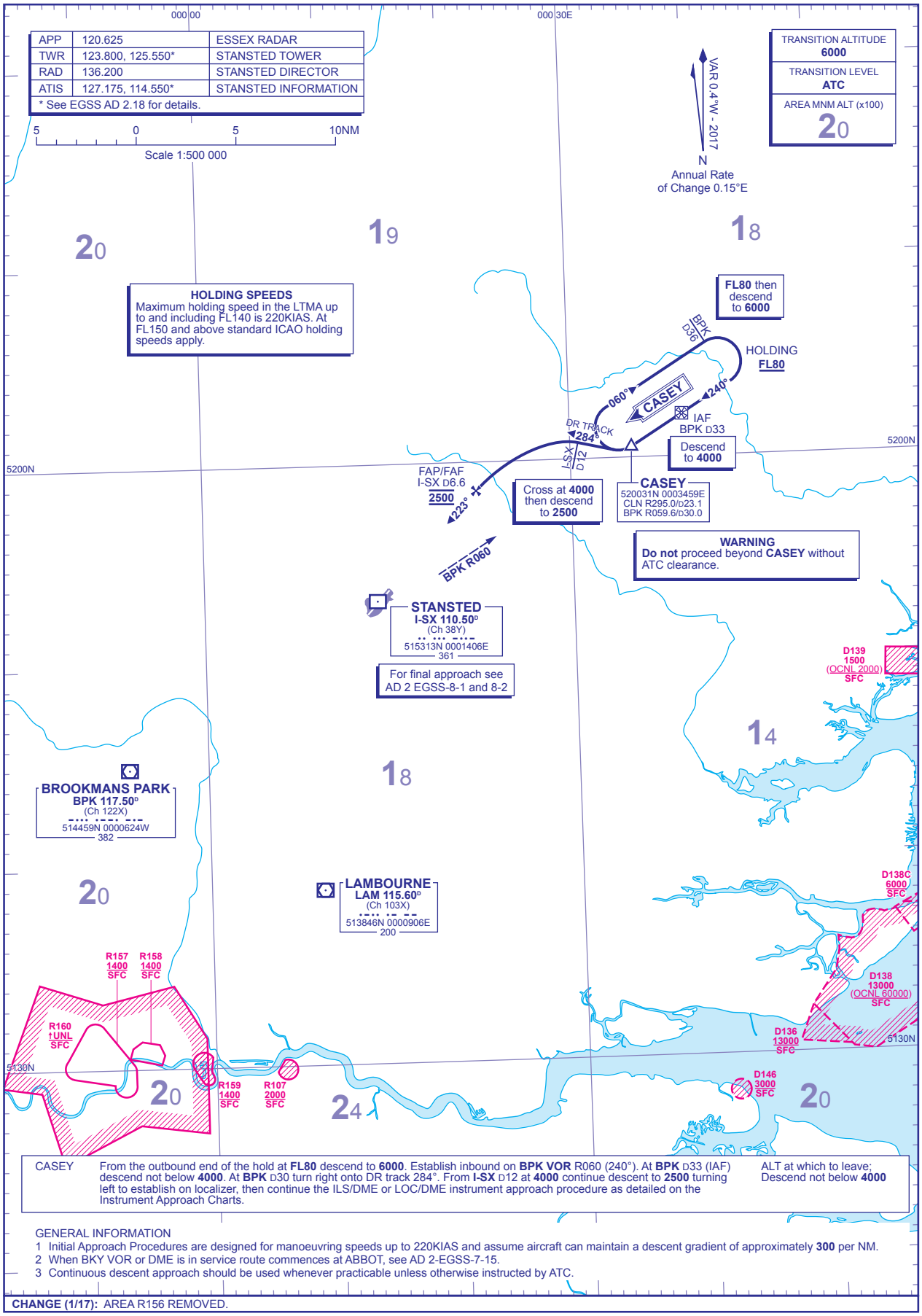
CHANGE (3/17): LAM VOR RECALIBRATED. LOREL/ASKEY LAM VOR RADIALS.

AERO INFO DATE 02 DEC 16

INITIAL APPROACH PROCEDURES
ILS RWY 22 Without Radar Control VOR/DME BKY u/s

DISTANCES IN NAUTICAL MILES
BEARINGS, TRACKS AND RADIALS ARE MAGNETIC
ALTITUDES AND ELEVATIONS ARE IN FEET

LONDON STANSTED



CASEY	From the outbound end of the hold at **FL80** descend to **6000**. Establish inbound on **BPK VOR** R060 (240°). At **BPK** D33 (IAF) descend not below **4000**. At **BPK** D30 turn right onto DR track 284°. From **I-SX** D12 at **4000** continue descent to **2500** turning left to establish on localizer, then continue the ILS/DME or LOC/DME instrument approach procedure as detailed on the Instrument Approach Charts.	ALT at which to leave: Descend not below **4000**

GENERAL INFORMATION
1 Initial Approach Procedures are designed for manoeuvring speeds up to 220KIAS and assume aircraft can maintain a descent gradient of approximately **300** per NM.
2 When BKY VOR or DME is in service route commences at ABBOT, see AD 2-EGSS-7-15.
3 Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC.

CHANGE (1/17): AREA R156 REMOVED.

AERO INFO DATE 12 OCT 16

AERODROME CHART - ICAO

ARP 505722N 0005621E

AD ELEV 13FT

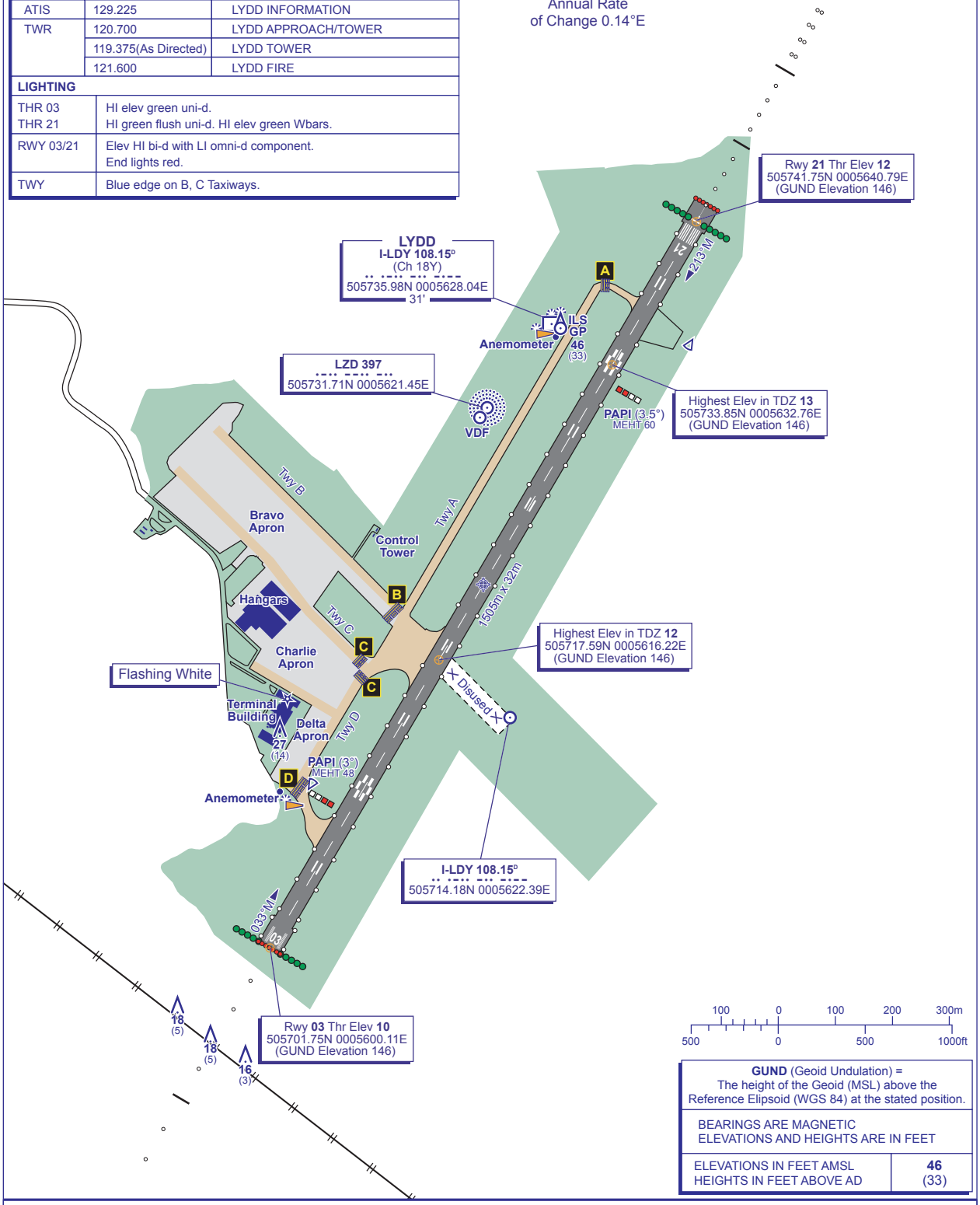
LYDD
EGMD

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 03/21	Grooved Asphalt	46/F/C/X/T	-
Apron B	Asphalt	46/F/C/X/T	10ft amsl
Apron C	Asphalt	-	-
Taxiways A & D	Asphalt	-	-
Taxiways B & C	Asphalt	46/F/C/X/T	-

COM		
ATIS	129.225	LYDD INFORMATION
TWR	120.700	LYDD APPROACH/TOWER
	119.375(As Directed)	LYDD TOWER
	121.600	LYDD FIRE

LIGHTING	
THR 03 THR 21	HI elev green uni-d. HI green flush uni-d. HI elev green Wbars.
RWY 03/21	Elev HI bi-d with LI omni-d component. End lights red.
TWY	Blue edge on B, C Taxiways.

VAR 0.1°W - 2017
N
Annual Rate of Change 0.14°E



GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.

BEARINGS ARE MAGNETIC
ELEVATIONS AND HEIGHTS ARE IN FEET

ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	**46** (33)

CHANGE (3/17): MAG VAR. RUNWAY HEADINGS/DISUSED AREA/HOLDS/TDZ BOXES AMENDED. NEW HANGAR/OBS ADDED. TWY C DESIGNATED.

AERO INFO DATE 15 DEC 16

AIRCRAFT PARKING/DOCKING CHART - ICAO

ARP 505722N 0005621E **AD ELEV 13FT**

LYDD
EGMD

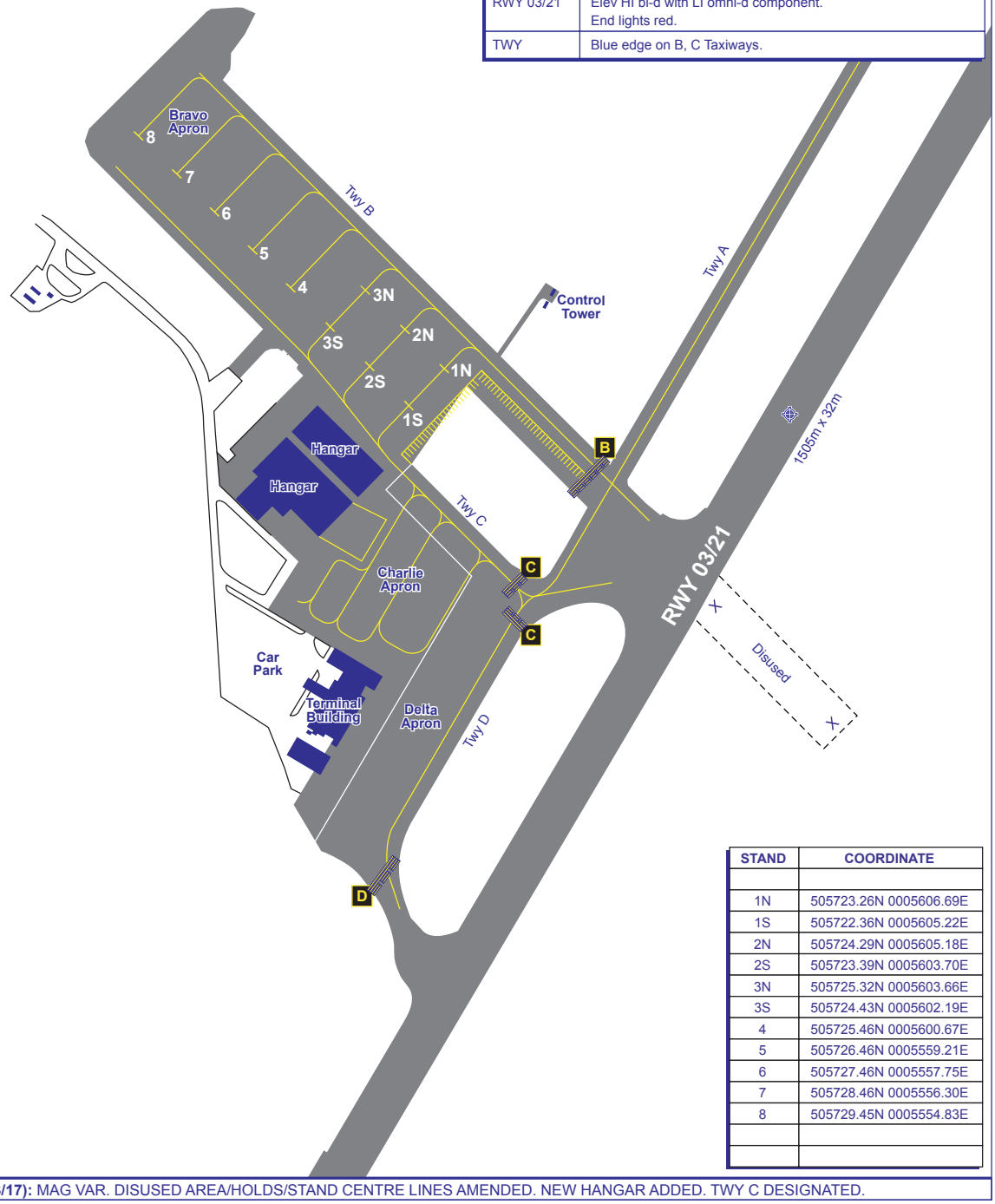
GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.
BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET
ELEVATIONS IN FEET AMSL **46** HEIGHTS IN FEET ABOVE AD (33)

50 0 50 100 150m
100 0 100 200 300 400 500ft

VAR 0.1°W - 2017
N
Annual Rate of Change 0.14°E

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	**SURFACE**	**BEARING STRENGTH**	**ELEVATION**
RWY 03/21	Grooved Asphalt	46/F/C/X/T	-
Apron B	Asphalt	46/F/C/X/T	10ft amsl
Apron C	Asphalt	-	-
Taxiways A & D	Asphalt	-	-
Taxiways B & C	Asphalt	46/F/C/X/T	-

COM		
ATIS	129.225	LYDD INFORMATION
TWR	120.700	LYDD APPROACH/TOWER
	119.375(As Directed)	LYDD TOWER
	121.600	LYDD FIRE
LIGHTING		
THR 03 THR 21	HI elev green uni-d. HI green flush uni-d. HI elev green Wbars.	
RWY 03/21	Elev HI bi-d with LI omni-d component. End lights red.	
TWY	Blue edge on B, C Taxiways.	

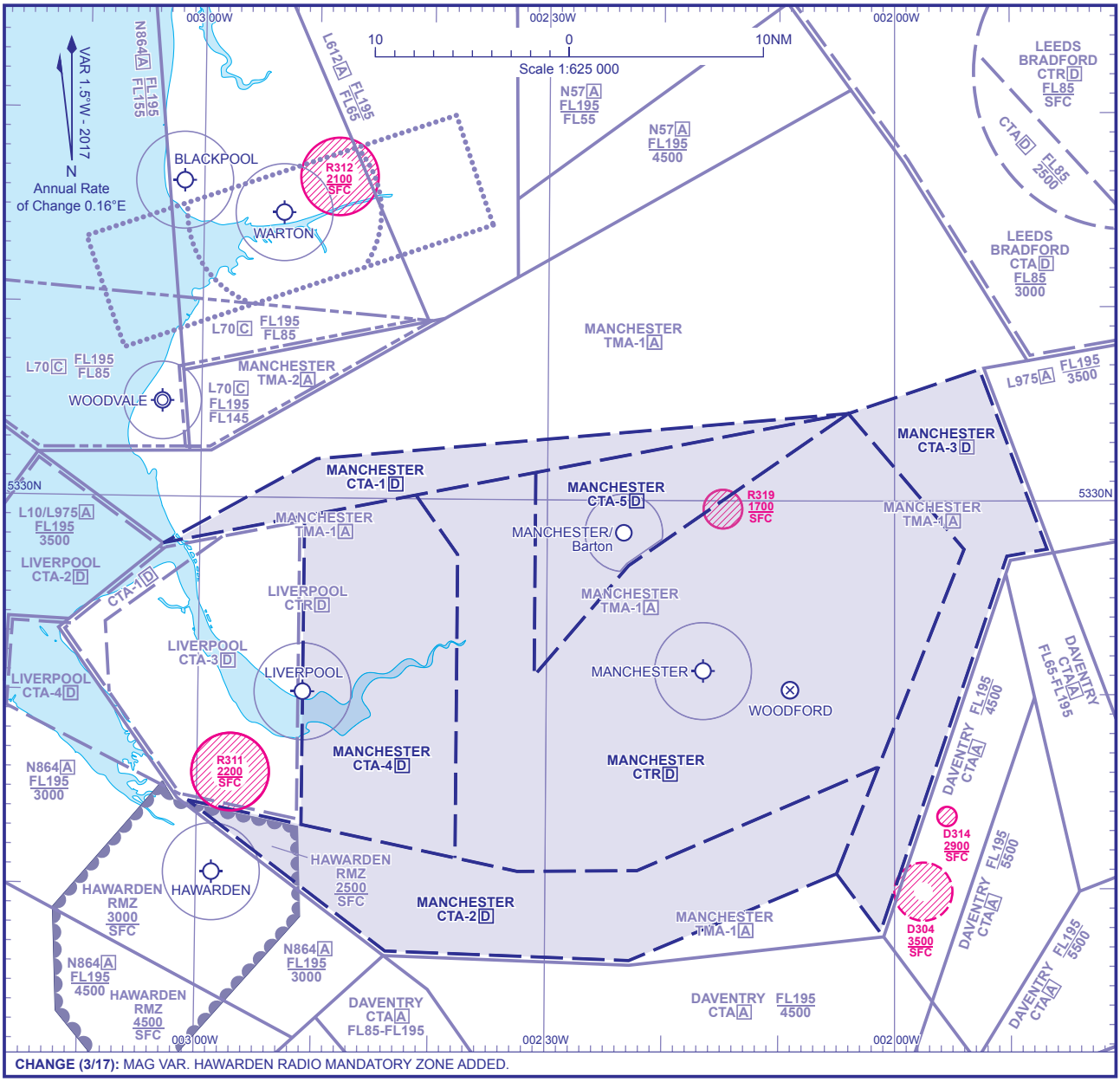


STAND	COORDINATE
1N	505723.26N 0005606.69E
1S	505722.36N 0005605.22E
2N	505724.29N 0005605.18E
2S	505723.39N 0005603.70E
3N	505725.32N 0005603.66E
3S	505724.43N 0005602.19E
4	505725.46N 0005600.67E
5	505726.46N 0005559.21E
6	505727.46N 0005557.75E
7	505728.46N 0005556.30E
8	505729.45N 0005554.83E

CHANGE (3/17): MAG VAR. DISUSED AREA/HOLDS/STAND CENTRE LINES AMENDED. NEW HANGAR ADDED. TWY C DESIGNATED.

AERO INFO DATE 15 DEC 16

CONTROL ZONE AND CONTROL AREA — MANCHESTER



CHANGE (3/17): MAG VAR. HAWARDEN RADIO MANDATORY ZONE ADDED.

AERO INFO DATE 05 DEC 16

ATS AIRSPACE VERTICAL LIMITS Controlled airspace with an upper vertical limit of FL195 and above is not shown.

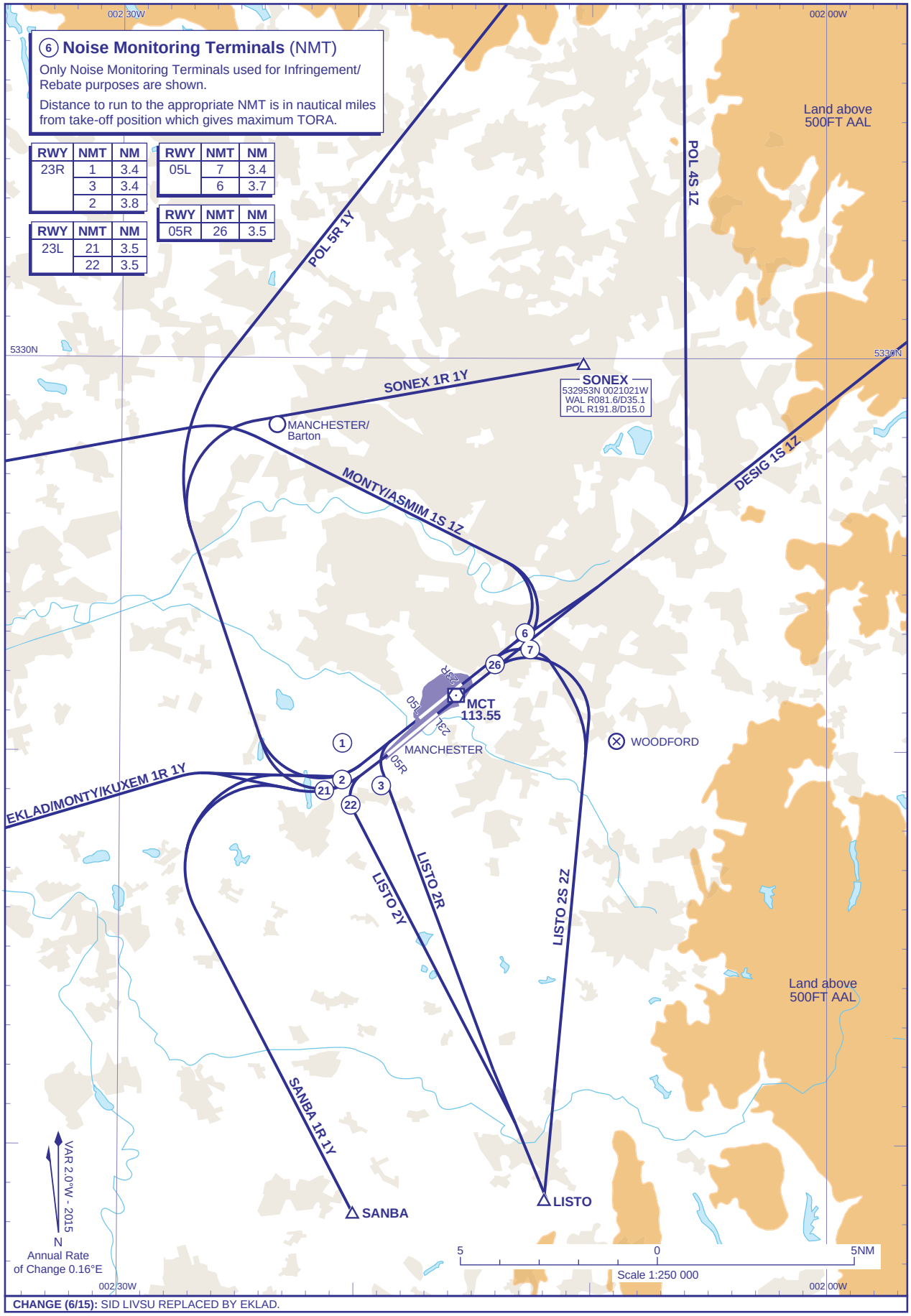
MANCHESTER			LIVERPOOL			MANCHESTER		
CTR	D	3500 SFC	CTR	D	2500 SFC	TMA-1	A	FL195 3500
CTA-1	D	3500 2500	CTA-1	D	3500 1500	TMA-2	A	FL145 FL55 (MNM 5000)
CTA-2	D	3500 2500	CTA-2	D	3500 2000			
CTA-3	D	3500 3000	CTA-3	D	3500 2500			
CTA-4	D	3500 2500	CTA-4	D	3000 2000			
CTA-5	D	3500 2000						

LATERAL LIMITS

See AD 2-EGCC 2.17	See AD 2-EGGP 2.17	See Manchester TMA ENR 2.1	

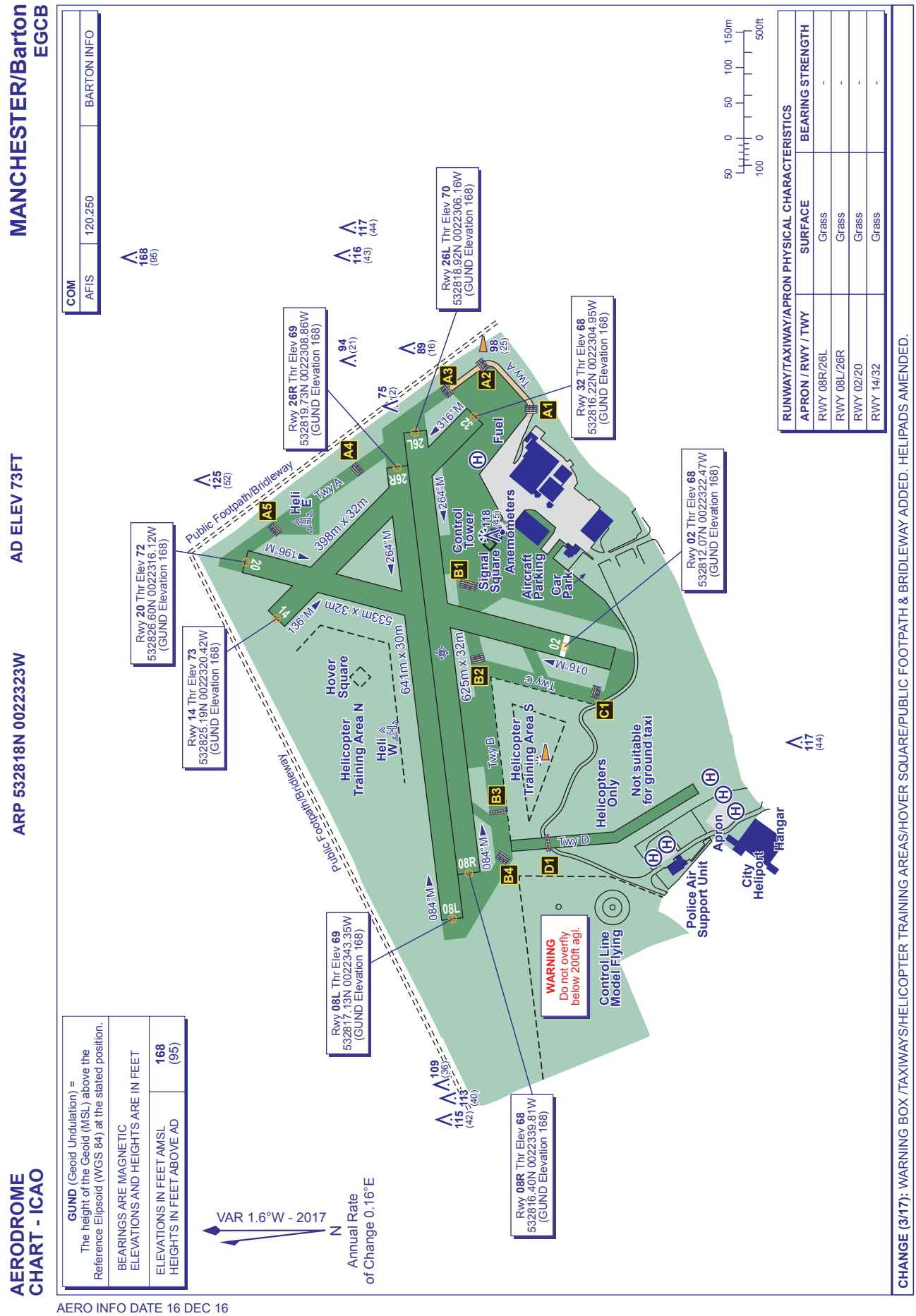
NOISE PREFERENTIAL ROUTEINGS

MANCHESTER



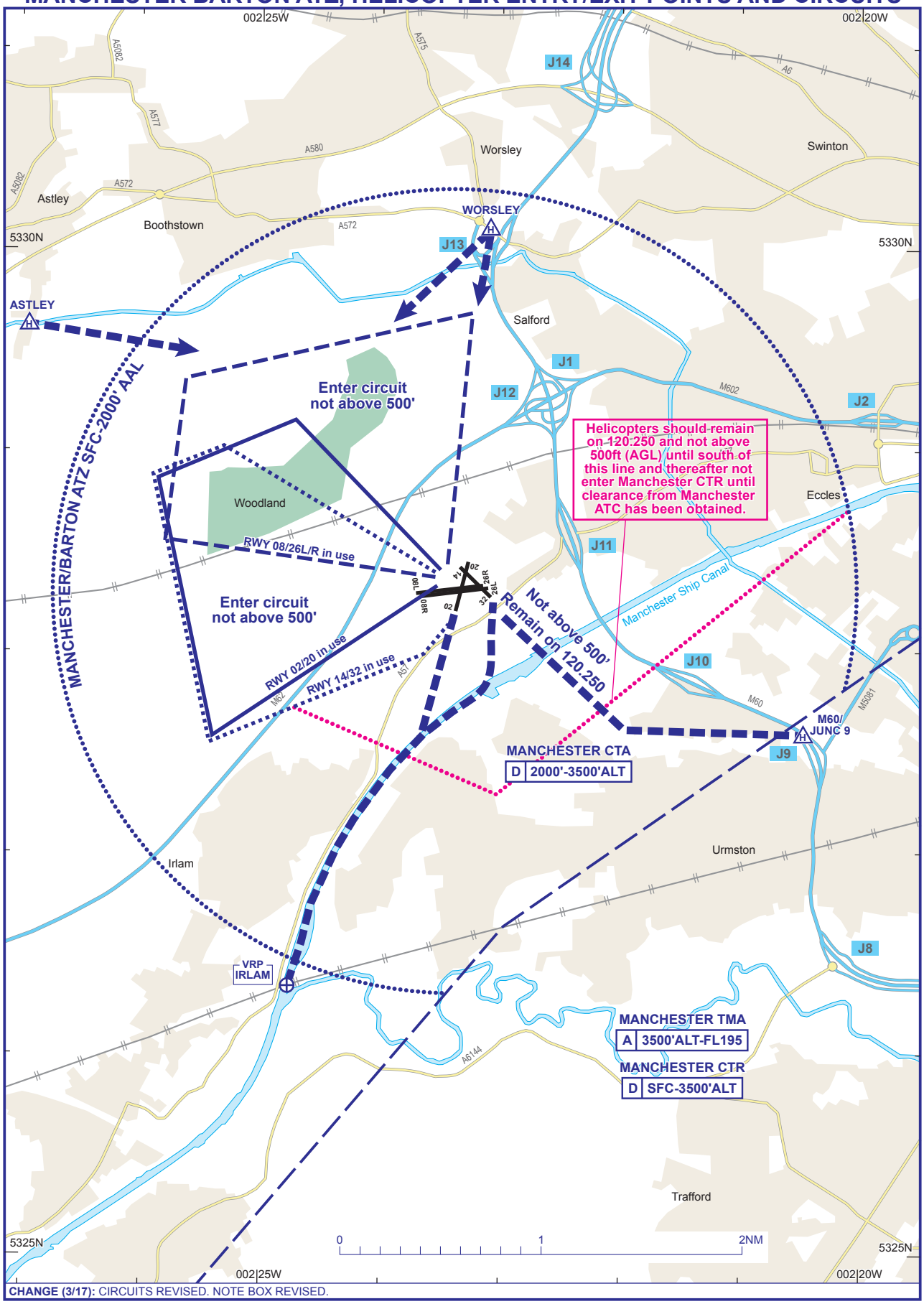
CHANGE (6/15): SID LIVSU REPLACED BY EKLAD.

AERO INFO DATE 27 FEB 15


MANCHESTER/Barton
EGCB
AERODROME CHART - ICAO
ARP 532818N 0022323W
AD ELEV 73FT
COM
AFIS
120.250
BARTON INFO
GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.
BEARINGS ARE MAGNETIC
ELEVATIONS AND HEIGHTS ARE IN FEET
ELEVATIONS IN FEET AMSL 168 (95)
HEIGHTS IN FEET ABOVE AD
VAR 1.6°W - 2017
N
Annual Rate of Change 0.16°E
AERO INFO DATE 16 DEC 16
Rwy 20 Thr Elev 72 532826.60N 0022316.12W (GUND Elevation 168)
Rwy 14 Thr Elev 73 532825.19N 0022320.42W (GUND Elevation 168)
Rwy 08L Thr Elev 69 532817.13N 0022343.35W (GUND Elevation 168)
Rwy 08R Thr Elev 68 532816.40N 0022339.81W (GUND Elevation 168)
Rwy 26R Thr Elev 69 532819.73N 0022308.86W (GUND Elevation 168)
Rwy 26L Thr Elev 70 532818.92N 0022306.16W (GUND Elevation 168)
Rwy 32 Thr Elev 68 532816.22N 0022304.95W (GUND Elevation 168)
Rwy 02 Thr Elev 68 532812.07N 0022322.47W (GUND Elevation 168)
Public Footpath/Bridleway
Twy A
Twy B
Twy C
Twy D
Heli E
Heli W
Hover Square
Helicopter Training Area N
Helicopter Training Area S
398m x 32m
533m x 32m
641m x 30m
625m x 32m
Control Tower
Signal Square
Anemometers
Aircraft Parking
Car Park
Fuel
Helicopters Only
Not suitable for ground taxi
Control Line Model Flying
WARNING
Do not overfly below 200ft agl.
Police Air Support Unit
City Heliport
Apron
Hangar
RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS
APRON / RWY / TWY
SURFACE
BEARING STRENGTH
RWY 08R/26L
Grass
-
RWY 08L/26R
Grass
-
RWY 02/20
Grass
-
RWY 14/32
Grass
-
CHANGE (3/17): WARNING BOX /TAXIWAYS/HELICOPTER TRAINING AREAS/HOVER SQUARE/PUBLIC FOOTPATH & BRIDLEWAY ADDED. HELIPADS AMENDED.

INTENTIONALLY BLANK

MANCHESTER BARTON ATZ, HELICOPTER ENTRY/EXIT POINTS AND CIRCUITS



CHANGE (3/17): CIRCUITS REVISED. NOTE BOX REVISED.

AERO INFO DATE 05 DEC 16

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CONTROL ZONE AND CONTROL AREA CHART — SOUTHAMPTON



APP	120.225	SOLENT RADAR
	122.725	SOUTHAMPTON RADAR
TWR	118.200	SOUTHAMPTON TOWER

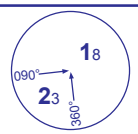
CHANGE (3/17): NEW CHART.

AERO INFO DATE 16 DEC 16

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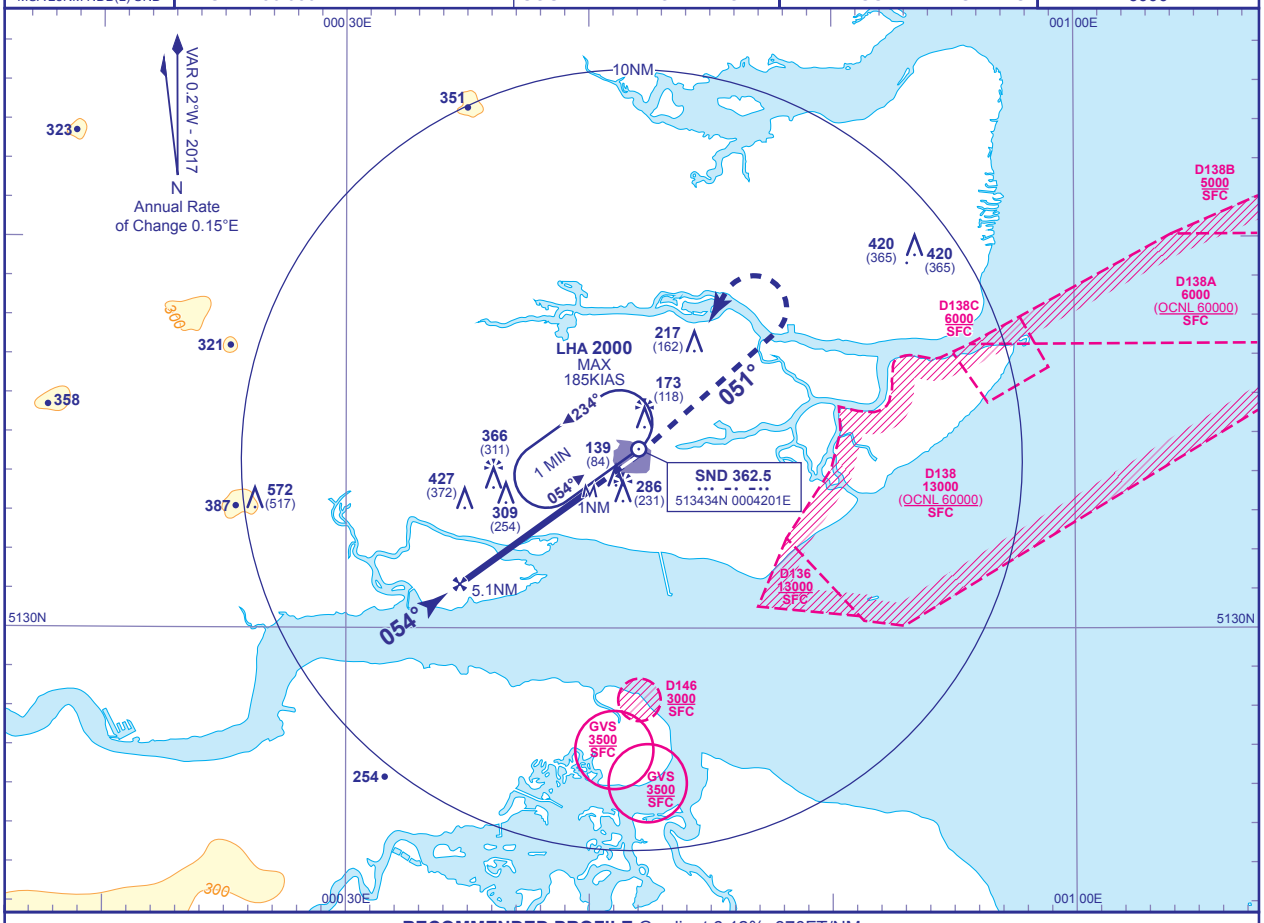
INSTRUMENT APPROACH CHART - ICAO

SOUTHEND
SRA RTR 2NM
RWY 05
(ACFT CAT A,B,C)



MSA 25NM NDB(L) SND

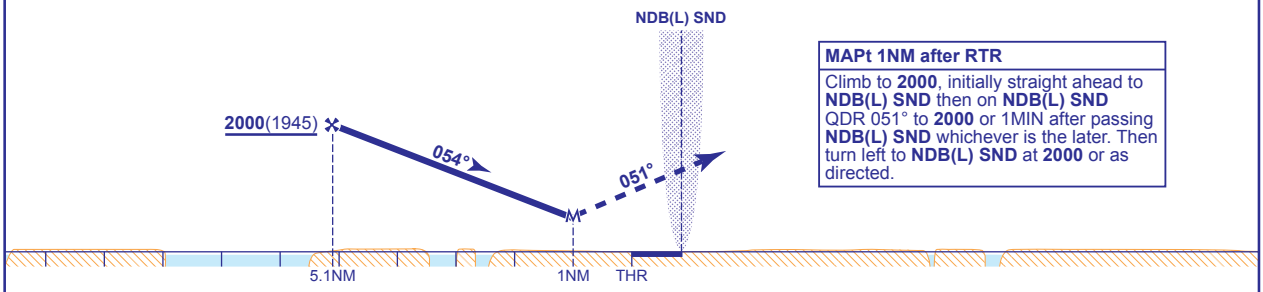
APP	130.775	SOUTHEND APPROACH	AD ELEVATION	55	TRANSITION ALTITUDE 6000
TWR	127.725	SOUTHEND TOWER	THR ELEVATION	55	
RAD	130.775	SOUTHEND RADAR	OBSTACLE ELEVATION 572 AMSL (517) (ABOVE THR)		
DIR	132.450	SOUTHEND DIRECTOR	BEARINGS ARE MAGNETIC		
ATIS	136.050	SOUTHEND INFORMATION			



RECOMMENDED PROFILE Gradient 6.12%, 370FT/NM

NM	5.0	4.0	3.0	2.0
ALT(HGT)	**1970**(1915)	**1590**(1535)	**1220**(1165)	**850**(795)

Initial and intermediate approach as directed by radar.



MAPt 1NM after RTR

Climb to **2000**, initially straight ahead to **NDB(L) SND** then on **NDB(L) SND** QDR 051° to **2000** or 1MIN after passing **NDB(L) SND** whichever is the later. Then turn left to **NDB(L) SND** at **2000** or as directed.

Aircraft Category		A	B	C
OCA (OCH)	Procedure	**560**(505)	**560**(505)	**560**(505)
VM(C)OCA (OCH AAL)	Total Area	**600**(545)	**700**(645)	**900**(845)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	990	870	740	620	500
RTR to MAPT	MIN:SEC	0:23	0:26	0:30	0:36	0:45

NOTE Aircraft will be required to hold not lower than **2500**. Lowest altitude to commence procedure from NDB(L) SND following a missed approach is **2000**.

CHANGE (2/17): TRACKS UPDATED. MAG VAR AND ANNUAL RATE OF CHANGE. R156 REMOVED.

AERO INFO DATE 14 NOV 16

INSTRUMENT APPROACH CHART - ICAO

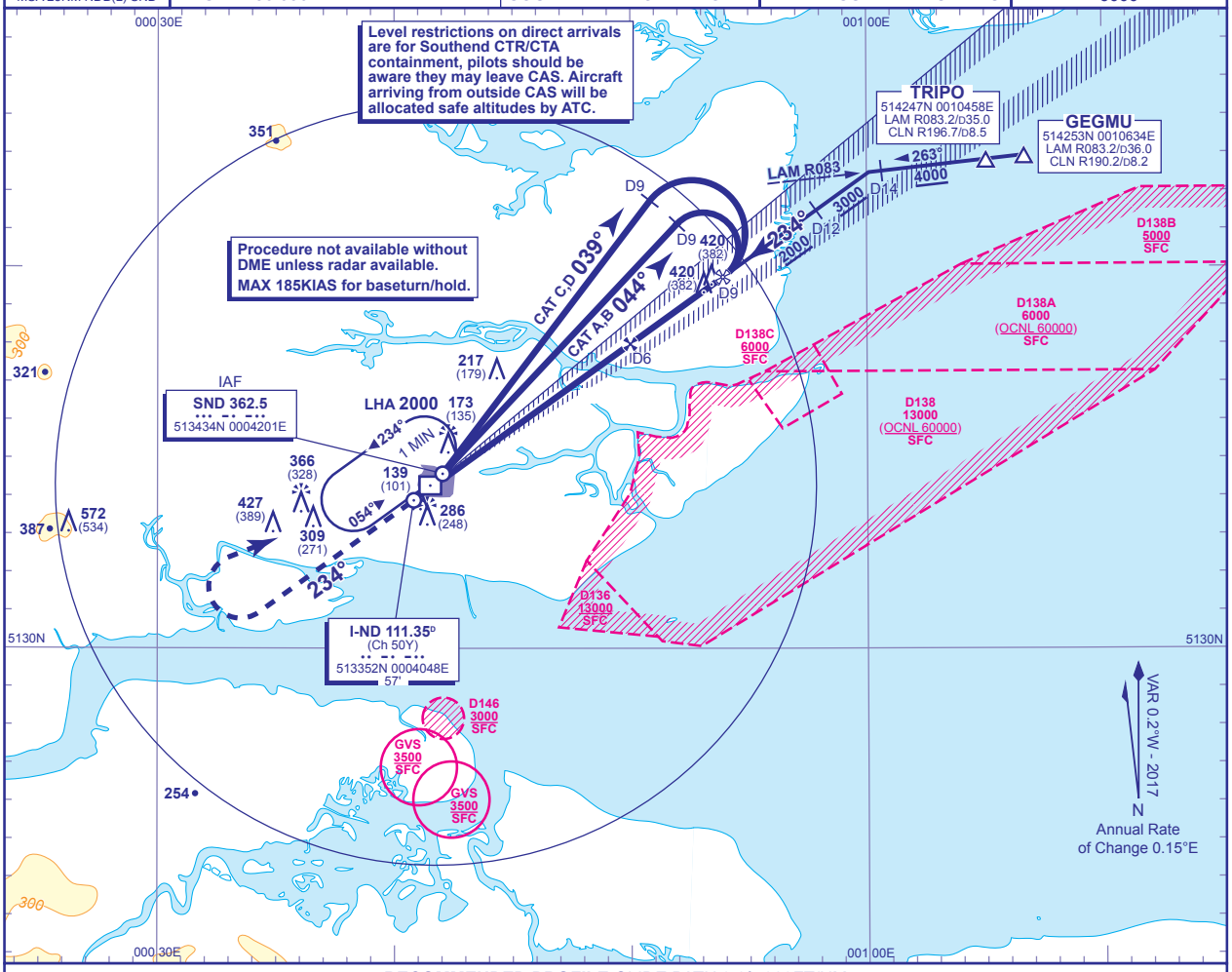
SOUTHEND ILS/DME/NDB(L) RWY 23 (ACFT CAT A,B,C,D)



MSA 25NM NDB(L) SND

APP	130.775	SOUTHEND APPROACH	AD ELEVATION	55	
TWR	127.725	SOUTHEND TOWER	THR ELEVATION	38	
RAD	130.775	SOUTHEND RADAR	OBSTACLE ELEVATION		
DIR	132.450	SOUTHEND DIRECTOR	572 AMSL (534) (ABOVE THR)		
ATIS	136.050	SOUTHEND INFORMATION	BEARINGS ARE MAGNETIC		

TRANSITION ALTITUDE 6000

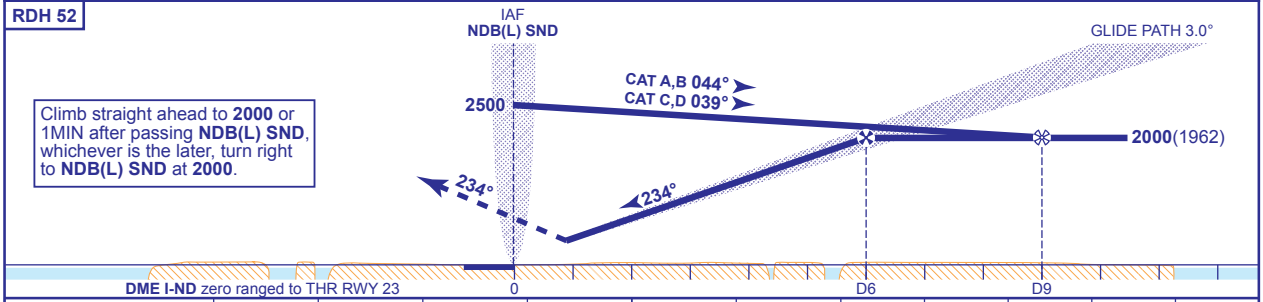


RECOMMENDED PROFILE GLIDE PATH 3.0°, 320FT/NM

DME I-ND	6	5	4	3	2	1
ALT(HGT)	**2000**(1962)	**1680**(1642)	**1360**(1322)	**1050**(1012)	**730**(692)	**410**(372)

RDH 52

Climb straight ahead to **2000** or 1MIN after passing **NDB(L) SND**, whichever is the later, turn right to **NDB(L) SND** at **2000**.



Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**196**(158)	**204**(166)	**214**(176)	**223**(185)
VM(C)OCA (OCH AAL)	Total Area	**600**(545)	**700**(645)	**900**(845)	**900**(845) (see note 4)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

AIRCRAFT UNABLE TO RECIEVE DME I-ND Advise ATC. Aircraft will be radar vectored onto FAT and radar range passed at 3NM inbound.

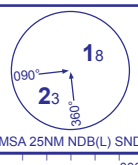
NOTES
1. Aircraft will normally be required to hold not lower than **2500**. Lowest altitude to commence procedure from NDB(L) SND following a missed approach is **2000**.
2. Maximum 185KIAS for hold and Baseturns.
3. Active danger areas lie adjacent to the localiser course.
4. CAT D circling not authorised south of RWY 05/23 C/L.

CHANGE (3/17): LAM VOR RECALIBRATED. LAM VOR RADIALS.

AERO INFO DATE 30 NOV 16

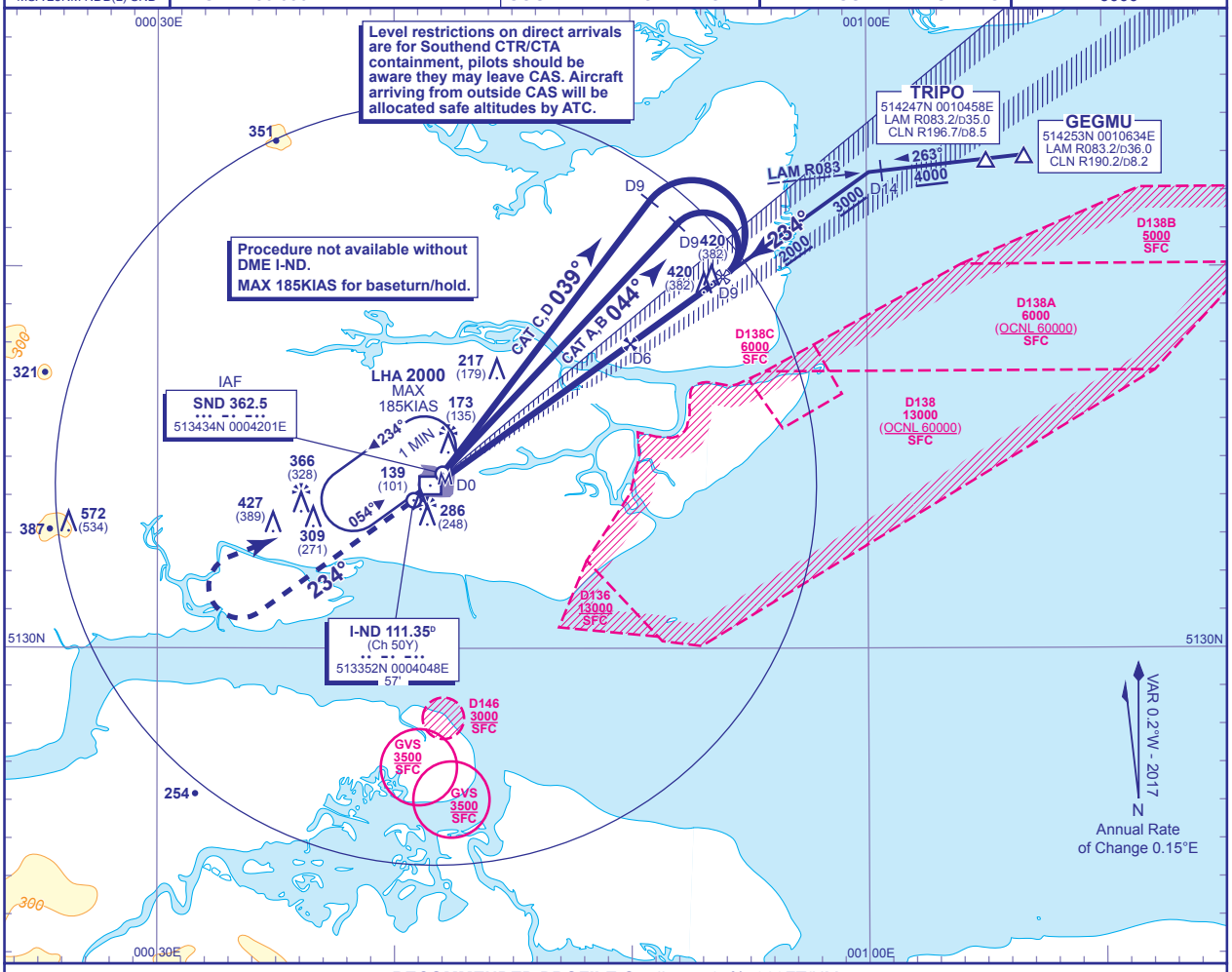
INSTRUMENT APPROACH CHART - ICAO

SOUTHEND LOC/DME/NDB(L) RWY 23 (ACFT CAT A,B,C,D)



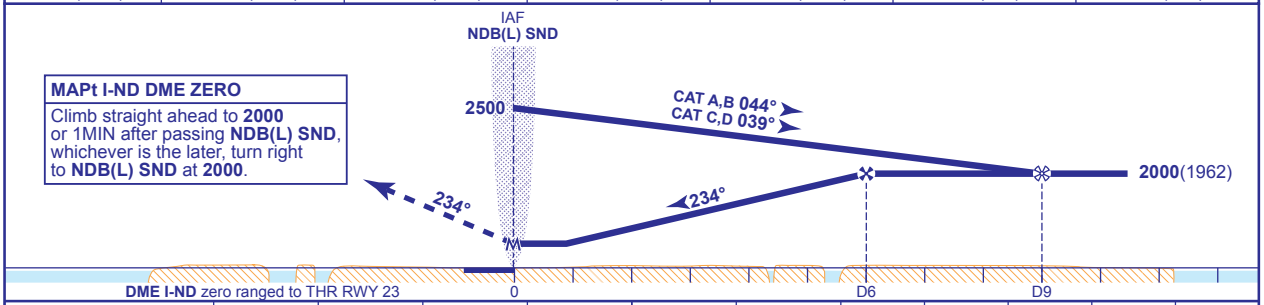
MSA 25NM NDB(L) SND

APP	130.775	SOUTHEND APPROACH	AD ELEVATION	55	TRANSITION ALTITUDE 6000
TWR	127.725	SOUTHEND TOWER	THR ELEVATION	38	
RAD	130.775	SOUTHEND RADAR	OBSTACLE ELEVATION 572 AMSL (534) (ABOVE THR)		
DIR	132.450	SOUTHEND DIRECTOR			
ATIS	136.050	SOUTHEND INFORMATION	BEARINGS ARE MAGNETIC		



RECOMMENDED PROFILE Gradient 5.24%, 320FT/NM

DME I-ND	6	5	4	3	2	1
ALT(HGT)	**2000**(1962)	**1680**(1642)	**1360**(1322)	**1050**(1012)	**730**(692)	**410**(372)



MAPt I-ND DME ZERO
Climb straight ahead to **2000** or 1MIN after passing **NDB(L) SND**, whichever is the later, turn right to **NDB(L) SND** at **2000**.

Aircraft Category		A	B	C	D
OCA (OCH)	Procedure	**420**(382)	**420**(382)	**420**(382)	**420**(382)
VM(C)OCA (OCH AAL)	Total Area	**600**(545)	**700**(645)	**900**(845)	**900**(845) (see note 4)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420

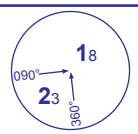
NOTES
1 Aircraft will normally be required to hold not lower than **2500**. Lowest altitude to commence procedure from NDB(L) SND following a missed approach is **2000**.
2 Maximum 185KIAS for hold and baseturns.
3 Active danger areas lie adjacent to the localiser course.
4 CAT D circling not authorised south of RWY 05/23 C/L.

CHANGE (3/17): LAM VOR RECALIBRATED. LAM VOR RADIALS.

AERO INFO DATE 30 NOV 16

INSTRUMENT APPROACH CHART - ICAO

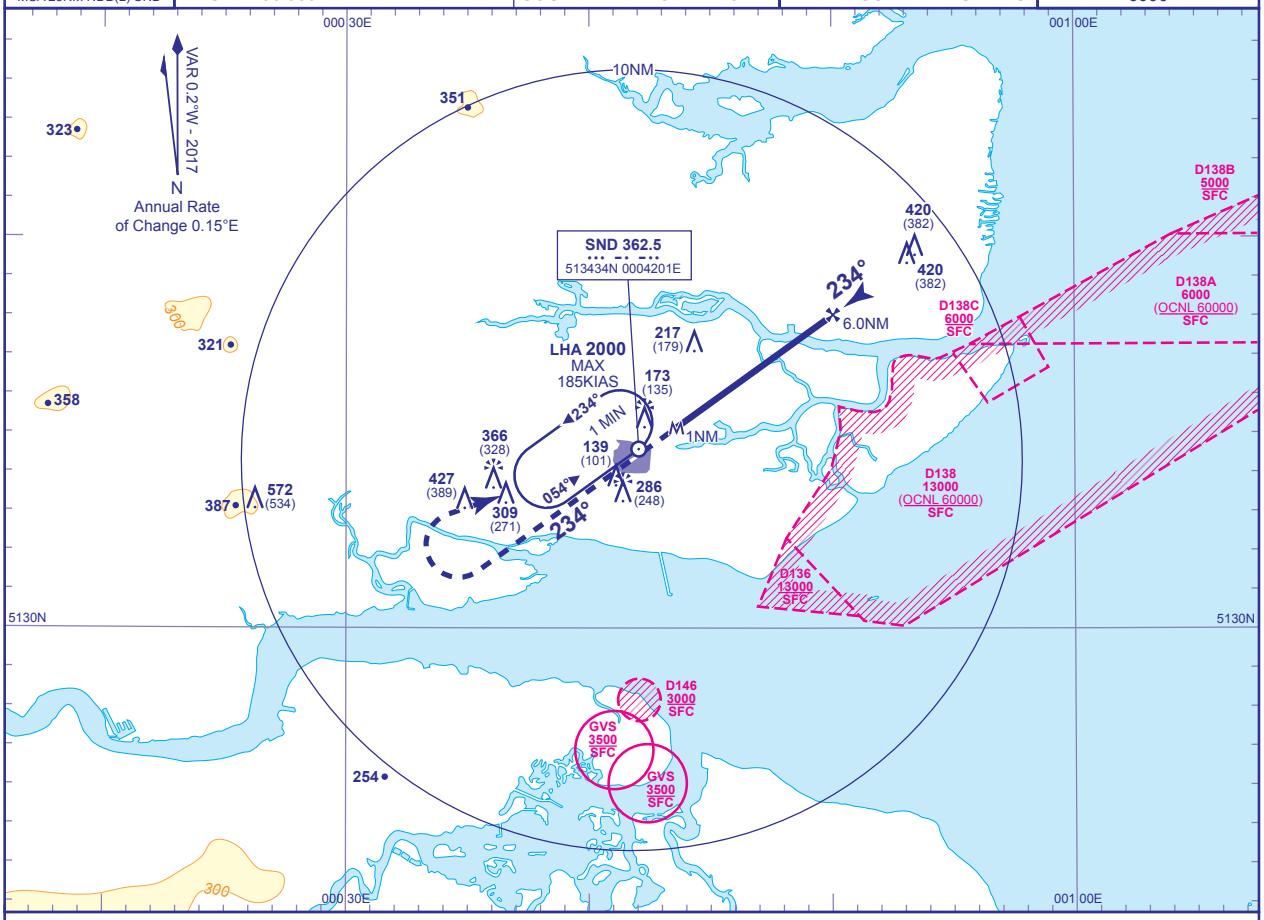
SOUTHEND
SRA RTR 2NM
RWY 23
(ACFT CAT A,B,C)



MSA 25NM NDB(L) SND

APP	130.775	SOUTHEND APPROACH	AD ELEVATION	55	
TWR	127.725	SOUTHEND TOWER	THR ELEVATION	38	
RAD	130.775	SOUTHEND RADAR	OBSTACLE ELEVATION		
DIR	132.450	SOUTHEND DIRECTOR	572 AMSL (534) (ABOVE THR)		
ATIS	136.050	SOUTHEND INFORMATION	BEARINGS ARE MAGNETIC		

TRANSITION ALTITUDE **6000**

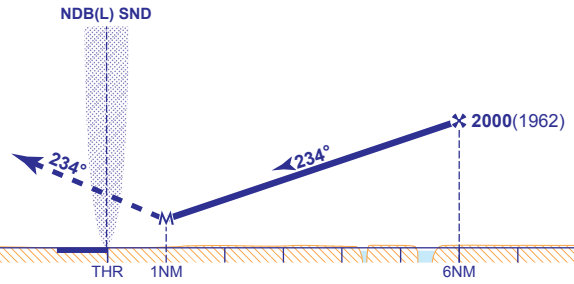


RECOMMENDED PROFILE Gradient 5.24%, 320FT/NM

NM	6.0	5.0	4.0	3.0	2.0	1.0
ALT(HGT)	**2000**(1962)	**1680**(1642)	**1360**(1322)	**1050**(1012)	**730**(692)	**410**(372)

Initial and intermediate approach as directed by radar.

MAPt 1NM after RTR
Climb straight ahead to **2000** or 1MIN after passing **NDB(L) SND**, whichever is the later, turn right to **NDB(L) SND** at **2000** or as directed.



Aircraft Category		A	B	C
OCA (OCH)	Procedure	**490**(452)	**490**(452)	**490**(452)
VM(C)OCA (OCH AAL)	Total Area	**600**(545)	**700**(645)	**900**(845)

Rate of descent	G/S KT	160	140	120	100	80
	FT/MIN	850	740	640	530	420
RTR to MAPT	MIN:SEC	0:23	0:26	0:30	0:36	0:45

NOTE Aircraft will be required to hold not lower than **2500**. Lowest altitude to commence procedure from NDB(L) SND following a missed approach is **2000**.

CHANGE (2/17): TRACKS UPDATED. MAG VAR AND ANNUAL RATE OF CHANGE. R156 REMOVED.

AERO INFO DATE 14 NOV 16

AERODROME CHART - ICAO

ARP 521132N 0013652W

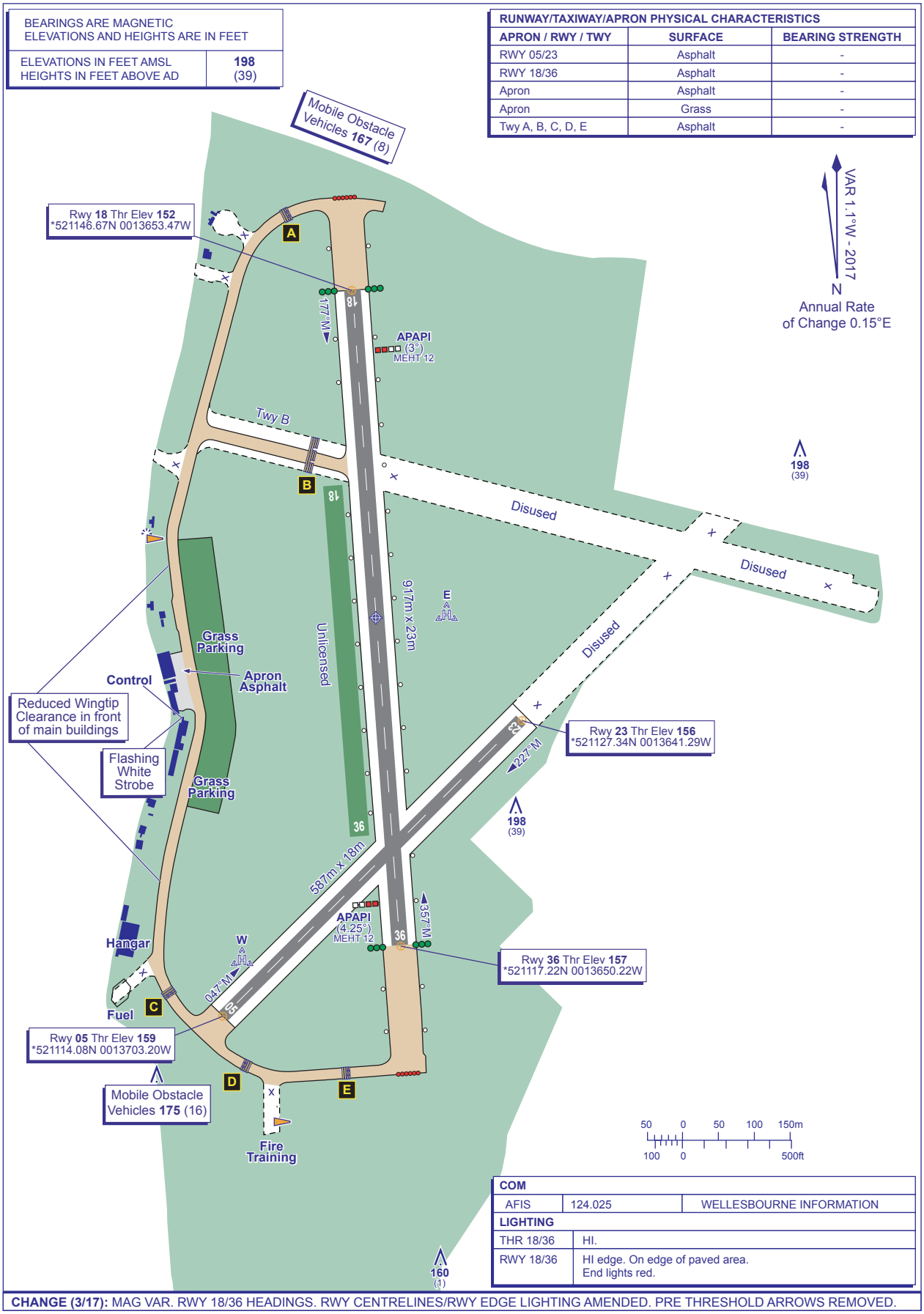
AD ELEV 159FT

WELLESBOURNE MOUNTFORD
EGBW

BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET	
ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	198 (39)

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS

APRON / RWY / TWY	SURFACE	BEARING STRENGTH
RWY 05/23	Asphalt	-
RWY 18/36	Asphalt	-
Apron	Asphalt	-
Apron	Grass	-
Twy A, B, C, D, E	Asphalt	-



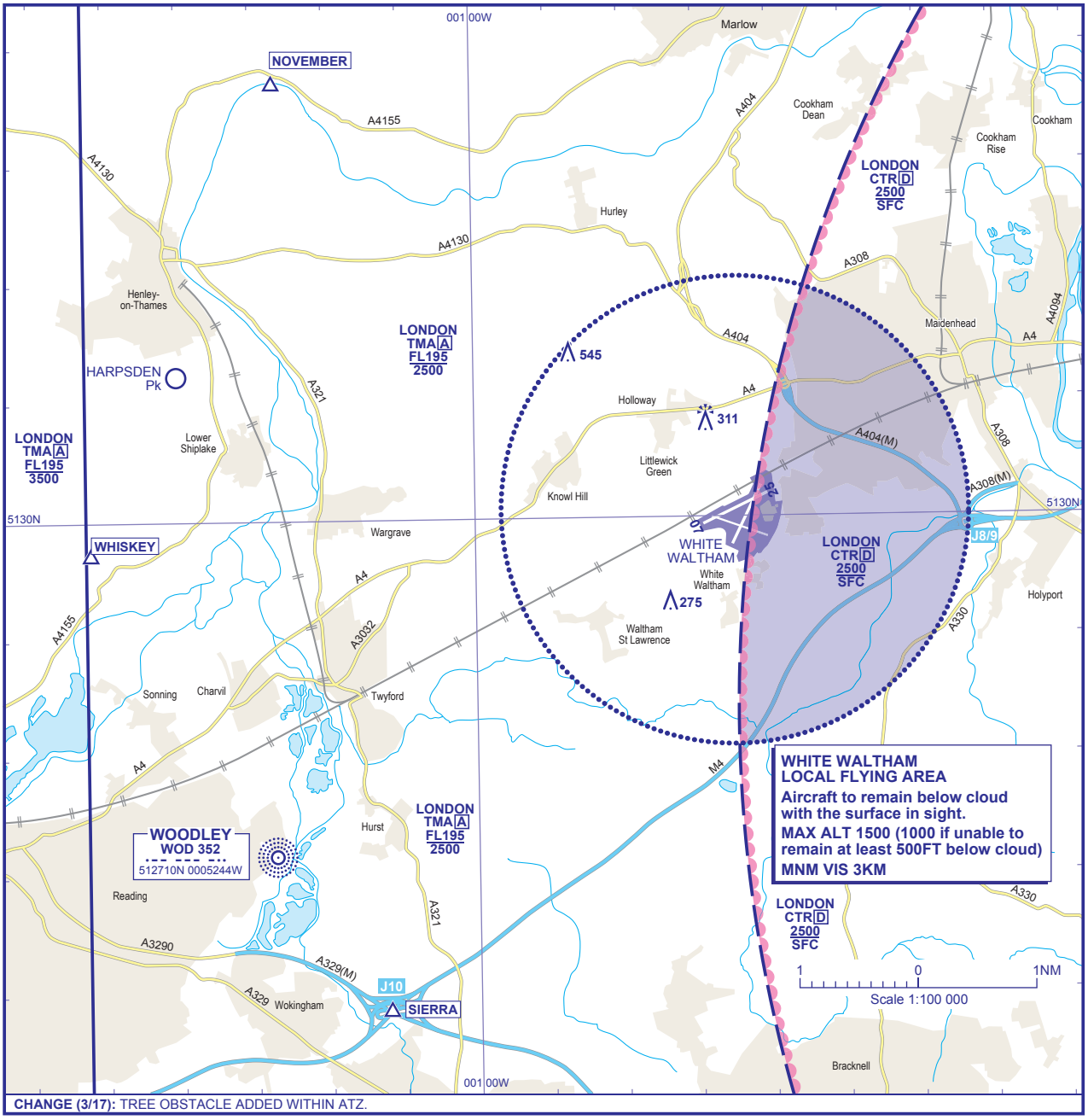
COM		
AFIS	124.025	WELLESBOURNE INFORMATION
LIGHTING		
THR 18/36	HI.	
RWY 18/36	HI edge. On edge of paved area. End lights red.	

CHANGE (3/17): MAG VAR. RWY 18/36 HEADINGS. RWY CENTRELINES/RWY EDGE LIGHTING AMENDED. PRE THRESHOLD ARROWS REMOVED.

AERO INFO DATE 14 DEC 16

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WHITE WALTHAM TRAFFIC ZONE

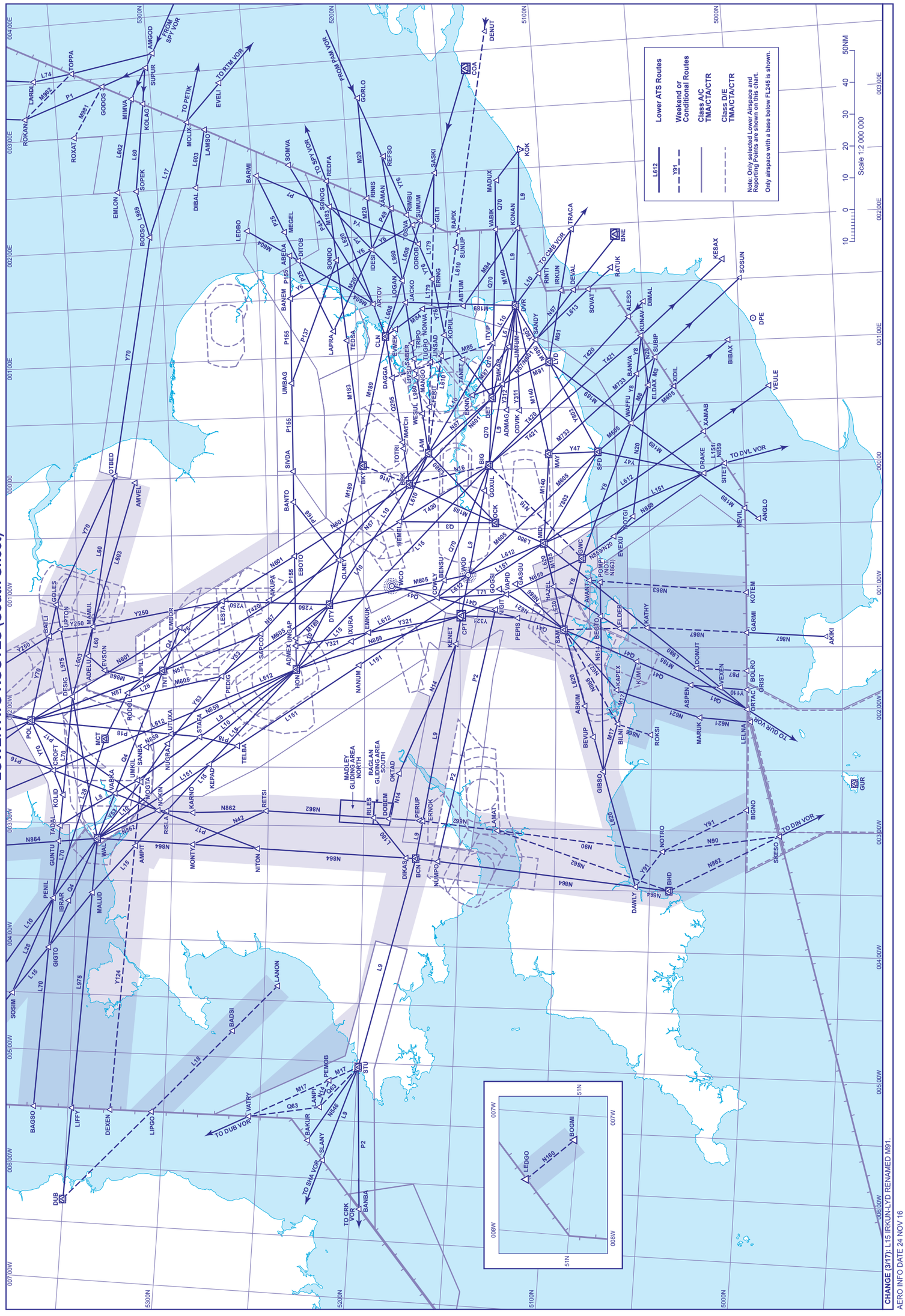


CHANGE (3/17): TREE OBSTACLE ADDED WITHIN ATZ.

AERO INFO DATE 21 NOV 16

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LOWER ATS ROUTES (South Sheet)

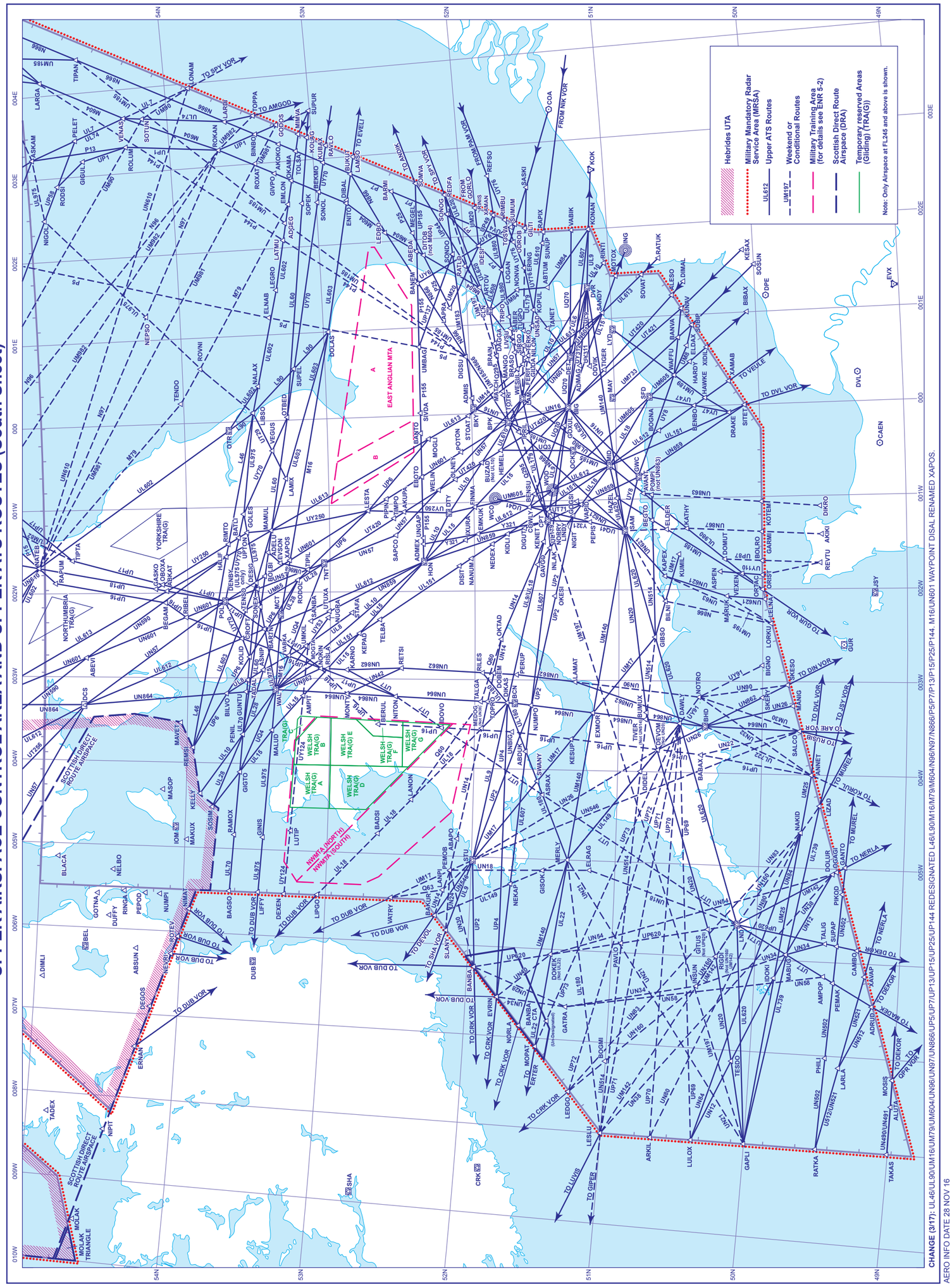


LOWER ATS ROUTES (North Sheet)



CHANGE (13/16): N580 REMOVED. L602, Y96 AMENDED. P600, N864 WAYPOINT ANGUS RENAMED ASNUD.
AERO INFO DATE 05 SEP 16

UPPER AIRSPACE CONTROL AREA AND UPPER ATS ROUTES (South Sheet)


Hebrides UTA
Military Mandatory Radar Service Area (MRSA)
Upper ATS Routes
Weekend or Conditional Routes
Military Training Area (for details see ENR 5-2)
Scottish Direct Route Airspace (DRA)
Temporary reserved Areas (Gliding) (TRA(G))
Note: Only Airspace at FL245 and above is shown.
EAST ANGLIAN MTA
NWMTA (NORTH)
NWMTA (SOUTH)
SCOTTISH DIRECT ROUTE AIRSPACE
MOLAK TRIANGLE
YORKSHIRE TRA(G)
NORTHUMBRIA TRA(G)
WELSH TRA(G) A
WELSH TRA(G) B
WELSH TRA(G) C
WELSH TRA(G) D
WELSH TRA(G) E
WELSH TRA(G) F
WELSH TRA(G) G
TO SPY VOR
TO AMGOD
TO ANDIK
TO EVELI
FROM PAM VOR
FROM NIK VOR
TO VEULE
TO DVL VOR
TO OUSE VOR
TO DIN VOR
TO ISY VOR
TO DVL VOR
TO ARE VOR
TO RUSHY
TO MUREL
TO KORUL
TO NERLA
TO DEKOR
TO MADEK
TO DEKOR
TO QPR VOR
TO DUB VOR
TO CRK VOR
TO SHA VOR
TO LUVIS
TO GIPER
TO MOPAT
TO DEVOL
TO BANBA
TO PEMOB
TO VATRY
TO LIPGO
TO DEXEN
TO LIFFY
TO BAGSO
TO NEVRI
TO ROTEV
TO NIMAX
TO ERNAK
TO DEGOS
TO ABSUN
TO DIMLI
TO BEL
TO GOTNA
TO DUFFY
TO RINGA
TO PEPOD
TO NUMPI
TO NELBO
TO BLACA
TO IOM
TO MAKUX
TO SOSIM
TO KELLY
TO REMSI
TO MAVET
TO SCOTTISH DIRECT ROUTE AIRSPACE
TO NIPIT
TO TADEX
TO SHA
TO CRK
TO DUB
TO CAEN
TO DVL
TO EVX
TO DPE
TO SOSUN
TO KOK
TO COA
TO OTR
TO LAM
TO TIPTA
TO RAPUM
TO HALIF
TO RMTO
TO BATLU
TO GOLES
TO MAMUL
TO ADELU
TO KEVSON
TO KAPOS
TO BOLBI
TO TIPIL
TO RODOL
TO SANBA
TO MCT
TO BARTN
TO ASNIP
TO KOLID
TO GROFT
TO TENSO
TO ONESO
TO DENBO
TO UPTON
TO GOSGA
TO OROXA
TO AKKAT
TO RIBEL
TO POL
TO BILVO
TO PENIL
TO GUNTU
TO TADAL
TO WALEY
TO MAMSO
TO KARNO
TO RISLA
TO NORBU
TO MONTY
TO PERUL
TO NITON
TO DOVO
TO MEDOG
TO TALGA
TO RILES
TO OKTAD
TO PERUP
TO LLAMAT
TO BCN
TO OMKAS
TO TOPRO
TO NUMPO
TO UNBIG
TO ABDUX
TO SWANY
TO ASRAX
TO KESUP
TO EXMOR
TO TIVER
TO DAWLY
TO NOTRO
TO BHD
TO BABAX
TO DIDEL
TO SALCO
TO ANNET
TO LIZAD
TO DOLUR
TO GOATO
TO PIKOD
TO TALIG
TO SUPAP
TO CAMBO
TO XAVAP
TO PEMAK
TO AMPOP
TO MABUG
TO IDOKI
TO ADRUD
TO MOSIS
TO ALLTA
TO TAKAS
TO RATKA
TO LARLA
TO PHILI
TO FESDO
TO GAPLI
TO LULOX
TO ARKIL
TO LEDGO
TO ERTER
TO GATRA
TO BOGMI
TO PAVLO
TO GISOK
TO MERLY
TO ELRAG
TO NEKAP
TO ABAPO
TO STU
TO LANPI
TO BAKUR
TO Q63
TO DOLAS
TO SUPEL
TO OTBED
TO LAMIX
TO VEGUS
TO LIBSO
TO BANYO
TO EBOTO
TO WELIN
TO MOGLI
TO POTON
TO STOAT
TO BKY
TO BPK
TO HEMEL
TO BUZAD
TO DIGSU
TO ADMIS
TO BRAIN
TO DAGGA
TO TRIPO
TO LOGAN
TO LIMONA
TO ODROB
TO GILTI
TO RAPIX
TO VABIK
TO KONAN
TO RINTY
TO RATUK
TO KESAX
TO DIMAL
TO KUNAV
TO BIBAX
TO BANVA
TO ELDAX
TO SOBIP
TO WAFFU
TO HARDY
TO HAWKE
TO XIDIL
TO KAMAB
TO SFD
TO BOGNA
TO BENBO
TO SITET
TO DRAKE
TO SKY
TO GWC
TO TAVAR
TO POMPI
TO KATHY
TO DOMUT
TO KAPEX
TO KUMIL
TO ASPEN
TO VEXEN
TO ORTAC
TO MARUK
TO LENAC
TO ORSIT
TO BOLRO
TO GARMI
TO KOTEM
TO DIKRO
TO AKIN
TO REVTU
TO JSY
TO GUR
TO HON
TO DISIT
TO NANUM
TO NEDEX
TO KIDLI
TO DIGUT
TO CROWL
TO KENET
TO NORRY
TO LNDRY
TO NIGIT
TO PEPIS
TO MAGEE
TO HAZEL
TO SAM
TO BEGTO
TO ELDER
TO GWC
TO SKIPP
TO BENSU
TO WOD
TO OCK
TO GOATU
TO BIG
TO MID
TO SFD
TO MAY
TO TIGER
TO LYD
TO OTMIL
TO DVR
TO SANDY
TO ORTAC
TO DVR

AERO INFO DATE 22 NOV 16

CHANGE (3/17): WAYPOINT DIRGI REMOVED FROM UP612. UL983/UM83/UM604/UN96/UN97/UN866/UP5/UP13/UP15/UP144/UT55/UZ278 REDESIGNATED L983/M83/M604/N96/N97/N866/P5/P13/P15/P144/T55/Z278.

UPPER AIRSPACE CONTROL AREA AND UPPER ATS ROUTES (North Sheet)

Note: Only Airspace at FL245 and above is shown.

- Hebrides UTA
- Military Mandatory Radar Service Area (MRSA)
- Upper ATS Routes — UL612
- Weekend or Conditional Routes — UN591
- Scottish Direct Route Airspace (DRA)
- Temporary reserved Areas (Gliding) (TRA(G))

AERODROME CHART - ICAO

ARP 555700N 0032221W | **AD ELEV 136FT**

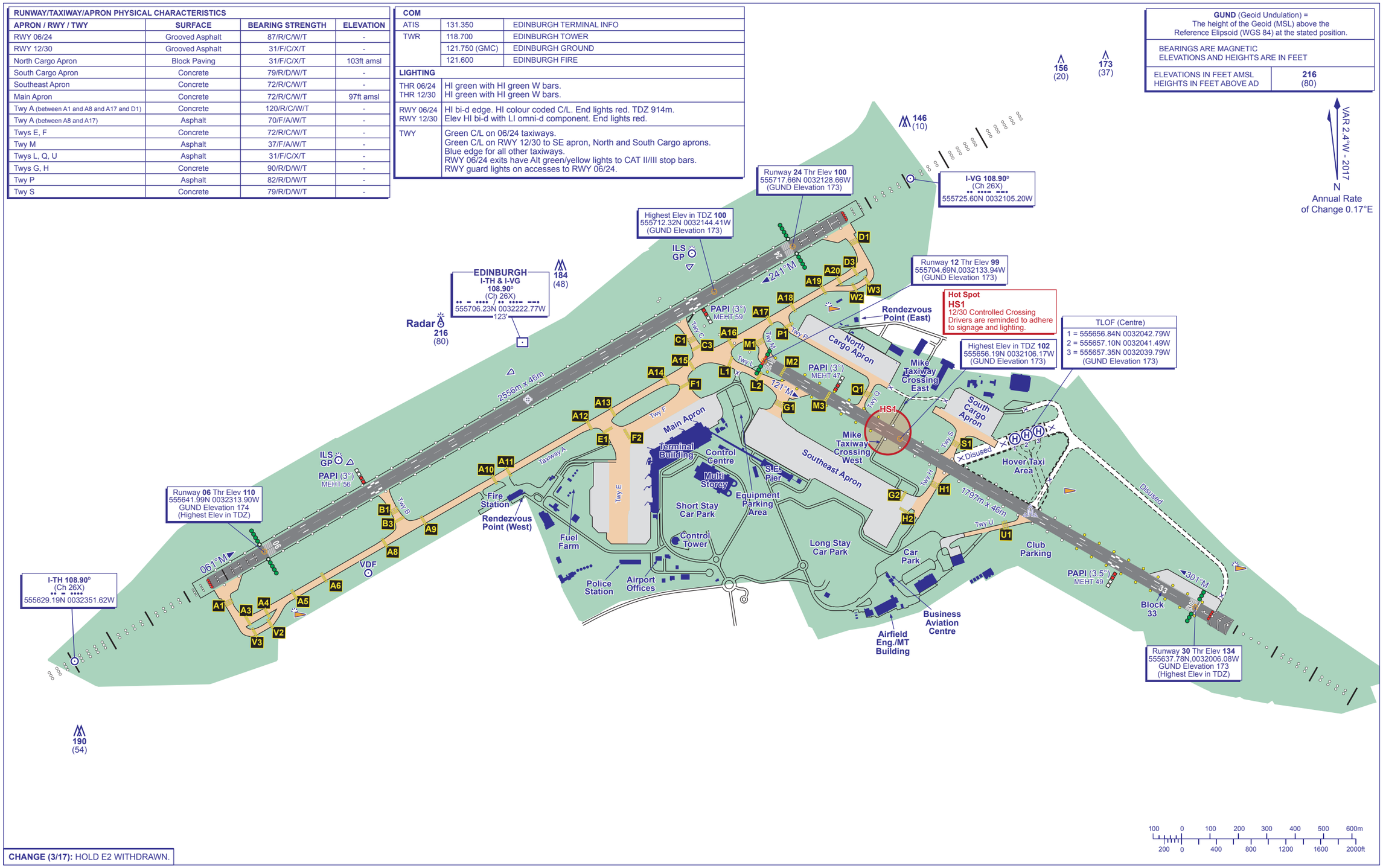
EDINBURGH
EGPH

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	**SURFACE**	**BEARING STRENGTH**	**ELEVATION**
RWY 06/24	Grooved Asphalt	87/R/C/W/T	-
RWY 12/30	Grooved Asphalt	31/F/C/X/T	-
North Cargo Apron	Block Paving	31/F/C/X/T	103ft amsl
South Cargo Apron	Concrete	79/R/D/W/T	-
Southeast Apron	Concrete	72/R/C/W/T	-
Main Apron	Concrete	72/R/C/W/T	97ft amsl
Twy A (between A1 and A8 and A17 and D1)	Concrete	120/R/C/W/T	-
Twy A (between A8 and A17)	Asphalt	70/F/A/W/T	-
Twys E, F	Concrete	72/R/C/W/T	-
Twy M	Asphalt	37/F/A/W/T	-
Twys L, Q, U	Asphalt	31/F/C/X/T	-
Twys G, H	Concrete	90/R/D/W/T	-
Twy P	Asphalt	82/R/D/W/T	-
Twy S	Concrete	79/R/D/W/T	-

COM		
ATIS	131.350	EDINBURGH TERMINAL INFO
TWR	118.700	EDINBURGH TOWER
	121.750 (GMC)	EDINBURGH GROUND
	121.600	EDINBURGH FIRE

LIGHTING	
THR 06/24 THR 12/30	HI green with HI green W bars. HI green with HI green W bars.
RWY 06/24 RWY 12/30	HI bi-d edge. HI colour coded C/L. End lights red. TDZ 914m. Elev HI bi-d with LI omni-d component. End lights red.
TWY	Green C/L on 06/24 taxiways. Green C/L on RWY 12/30 to SE apron, North and South Cargo aprons. Blue edge for all other taxiways. RWY 06/24 exits have Alt green/yellow lights to CAT II/III stop bars. RWY guard lights on accesses to RWY 06/24.

GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.	
BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET	
ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	**216** (80)



CHANGE (3/17): HOLD E2 WITHDRAWN.

AERO INFO DATE 24 NOV 16

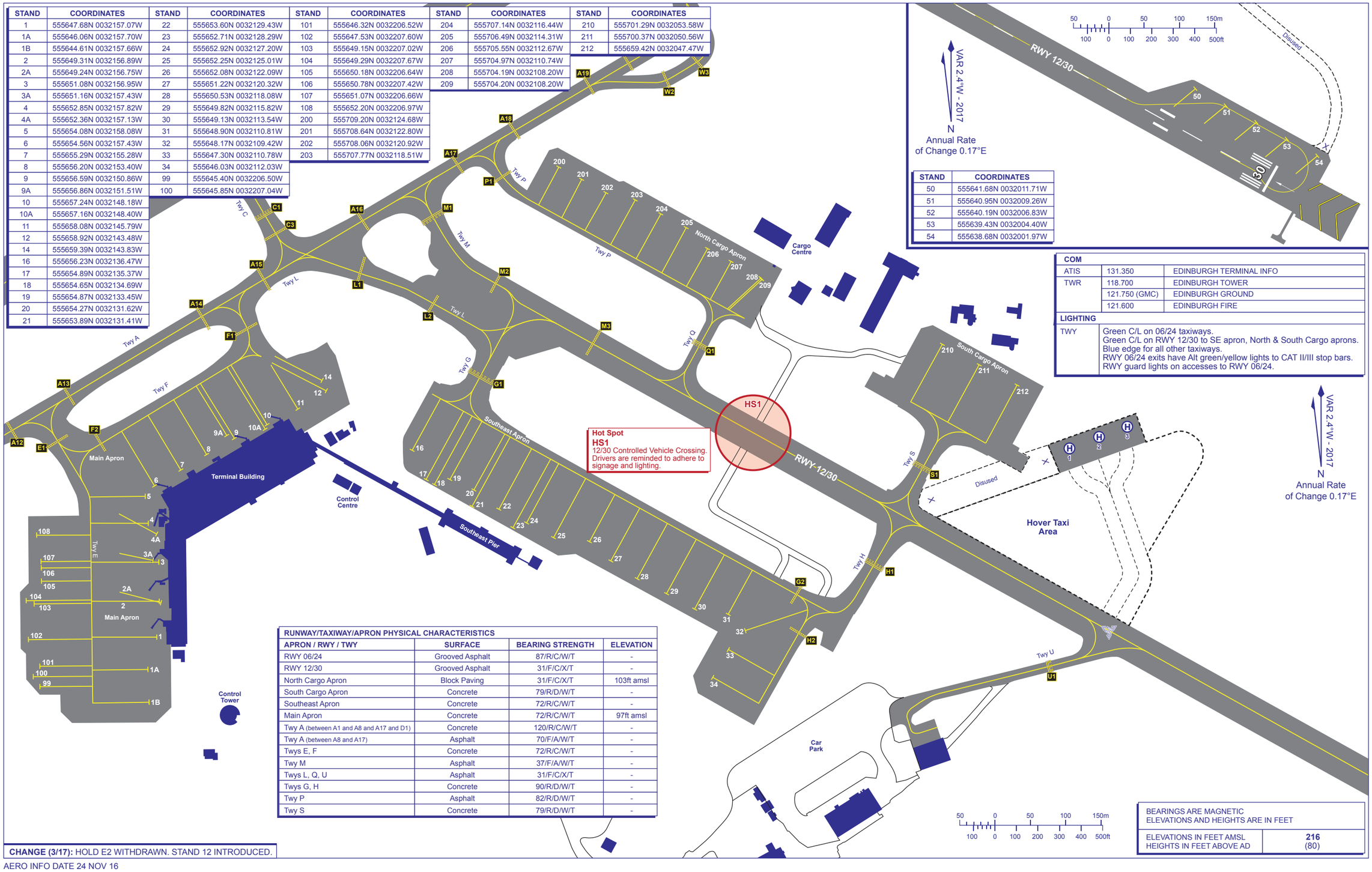
AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING CHART - ICAO

ARP 555700N 0032221W

AD ELEV 136FT

EDINBURGH
EGPH

STAND	COORDINATES	STAND	COORDINATES	STAND	COORDINATES	STAND	COORDINATES	STAND	COORDINATES
1	555647.68N 0032157.07W	22	555653.60N 0032129.43W	101	555646.32N 0032206.52W	204	555707.14N 0032116.44W	210	555701.29N 0032053.58W
1A	555646.06N 0032157.70W	23	555652.71N 0032128.29W	102	555647.53N 0032207.60W	205	555706.49N 0032114.31W	211	555700.37N 0032050.56W
1B	555644.61N 0032157.66W	24	555652.92N 0032127.20W	103	555649.15N 0032207.02W	206	555705.55N 0032112.67W	212	555659.42N 0032047.47W
2	555649.31N 0032156.89W	25	555652.25N 0032125.01W	104	555649.29N 0032207.67W	207	555704.97N 0032110.74W		
2A	555649.24N 0032156.75W	26	555652.08N 0032122.09W	105	555650.18N 0032206.64W	208	555704.19N 0032108.20W		
3	555651.08N 0032156.95W	27	555651.22N 0032120.32W	106	555650.78N 0032207.42W	209	555704.20N 0032108.20W		
3A	555651.16N 0032157.43W	28	555650.53N 0032118.08W	107	555651.07N 0032206.66W				
4	555652.85N 0032157.82W	29	555649.82N 0032115.82W	108	555652.20N 0032206.97W				
4A	555652.36N 0032157.13W	30	555649.13N 0032113.54W	200	555709.20N 0032124.68W				
5	555654.08N 0032158.08W	31	555648.90N 0032110.81W	201	555708.64N 0032122.80W				
6	555654.56N 0032157.43W	32	555648.17N 0032109.42W	202	555708.06N 0032120.92W				
7	555655.29N 0032155.28W	33	555647.30N 0032110.78W	203	555707.77N 0032118.51W				
8	555656.20N 0032153.40W	34	555646.03N 0032112.03W						
9	555656.59N 0032150.86W	99	555645.40N 0032206.50W						
9A	555656.86N 0032151.51W	100	555645.85N 0032207.04W						
10	555657.24N 0032148.18W								
10A	555657.16N 0032148.40W								
11	555658.08N 0032145.79W								
12	555658.92N 0032143.48W								
14	555659.39N 0032143.83W								
16	555656.23N 0032136.47W								
17	555654.89N 0032135.37W								
18	555654.65N 0032134.69W								
19	555654.87N 0032133.45W								
20	555654.27N 0032131.62W								
21	555653.89N 0032131.41W								



STAND	COORDINATES
50	555641.68N 0032011.71W
51	555640.95N 0032009.26W
52	555640.19N 0032006.83W
53	555639.43N 0032004.40W
54	555638.68N 0032001.97W

COM		
ATIS	131.350	EDINBURGH TERMINAL INFO
TWR	118.700	EDINBURGH TOWER
	121.750 (GMC)	EDINBURGH GROUND
	121.600	EDINBURGH FIRE

LIGHTING	
TWY	Green C/L on 06/24 taxiways. Green C/L on RWY 12/30 to SE apron, North & South Cargo aprons. Blue edge for all other taxiways. RWY 06/24 exits have Alt green/yellow lights to CAT II/III stop bars. RWY guard lights on accesses to RWY 06/24.

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 06/24	Grooved Asphalt	87/R/C/W/T	-
RWY 12/30	Grooved Asphalt	31/F/C/X/T	-
North Cargo Apron	Block Paving	31/F/C/X/T	103ft amsl
South Cargo Apron	Concrete	79/R/D/W/T	-
Southeast Apron	Concrete	72/R/C/W/T	-
Main Apron	Concrete	72/R/C/W/T	97ft amsl
Twy A (between A1 and A8 and A17 and D1)	Concrete	120/R/C/W/T	-
Twy A (between A8 and A17)	Asphalt	70/F/A/W/T	-
Twys E, F	Concrete	72/R/C/W/T	-
Twy M	Asphalt	37/F/A/W/T	-
Twys L, Q, U	Asphalt	31/F/C/X/T	-
Twys G, H	Concrete	90/R/D/W/T	-
Twy P	Asphalt	82/R/D/W/T	-
Twy S	Concrete	79/R/D/W/T	-

BEARINGS ARE MAGNETIC
ELEVATIONS AND HEIGHTS ARE IN FEET

ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	**216** (80)

CHANGE (3/17): HOLD E2 WITHDRAWN. STAND 12 INTRODUCED.

AERO INFO DATE 24 NOV 16

AERODROME CHART - ICAO

ARP 512839N 0002741W

AD ELEV 83FT

LONDON HEATHROW
EGLL

VAR 0.6°W - 2017
N
Annual Rate of Change 0.15°E

I-RR 110.30°
512838.88N 0002937.48W

Rwy 09L Thr Elev 79
512839.00N 0002906.05W
(GUND Elevation 151)

Highest Elev in TDZ 81
512839.15N 0002824.83W
(GUND Elevation 151)

HEATHROW
I-AA & I-RR
110.30°
(Ch 40X)
512843.84N 0002732.51W
89'

Highest Elev in TDZ 79
512839.50N 0002641.18W
(GUND Elevation 151)

Rwy 27R Thr Elev 78
512839.63N 0002559.74W
(GUND Elevation 151)

MLS M-HAA Ch 522

I-AA 110.30°
512839.70N 0002537.13W

MLS M-HER Ch 522

RVP North

3902m x 50m

ILS GP

PAPI (3°) MEHT 66

090°M

270°M

PAPI (3°) MEHT 73

Snow Base

Fire East Stn

No 1. Maintenance Area 1

Bealine Base

Terminal 5A

Car Park

Terminal 5B

Terminal 5C

Northern Fuel Farm

Fire Station

Control Tower

Pier 4A

Pier 4

Pier 5

Pier 7

Terminal 1

Terminal 3

Pier 6

Terminal 2A

Terminal 2B

Under Construction

Radar

RVP East

Hot Spots
HS2/HS3
Pilots are to maintain a good lookout at all times and are responsible for wing tip clearance.

MLS M-HRL Ch 514

MLS M-HBB Ch 514

I-BB 109.50°
512753.89N 0002541.69W

RVP West

PAPI (3°) MEHT 67

3660m x 50m

ILS GP

Disused

Southern Fuel Farm

Cargo Apron

Royal Suite

Terminal 4

RVP South

I-LL 109.50°
512753.14N 0002928.28W

Hot Spot
HS1
Pilots are to ensure they have clearance to enter the runway before crossing the holding point.

Rwy 09R Thr Elev 75
512753.25N 0002856.41W
(GUND Elevation 151)

Highest Elev in TDZ 76
512753.39N 0002816.43W
(GUND Elevation 151)

HEATHROW
I-BB & I-LL
109.50°
(Ch 32X)
512749.74N 0002730.90W
92'

Rwy 27L Thr Elev 77
512753.83N 0002602.68W
(GUND Elevation 151)

Highest Elev in TDZ 78
512753.67N 0002651.99W
(GUND Elevation 151)

COM		
ATIS	128.075, 113.750, 115.100 (Arrival) 121.935 (Departure)	HEATHROW INFO
TWR	118.700, 118.500, 124.475	HEATHROW TOWER
	121.975 (GM Planning)	HEATHROW DELIVERY
	121.900, 121.700, 121.850 (GMC)	HEATHROW GROUND
	121.600	HEATHROW FIRE

GUND (Geoid Undulation) =
The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.

BEARINGS ARE MAGNETIC
ELEVATIONS AND HEIGHTS ARE IN FEET

ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	**362** (279)

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS		
APRON / RWY / TWY	**SURFACE**	**BEARING STRENGTH**
RWY 09L/27R	Grooved Asphalt	83/F/A/W/T
RWY 09R/27L	Grooved Asphalt	83/F/A/W/T
Aprons	Concrete	-
Taxiways	Concrete	-

LIGHTING	
THR 09L 09R THR 27L 27R	HI Green with HI W bars. HI Green with HI W bars.
RWY 09L	HI bi-d colour coded C/L. TDZ 900m. HI bi-d white edge (first 300m Red). End lights red.
RWY 27R	HI bi-d colour coded C/L. TDZ 901m. HI bi-d white edge. End lights red.
RWY 09R	HI bi-d colour coded C/L. TDZ 899m. HI bi-d white edge (first 300m Red). End lights red.
RWY 27L	HI bi-d colour coded C/L. TDZ 901m. HI bi-d white edge. End lights red.
TWY	Green C/L and Red stop bars with selective switching on all taxiway routes.

100 0 100 200 300 400 500m
500 0 500 1000 1500ft

CHANGE (3/17): RUNWAY 09R/27L TURN-ON ADJACENT TO HOLD S11 DESIGNATED DISUSED.

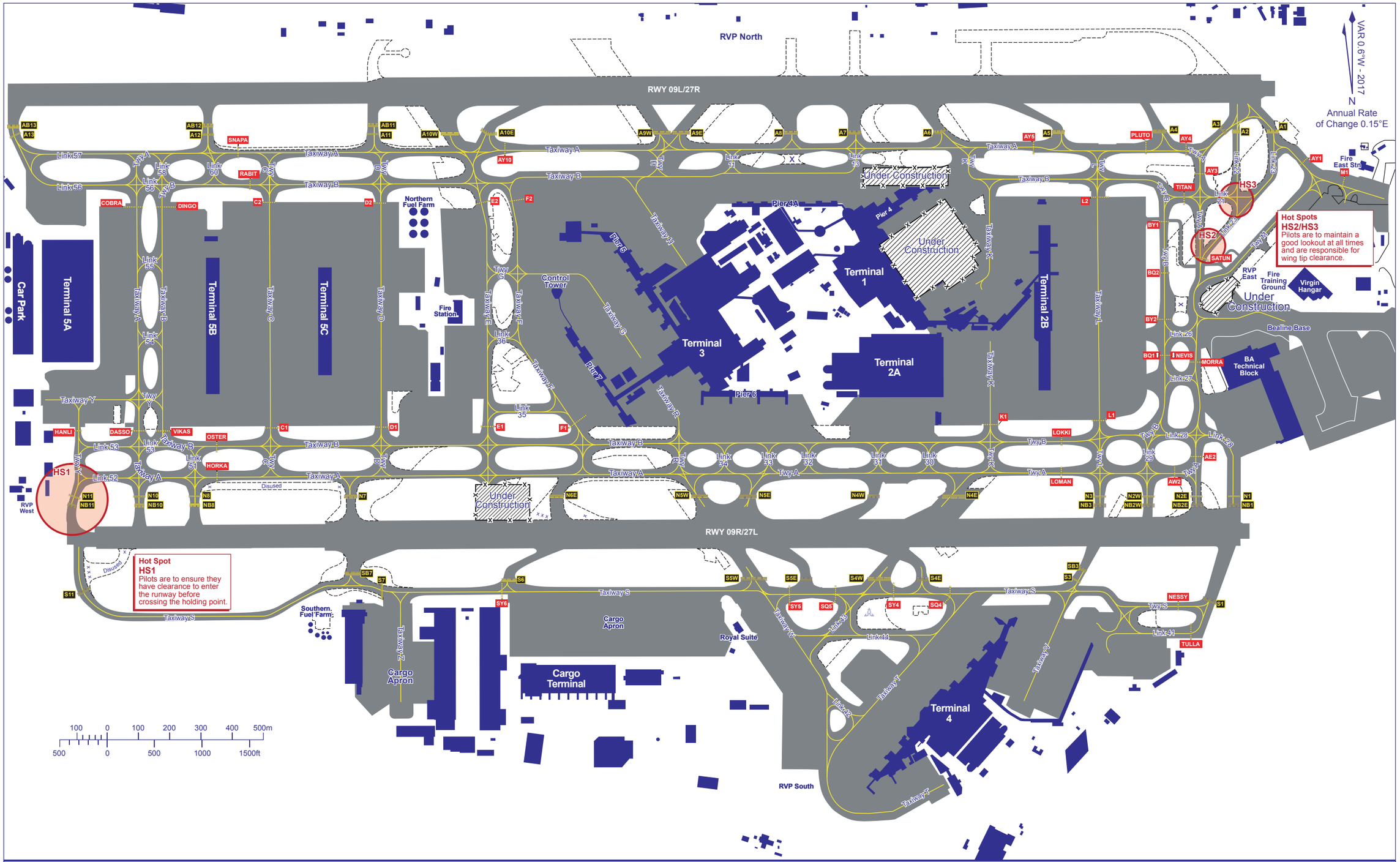
AERO INFO DATE 05 DEC 16

AIRCRAFT GROUND MOVEMENT/ALL TAXIWAYS CHART - ICAO

ARP 512839N 0002741W

AD ELEV 83FT

LONDON HEATHROW
EGLL



CHANGE (3/17): RUNWAY 09R/27L TURN-ON ADJACENT TO HOLD S11 DESIGNATED DISUSED.

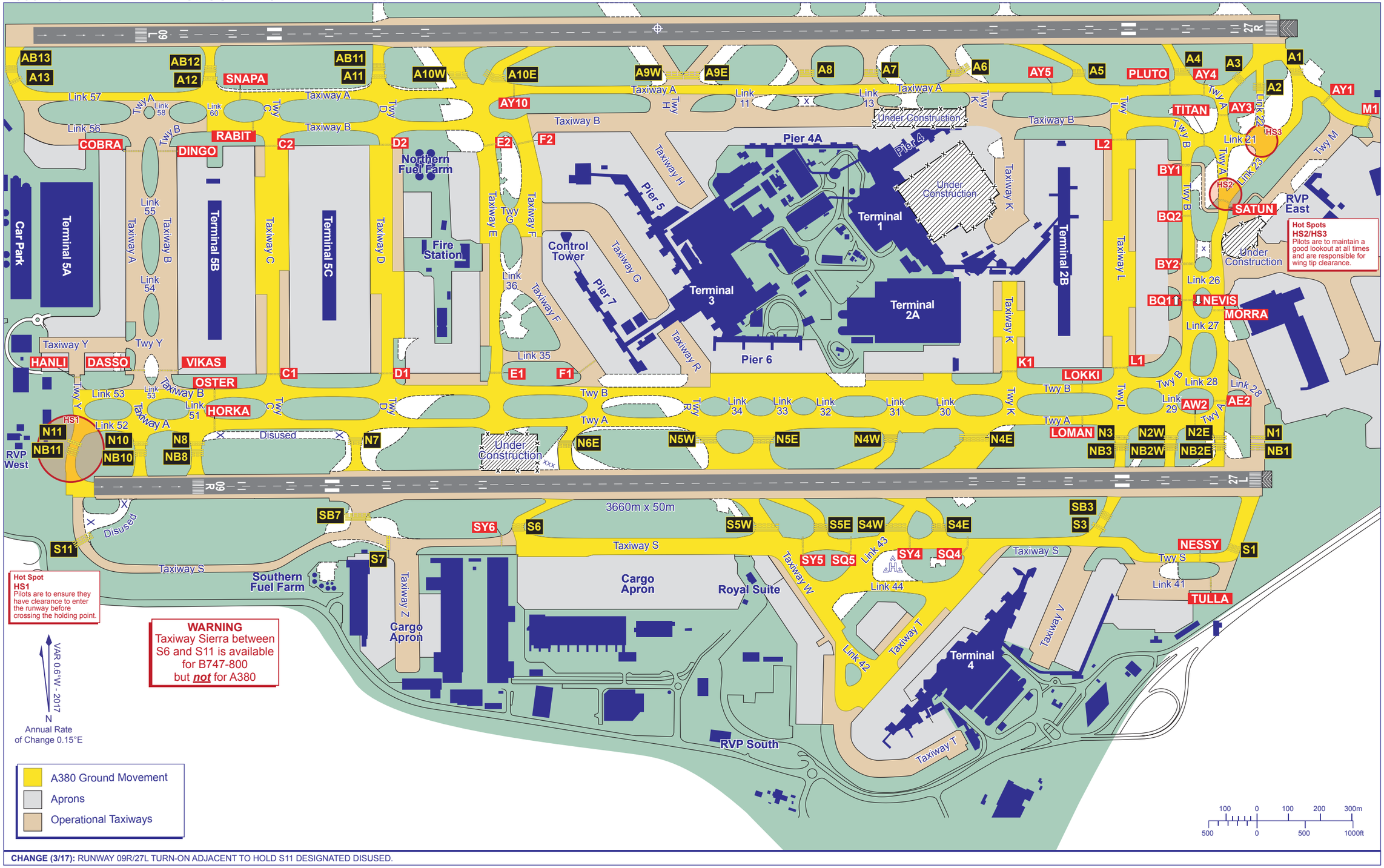
AERO INFO DATE 05 DEC 16

AERODROME CHART
A380/CODE F AIRCRAFT GROUND MOVEMENT - ICAO

ARP 512839N 0002741W

AD ELEV 83FT

LONDON HEATHROW
EGLL



CHANGE (3/17): RUNWAY 09R/27L TURN-ON ADJACENT TO HOLD S11 DESIGNATED DISUSED.

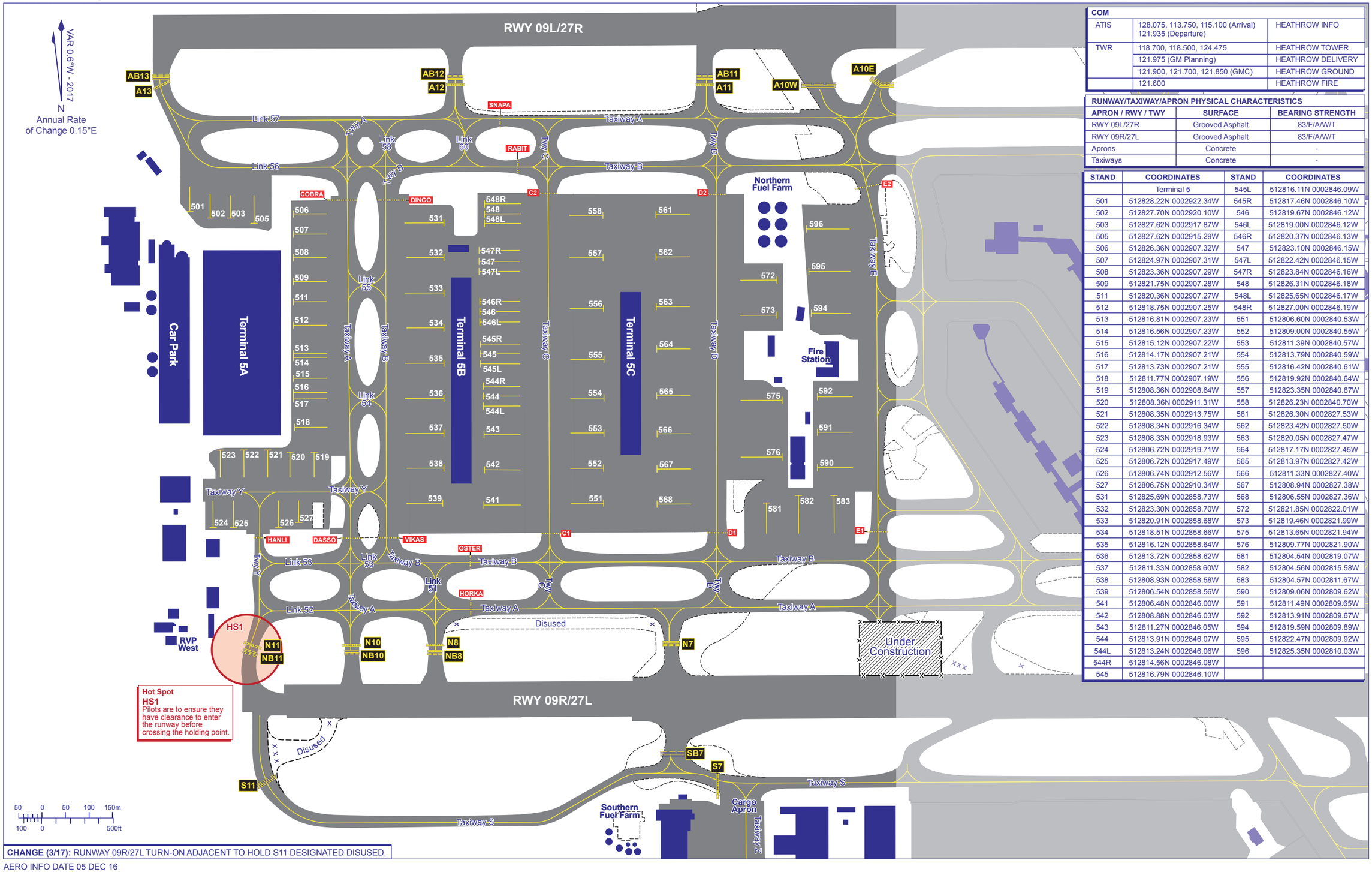
AERO INFO DATE 14 DEC 16

AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING - TERMINAL 5
CHART - ICAO

ARP 512839N 0002741W

AD ELEV 83FT

LONDON HEATHROW
EGLL



COM		
ATIS	128.075, 113.750, 115.100 (Arrival) 121.935 (Departure)	HEATHROW INFO
TWR	118.700, 118.500, 124.475	HEATHROW TOWER
	121.975 (GM Planning)	HEATHROW DELIVERY
	121.900, 121.700, 121.850 (GMC)	HEATHROW GROUND
	121.600	HEATHROW FIRE

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS		
APRON / RWY / TWY	SURFACE	BEARING STRENGTH
RWY 09L/27R	Grooved Asphalt	83/F/A/W/T
RWY 09R/27L	Grooved Asphalt	83/F/A/W/T
Aprons	Concrete	-
Taxiways	Concrete	-

STAND	COORDINATES	STAND	COORDINATES
	Terminal 5	545L	512816.11N 0002846.09W
501	512828.22N 0002922.34W	545R	512817.46N 0002846.10W
502	512827.70N 0002920.10W	546	512819.67N 0002846.12W
503	512827.62N 0002917.87W	546L	512819.00N 0002846.12W
505	512827.62N 0002915.29W	546R	512820.37N 0002846.13W
506	512826.36N 0002907.32W	547	512823.10N 0002846.15W
507	512824.97N 0002907.31W	547L	512822.42N 0002846.15W
508	512823.36N 0002907.29W	547R	512823.84N 0002846.16W
509	512821.75N 0002907.28W	548	512826.31N 0002846.18W
511	512820.36N 0002907.27W	548L	512825.65N 0002846.17W
512	512818.75N 0002907.25W	548R	512827.00N 0002846.19W
513	512816.81N 0002907.23W	551	512806.60N 0002840.53W
514	512816.56N 0002907.23W	552	512809.00N 0002840.55W
515	512815.12N 0002907.22W	553	512811.39N 0002840.57W
516	512814.17N 0002907.21W	554	512813.79N 0002840.59W
517	512813.73N 0002907.21W	555	512816.42N 0002840.61W
518	512811.77N 0002907.19W	556	512819.92N 0002840.64W
519	512808.36N 0002908.64W	557	512823.35N 0002840.67W
520	512808.36N 0002911.31W	558	512826.23N 0002840.70W
521	512808.35N 0002913.75W	561	512826.30N 0002827.53W
522	512808.34N 0002916.34W	562	512823.42N 0002827.50W
523	512808.33N 0002918.93W	563	512820.05N 0002827.47W
524	512806.72N 0002919.71W	564	512817.17N 0002827.45W
525	512806.72N 0002917.49W	565	512813.97N 0002827.42W
526	512806.74N 0002912.56W	566	512811.33N 0002827.40W
527	512806.75N 0002910.34W	567	512808.94N 0002827.38W
531	512825.69N 0002858.73W	568	512806.55N 0002827.36W
532	512823.30N 0002858.70W	572	512821.85N 0002822.01W
533	512820.91N 0002858.68W	573	512819.46N 0002821.99W
534	512818.51N 0002858.66W	575	512813.65N 0002821.94W
535	512816.12N 0002858.64W	576	512809.77N 0002821.90W
536	512813.72N 0002858.62W	581	512804.54N 0002819.07W
537	512811.33N 0002858.60W	582	512804.56N 0002815.58W
538	512808.93N 0002858.58W	583	512804.57N 0002811.67W
539	512806.54N 0002858.56W	590	512809.06N 0002809.62W
541	512806.48N 0002846.00W	591	512811.49N 0002809.65W
542	512808.88N 0002846.03W	592	512813.91N 0002809.67W
543	512811.27N 0002846.05W	594	512819.59N 0002809.89W
544	512813.91N 0002846.07W	595	512822.47N 0002809.92W
544L	512813.24N 0002846.06W	596	512825.35N 0002810.03W
544R	512814.56N 0002846.08W		
545	512816.79N 0002846.10W		

Hot Spot
HS1
Pilots are to ensure they have clearance to enter the runway before crossing the holding point.

CHANGE (3/17): RUNWAY 09R/27L TURN-ON ADJACENT TO HOLD S11 DESIGNATED DISUSED.

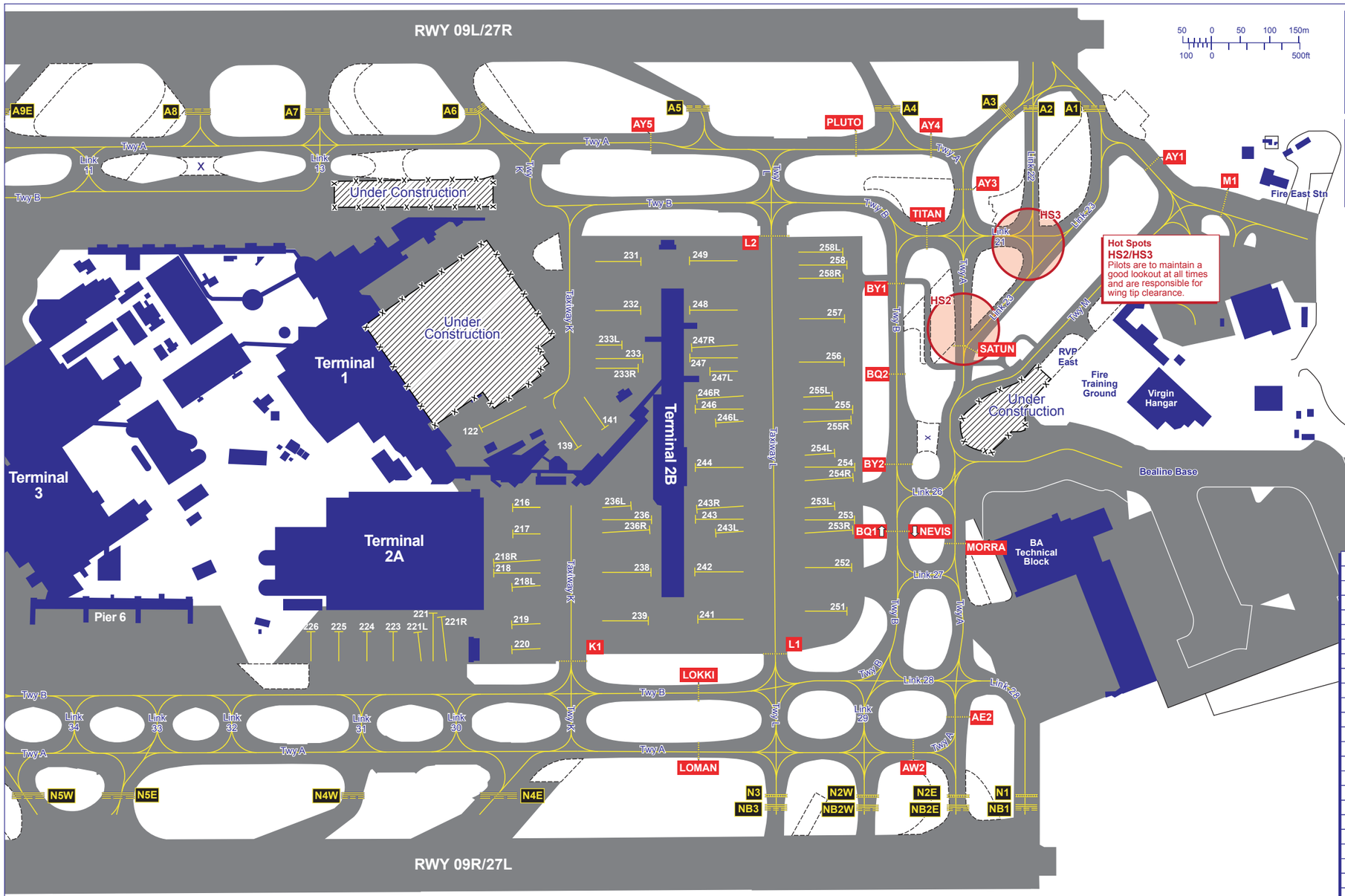
AERO INFO DATE 05 DEC 16

AIRCRAFT GROUND MOVEMENT/PARKING/DOCKING - TERMINAL 1 & 2 CHART - ICAO

ARP 512839N 0002741W

AD ELEV 83FT

LONDON HEATHROW
EGLL



COM		
ATIS	128.075, 113.750, 115.100 (Arrival) 121.935 (Departure)	HEATHROW INFO
TWR	118.700, 118.500, 124.475	HEATHROW TOWER
	121.975 (GM Planning)	HEATHROW DELIVERY
	121.900, 121.700, 121.850 (GMC)	HEATHROW GROUND
	121.600	HEATHROW FIRE

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS		
APRON / RWY / TWY	SURFACE	BEARING STRENGTH
RWY 09L/27R	Grooved Asphalt	83/F/A/W/T
RWY 09R/27L	Grooved Asphalt	83/F/A/W/T
Aprons	Concrete	-
Taxiways	Concrete	-

STAND	COORDINATES	STAND	COORDINATES
	Terminal 1		
122	512818.92N 0002647.53W	241	512807.21N 0002628.72W
139	512818.14N 0002644.55W	242	512809.78N 0002628.74W
141	512819.47N 0002642.43W	243	512812.66N 0002628.76W
		243L	512811.99N 0002628.76W
		243R	512813.38N 0002628.77W
	Terminal 2	244	512815.54N 0002628.79W
216	512813.31N 0002646.75W	246	512818.74N 0002628.81W
217	512811.87N 0002646.74W	246L	512818.07N 0002628.81W
218	512809.72N 0002646.72W	246R	512819.46N 0002628.82W
218L	512809.04N 0002646.71W	247	512821.62N 0002628.84W
218R	512810.43N 0002646.72W	247L	512820.88N 0002628.83W
219	512806.91N 0002646.69W	247R	512822.33N 0002628.84W
220	512805.54N 0002646.68W	248	512824.26N 0002628.86W
221	512804.69N 0002655.73W	249	512826.98N 0002628.88W
221L	512804.69N 0002656.77W	251	512807.64N 0002623.30W
221R	512804.69N 0002654.54W	252	512810.04N 0002623.32W
223	512804.68N 0002659.25W	253	512812.68N 0002623.34W
224	512804.67N 0002701.58W	253L	512813.34N 0002623.34W
225	512804.66N 0002704.07W	253R	512811.95N 0002623.33W
226	512804.65N 0002706.53W	254	512815.55N 0002623.36W
231	512826.94N 0002641.43W	254L	512816.22N 0002623.36W
232	512824.22N 0002641.41W	254R	512814.83N 0002623.35W
233	512821.58N 0002641.39W	255	512819.07N 0002623.39W
233L	512822.32N 0002641.39W	255L	To be surveyed
233R	512821.04N 0002641.38W	255R	To be surveyed
236	512812.62N 0002641.31W	256	512821.40N 0002623.41W
236L	512813.28N 0002641.32W	257	512823.79N 0002623.43W
236R	512811.90N 0002641.31W	258	512826.75N 0002623.45W
238	512809.74N 0002641.29W	258L	512827.46N 0002623.46W
239	512807.10N 0002641.27W	258R	512826.01N 0002623.44W

CHANGE (2/17): TWY BRAVO NORTH OPEN BETWEEN LINKS 11 AND 13. LINK 12 CLOSED.

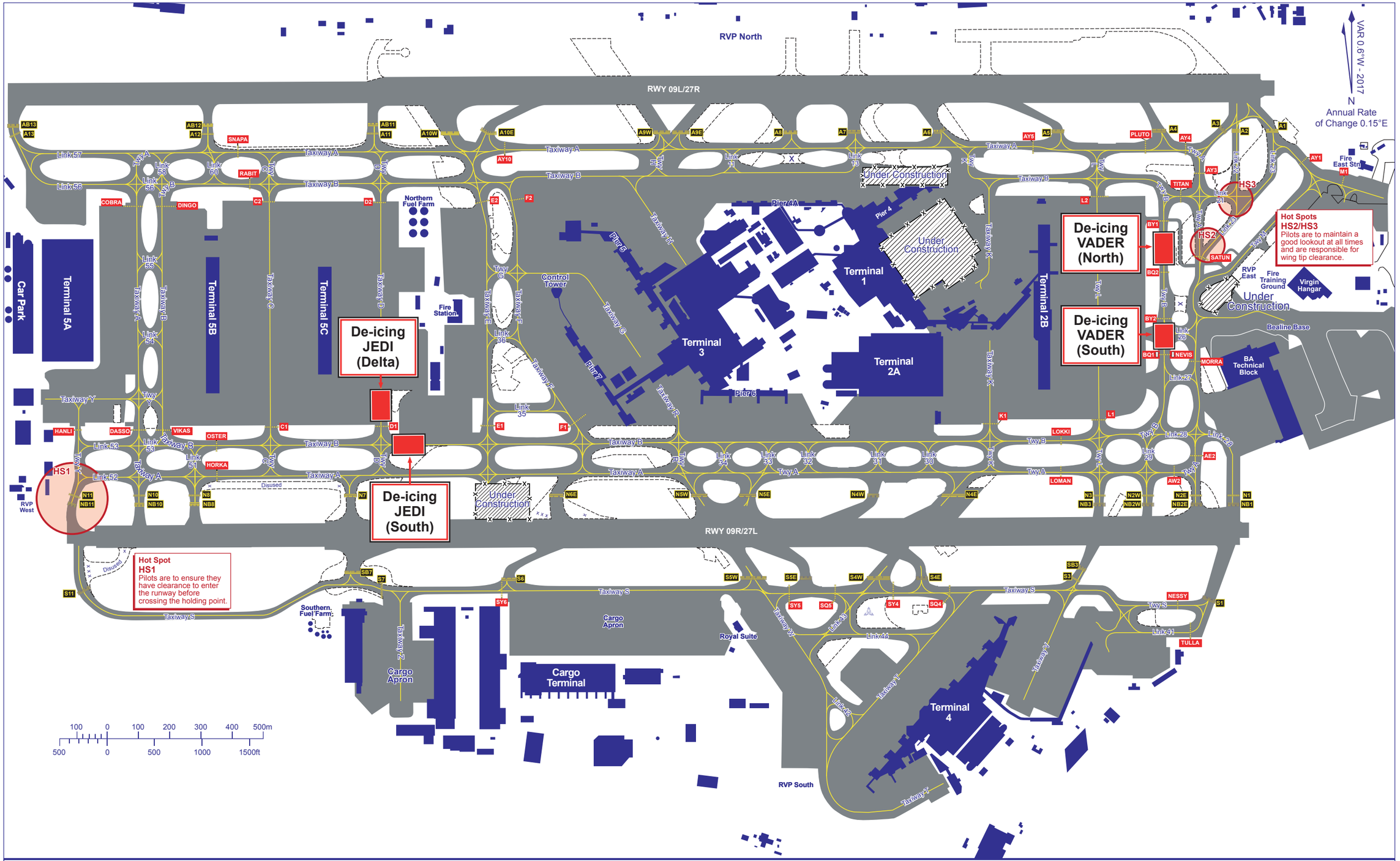
AERO INFO DATE 08 NOV 16

AIRCRAFT GROUND MOVEMENT - REMOTE DE-ICING AREAS LOCATION CHART - ICAO

ARP 512839N 0002741W

AD ELEV 83FT

LONDON HEATHROW
EGLL



CHANGE (3/17): NEW CHART.

AERO INFO DATE 05 DEC 16

AERODROME CHART - ICAO

532114N 0021630W

ELEV 257FT

MANCHESTER
EGCC

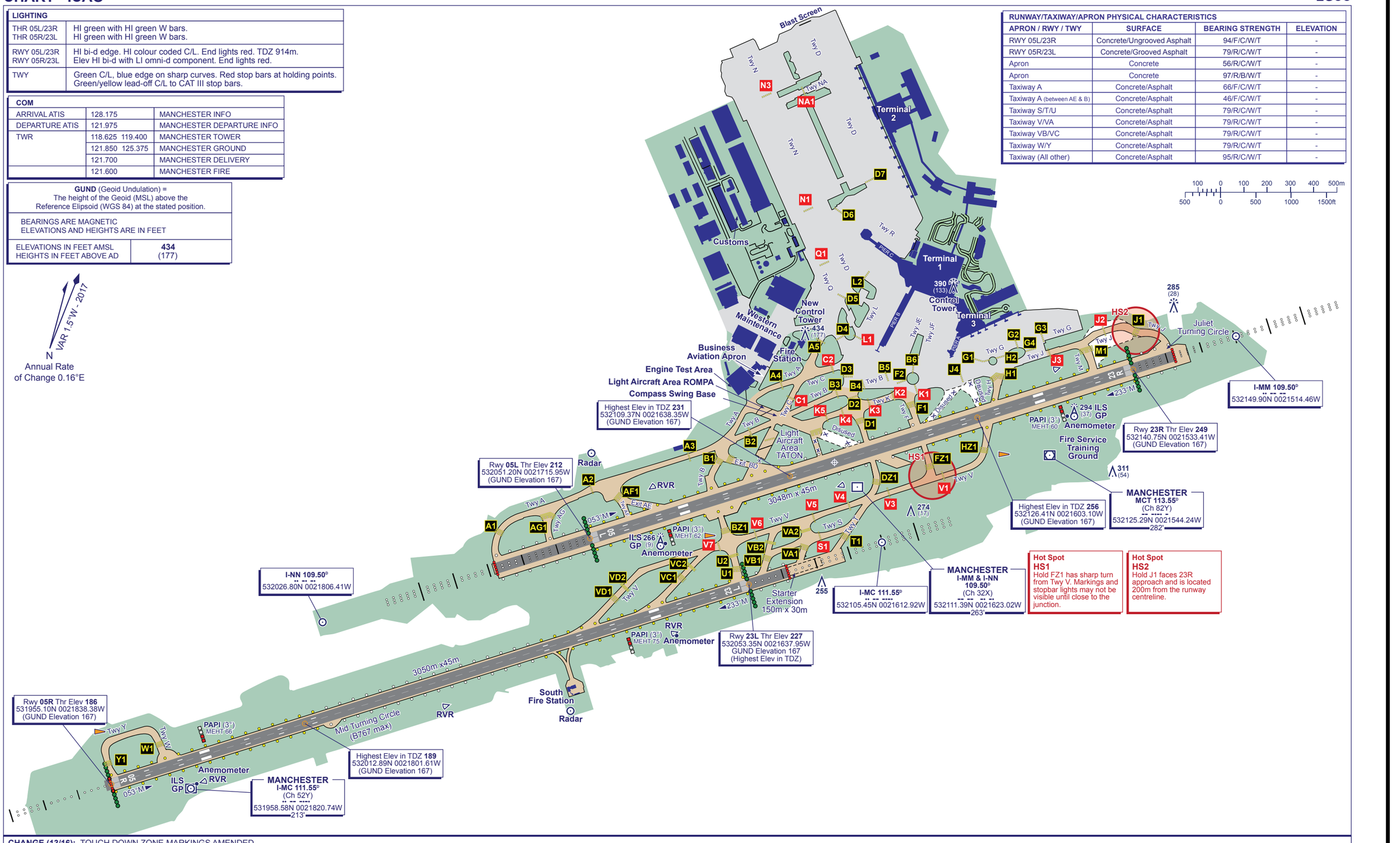
LIGHTING	
THR 05L/23R THR 05R/23L	HI green with HI green W bars. HI green with HI green W bars.
RWY 05L/23R RWY 05R/23L	HI bi-d edge. HI colour coded C/L. End lights red. TDZ 914m. Elev HI bi-d with LI omni-d component. End lights red.
TWY	Green C/L, blue edge on sharp curves. Red stop bars at holding points. Green/yellow lead-off C/L to CAT III stop bars.

COM		
ARRIVAL ATIS	128.175	MANCHESTER INFO
DEPARTURE ATIS	121.975	MANCHESTER DEPARTURE INFO
TWR	118.625 119.400	MANCHESTER TOWER
	121.850 125.375	MANCHESTER GROUND
	121.700	MANCHESTER DELIVERY
	121.600	MANCHESTER FIRE

GUND (Geoid Undulation) = The height of the Geoid (MSL) above the Reference Elipsoid (WGS 84) at the stated position.	
BEARINGS ARE MAGNETIC ELEVATIONS AND HEIGHTS ARE IN FEET	
ELEVATIONS IN FEET AMSL HEIGHTS IN FEET ABOVE AD	**434** (177)

N
VAR 1.5°W - 2017
Annual Rate
of Change 0.16°E

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS			
APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 05L/23R	Concrete/Ungrooved Asphalt	94/F/C/W/T	-
RWY 05R/23L	Concrete/Grooved Asphalt	79/R/C/W/T	-
Apron	Concrete	56/R/C/W/T	-
Apron	Concrete	97/R/B/W/T	-
Taxiway A	Concrete/Asphalt	66/F/C/W/T	-
Taxiway A (between AE & B)	Concrete/Asphalt	46/F/C/W/T	-
Taxiway S/T/U	Concrete/Asphalt	79/R/C/W/T	-
Taxiway V/VA	Concrete/Asphalt	79/R/C/W/T	-
Taxiway VB/VC	Concrete/Asphalt	79/R/C/W/T	-
Taxiway W/Y	Concrete/Asphalt	79/R/C/W/T	-
Taxiway (All other)	Concrete/Asphalt	95/R/C/W/T	-



CHANGE (13/16): TOUCH DOWN ZONE MARKINGS AMENDED.

AERO INFO DATE 27 SEP 16

AIRCRAFT PARKING/DOCKING CHART - ICAO

532114N 0021630W

ELEV 257FT

MANCHESTER
EGCC



STAND	COORDINATE	STAND	COORDINATE	STAND	COORDINATE	STAND	COORDINATE	STAND	COORDINATE	STAND	COORDINATE
	Terminal 1	28	532145.90N 0021642.40W	61	532133.60N 0021649.22W	69R	532149.54N 0021709.75W	83L	532155.56N 0021703.26W	208L	532157.33N 0021646.63W
1	532138.99N 0021626.70W	29	532143.47N 0021643.17W	61R	532134.75N 0021648.16W	70L	532150.47N 0021711.32W	83	532155.23N 0021702.58W	208	532157.35N 0021645.75W
2	532138.77N 0021629.89W	31	532144.58N 0021644.84W	62	532136.77N 0021648.20W	70	532150.94N 0021712.11W	83R	532154.63N 0021701.69W	209	532158.18N 0021648.72W
4	532137.10N 0021629.72W	32	532145.73N 0021643.95W	62L	532136.28N 0021646.83W	70R	532151.40N 0021712.90W	84L	532157.41N 0021706.38W	210L	532159.53N 0021650.00W
5	532136.63N 0021626.85W		Terminal 3	62R	532137.20N 0021647.21W	71L	532152.34N 0021714.47W	84	532157.09N 0021705.73W	210	532159.42N 0021649.32W
6	532135.22N 0021629.54W	41	532137.93N 0021616.22W	63	532137.91N 0021650.29W	71	532152.81N 0021715.26W	84R	532156.48N 0021704.81W	211	532200.27N 0021652.26W
7	532135.40N 0021627.33W	42	532136.08N 0021615.75W	63L	532137.55N 0021649.49W	71R	532153.27N 0021716.05W	85L	532201.24N 0021713.93W	212L	532201.61N 0021653.55W
8	532133.47N 0021630.04W	43	532134.20N 0021615.73W	63R	532138.52N 0021650.73W	72L	532154.02N 0021718.57W	85	532200.74N 0021712.65W	212	532201.56N 0021652.89W
9	532133.77N 0021627.44W	44L	532133.04N 0021615.99W	64	532139.64N 0021653.14W	72	532154.57N 0021719.71W	85R	532200.27N 0021712.32W	213	532202.37N 0021655.79W
10	532131.73N 0021630.16W	44	532133.03N 0021615.00W	64L	532139.54N 0021651.90W	72R	532154.98N 0021720.19W	86L	532203.24N 0021717.31W	214L	532203.72N 0021657.06W
11	532132.25N 0021627.50W	44R	532132.11N 0021615.44W	64R	532140.23N 0021653.61W	73L	532155.94N 0021721.82W	86	532202.67N 0021715.88W	214	532203.67N 0021656.41W
12	532129.39N 0021629.43W	47	532132.53N 0021613.60W	65R	532142.55N 0021656.23W	73	532156.44N 0021723.08W	86R	532202.24N 0021715.62W	215	532204.89N 0021658.84W
12L	532129.75N 0021630.62W	48	532133.42N 0021612.63W	65	532141.60N 0021655.60W	73R	532156.91N 0021723.44W	100	532136.02N 0021637.49W		Terminal 2 Remote
12R	532128.91N 0021629.21W	49	532135.40N 0021612.42W	65L	532141.70N 0021654.77W	74L	532157.87N 0021725.05W	101	532132.54N 0021638.00W	216	To be surveyed
15	532130.37N 0021627.27W	50	532136.79N 0021610.09W	66L	532143.02N 0021658.70W	74	532158.38N 0021726.30W		Terminal 2	216R	532206.30N 0021701.07W
16	532139.29N 0021622.99W	51	532137.82N 0021608.49W	66	532143.39N 0021659.64W	74R	532158.83N 0021726.67W	201	532150.51N 0021634.67W	217	532207.47N 0021703.45W
17	532139.48N 0021620.95W	52	532138.67N 0021607.15W	66R	532143.93N 0021700.31W	80L	532150.16N 0021654.14W	202L	532151.11N 0021636.29W	218	532208.68N 0021704.95W
18	532139.25N 0021618.00W	53	532139.64N 0021605.53W	67L	532144.98N 0021701.69W	80	532149.85N 0021653.02W	202	532151.25N 0021635.03W	219	532210.11N 0021707.36W
21	532140.68N 0021630.84W	54	532140.75N 0021603.75W	67	532145.34N 0021702.67W	80R	532149.16N 0021652.46W	203	532152.17N 0021637.67W	231	532150.58N 0021650.74W
22	532143.85N 0021634.46W	55	532142.16N 0021601.11W	67R	532145.80N 0021703.45W	81L	532151.89N 0021657.07W	204L	532153.21N 0021639.82W	233	532152.54N 0021654.05W
23	532142.12N 0021634.04W	56	532141.75N 0021558.90W	68L	532146.85N 0021704.84W	81	532151.49N 0021656.29W	204	532153.10N 0021638.77W	235	532153.66N 0021655.92W
24	532144.49N 0021637.14W	57	532140.98N 0021557.50W	68	532147.07N 0021706.03W	81R	532151.07N 0021655.68W	205	532153.99N 0021641.66W	237	532154.82N 0021657.88W
25	532142.48N 0021636.90W	58	532140.16N 0021556.67W	68R	532147.67N 0021706.60W	82L	532153.70N 0021700.13W	206L	532155.23N 0021643.10W	239	532156.23N 0021700.26W
26	532144.74N 0021639.99W		West Apron	69L	532148.72N 0021707.99W	82	532153.38N 0021659.40W	206	532155.23N 0021642.25W	241	532157.57N 0021702.00W
27	532142.83N 0021638.80W	61L	532132.33N 0021648.46W	69	532149.07N 0021708.96W	82R	532152.76N 0021658.55W	207	532156.12N 0021645.13W	243	532158.53N 0021703.61W
										247	532203.37N 0021713.02W
										249	532204.72N 0021714.85W

Hot Spot
HS2
Hold J1 faces 23R approach and is located 200m from the runway centreline.

Hot Spot
HS1
Hold FZ1 has sharp turn from Twy V. Markings and stopbar lights may not be visible until close to the junction.

VAR 1.5°W - 2017
N
Annual Rate of Change 0.16°E

COM		
ARRIVAL ATIS	128.175	MANCHESTER INFO
DEPARTURE ATIS	121.975	MANCHESTER DEPARTURE INFO
TWR	118.625 119.400	MANCHESTER TOWER
	121.850 125.375	MANCHESTER GROUND
	121.700	MANCHESTER DELIVERY
	121.600	MANCHESTER FIRE

RUNWAY/TAXIWAY/APRON PHYSICAL CHARACTERISTICS

APRON / RWY / TWY	SURFACE	BEARING STRENGTH	ELEVATION
RWY 05L/23R	Concrete/Ungrooved Asphalt	94/F/C/W/T	-
RWY 05R/23L	Concrete/Grooved Asphalt	79/R/C/W/T	-
Apron	Concrete	56/R/C/W/T	-
Apron	Concrete	97/R/B/W/T	-
Taxiway A	Concrete/Asphalt	66/F/C/W/T	-
Taxiway A (between AE & B)	Concrete/Asphalt	46/F/C/W/T	-
Taxiway S/T/U	Concrete/Asphalt	79/R/C/W/T	-
Taxiway V/VA	Concrete/Asphalt	79/R/C/W/T	-
Taxiway VB/VC	Concrete/Asphalt	79/R/C/W/T	-
Taxiway W/Y	Concrete/Asphalt	79/R/C/W/T	-
Taxiway (All other)	Concrete/Asphalt	95/R/C/W/T	-

CHANGE (3/17): STAND COORDINATES 50/80L/80R/81L/81R/218/219/247/249 ADDED. STANDS 82L/82R/83L/83R/84L/84R/216R/217 AMENDED.

AERO INFO DATE 07 DEC 16

CONTROL ZONE AND CONTROL AREA CHART - ENTRY/EXIT LANES AND VRPs



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CHART OF UNITED KINGDOM ATS AIRSPACE CLASSIFICATIONS - SFC-FL195

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Chart compiled and drawn on CHARTS
AERO INFO DATE 21 NOV 19

UK ATS AIRSPACE CLASSIFICATIONS

Civil Aviation Authority

	A	C	D	E	G
IFR ATC SEPARATION PROVIDED	IFR ⟷ IFR	IFR ⟷ IFR; VFR ⟷ SVFR‡	IFR ⟷ IFR; IFR ⟷ SVFR‡	IFR ⟷ IFR	UK FLIGHT INFORMATION SERVICES
IFR TRAFFIC INFORMATION PROVIDED		IFR ⟷ ATC ⟷ VFR Air traffic avoidance advice O/R.	IFR ⟷ ATC ⟷ VFR Air traffic avoidance advice O/R.	IFR ⟷ ATC ⟷ VFR (when practicable)	Procedural, Deconfliction Traffic, Basic
IFR SPEED LIMITATION	Not applicable (unless notified for ATC purposes)	Not applicable (unless notified for ATC purposes)	below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS
IFR RADIO					Not required
IFR ATC CLEARANCE REQUIRED?	YES	YES	YES	YES	NO
VFR ATC SEPARATION PROVIDED	VFR FLIGHT NOT PERMITTED	VFR (SVFR)‡ ⟷ IFR (SVFR)‡	SVFR‡ ⟷ IFR (SVFR)‡	UK FLIGHT INFORMATION SERVICES	UK FLIGHT INFORMATION SERVICES
VFR TRAFFIC INFORMATION PROVIDED		VFR ⟷ ATC ⟷ VFR	VFR ⟷ ATC ⟷ IFR (VFR)	Traffic, Basic	Traffic, Basic
VFR VMC MINIMA	The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.	8KM 1500M FL100 1000FT 5KM 1500M 1000FT OR 3000FT AMSL 140KT or less 5KM clear of cloud † in sight	8KM 1500M FL100 1000FT 5KM 1500M 1000FT OR 3000FT AMSL 140KT or less 5KM clear of cloud † in sight	8KM 1500M FL100 1000FT 5KM 1500M 1000FT OR 3000FT AMSL 140KT or less 5KM clear of cloud † in sight	8KM 1500M FL100 1000FT 5KM* 1500M 1000FT OR 3000FT AMSL 5KM* clear of cloud in sight
VFR SPEED LIMITATION		below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS
VFR RADIO				Not required	Not required
VFR ATC CLEARANCE REQUIRED?		YES	YES	NO	NO

250 KIAS Not applicable to military aircraft

† Helicopters may fly at or below 3000FT AMSL clear of cloud with the surface in sight and a flight visibility of at least 1500 metres.
* Aircraft (except helicopters) at 140KIAS or less: clear of cloud with the surface in sight in a flight visibility of at least 1500 metres. Helicopters at a speed which, having regard to the visibility is reasonable: clear of cloud with the surface in sight in a flight visibility of at least 1500 metres.
‡ SVFR in CTR only.
NOTE: Air Navigation Order 2009 Schedule 7 UK licence privileges apply.

00900W 00800W 00700W 00600W 00500W 00400W 00300W 00200W 00100W 00000 00100E 00200E 00300E 00400E

6100N 6000N 5900N 5800N 5700N 5600N 5500N 5400N 5300N 5200N 5100N 5000N 4900N

CHANGE (5/17): NOTE 21 UN866 REPLACED WITH N866.

CHART OF UNITED KINGDOM ATS AIRSPACE CLASSIFICATIONS - FL195-FL245

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Published by National Air Traffic Services 2017
Chart compiled and drawn by NATS
AERO INFO DATE 14 DEC 16

UK ATS AIRSPACE CLASSIFICATIONS

Civil Aviation Authority

	A	C	D	E	G
IFR ATC SEPARATION PROVIDED	IFR ⟷ IFR	IFR ⟷ IFR; VFR ⟷ SVFR‡	IFR ⟷ IFR; IFR ⟷ SVFR‡	IFR ⟷ IFR	UK FLIGHT INFORMATION SERVICES
IFR TRAFFIC INFORMATION PROVIDED		IFR ⟷ ATC; VFR — Air traffic avoidance advice O/R.	IFR ⟷ ATC; VFR — Air traffic avoidance advice O/R.	IFR ⟷ ATC; VFR — (when practicable)	Procedural, Deconfliction Traffic, Basic
IFR SPEED LIMITATION	Not applicable (unless notified for ATC purposes)	Not applicable (unless notified for ATC purposes)	below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS
IFR RADIO					*Not required*
IFR ATC CLEARANCE REQUIRED?	YES	YES	YES	YES	NO
VFR ATC SEPARATION PROVIDED	VFR FLIGHT NOT PERMITTED	VFR/SVFR‡ ⟷ IFR/SVFR‡	SVFR‡ ⟷ IFR/SVFR‡	UK FLIGHT INFORMATION SERVICES	UK FLIGHT INFORMATION SERVICES
VFR TRAFFIC INFORMATION PROVIDED		VFR — ATC	SVFR‡ — ATC; IFR/VFR	Traffic, Basic	Traffic, Basic
VFR VMC MINIMA	The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.	8KM – 1500M – 1000FT – FL100 – 5KM – 1500M – 1000FT; OR 3000FT AMSL – 5KM – clear of cloud † – in sight	8KM – 1500M – 1000FT – FL100 – 5KM – 1500M – 1000FT; OR 3000FT AMSL – 5KM – clear of cloud † – in sight	8KM – 1500M – 1000FT – FL100 – 5KM – 1500M – 1000FT; OR 3000FT AMSL – 5KM – clear of cloud † – in sight	8KM – 1500M – 1000FT – FL100 – 5KM* – 1500M – 1000FT; OR 3000FT AMSL – 5KM* – clear of cloud – in sight
VFR SPEED LIMITATION	below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS	below FL100 250 KIAS
VFR RADIO				*Not required*	*Not required*
VFR ATC CLEARANCE REQUIRED?	YES	YES	YES	NO	NO

250 KIAS Not applicable to military aircraft

† Helicopters may fly at or below 3000FT AMSL clear of cloud with the surface in sight and a flight visibility of at least 1500 metres.
* Aircraft (except helicopters) at 140KIAS or less: clear of cloud with the surface in sight in a flight visibility of at least 1500 metres. Helicopters at a speed which, having regard to the visibility is reasonable: clear of cloud with the surface in sight in a flight visibility of at least 1500 metres.
‡ SVFR in CTR only.
NOTE: Air Navigation Order 2009 Schedule 7 UK licence privileges apply.

00900W 00800W 00700W 00600W 00500W 00400W 00300W 00200W 00100W 00000 00100E 00200E 00300E 00400E 00500E 00600E

6100N 6000N 5900N 5800N 5700N 5600N 5500N 5400N 5300N 5200N 5100N 5000N 4900N

SCOTTISH FIR

TRA 0088 FL195-FL245 (See Note 14)

TRA 008A FL195-FL245 (See Note 13)
TRA 008C FL195-FL245 (See Note 13)
TRA 008C FL195-FL245 (See Note 14)
TRA 008A FL195-FL245 (See Note 14)
TRA 007B FL195-FL245 (See Note 14)
TRA 007A FL195-FL245 (See Note 14)
TRA 007B FL195-FL245 (See Note 14)
TRA 007B FL195-FL245 (See Note 14)
TRA 005 FL195-FL245 (See Note 14)
TRA 004 FL195-FL245 (See Note 14)
TRA 002 FL195-FL245 (See Note 14)
TRA 001 FL195-FL245 (See Note 14)
TRA 006 FL195-FL245 (See Note 14)
TRA 003 FL195-FL245 (See Note 14)

Scottish Upper Area (North) FL240-FL270 (When notified)
Scottish Lower Area North FL195-FL240 (When notified)
Scottish Upper Area (South) FL240-UNL (When notified)
Northumbria FL195-FL240 (When notified)
Scottish Lower Area (South) FL195-FL240 (When notified)
Scottish Area FL195-FL240 (When notified)
Northumbria North Area FL195-FL240 (When notified)
Northumbria South Area FL195-FL240 (When notified)
Northern Ireland Area FL195-FL240 (When notified)
Yorkshire Upper Area (North) FL240-UNL (When notified)
Yorkshire Lower Area (North) FL195-FL240 (When notified)
Yorkshire Lower Area (South) FL195-FL240 (When notified)
Welsh Upper Area A FL240-UNL (When notified)
Welsh Lower Area A FL195-FL240 (When notified)
Welsh Upper Area B FL240-UNL (When notified)
Welsh Lower Area B FL195-FL240 (When notified)
Welsh Upper Area C FL240-UNL (When notified)
Welsh Lower Area C FL195-FL240 (When notified)
Welsh Upper Area D FL240-UNL (When notified)
Welsh Lower Area D FL195-FL240 (When notified)
Welsh Upper Area E FL240-FL270 (When notified)
Welsh Lower Area E FL195-FL240 (When notified)
Welsh Upper Area G FL240-FL270 (When notified)
Welsh Lower Area G FL195-FL240 (When notified)
Welsh Area H FL195-FL240 (When notified)
Clyde Upper Area FL240-UNL (When notified)
Clyde Lower Area FL195-FL240 (When notified)
Lowther Upper Area FL240-UNL (When notified)
Lowther Lower Area FL195-FL240 (When notified)
Solent Upper Area FL240-UNL (When notified)
Solent Lower Area FL195-FL240 (When notified)

Note 1 N864
Between ASNUD and Talla VOR (TLA) established from 0001 on Saturday to 2359 on Sunday as an alternative route when airway P600, to the south of Perth VOR (PTH), has been withdrawn from service. Aircraft operating on this route must not flight plan to use this route at any time during the above hours. At certain times, notably when the airspace is required for military use, this weekend route will not be available. In these circumstances, all of AWY P600 will be retained for use.

Note 2 L981
That area of controlled airspace (POMPI Triangle) bounded by great circle lines joining: 504420N 0004422W - 503700N 0000030W - 503700N 0010211W - 504620N 0009422W is part of L980.

Note 3 Y124
CDR Category One (CDR 1) Winter: 1800 to 0800 Monday - Friday and 1700 Friday (or the day preceding a Public Holiday) to 0900 Monday (or the day following a Public Holiday (1 hour earlier in summer).
CDR Category Two (CDR 2) Winter: 0800 to 1800 Monday - Thursday and 0800 to 1700 Friday.
CDR Category Two (CDR 2) Summer: 0700 to 1700 Monday - Friday.

Note 4 L18
CDR Category One (CDR 1)
Monday-Thursday 1809-0900 (winter), 1700-0800 (summer) and from 1700 (winter and 1600 (summer) Friday (or the day preceding a public holiday to 0900 (winter), 0800 (summer) on Monday or the day following the holiday.
CDR Category Two and Three (CDR 2 and 3):
At all other times.
Activation of the North Wales MTA Southern Area beyond the published hours is subject to prior coordination with Scottish Control (Prestwick). When L18 is active, these periods of activity L18 west of LIZARD6 will not be available. Non-availability of L18 will be notified to GAT by London Control (Swanwick) and traffic will be re-routed via AWYs L9 and M77.

Note 5 N50
CDR Category One and Three (CDR 1 and 3)
1900 Friday-0800 Monday (winter).
1500 Friday-0700 Monday (summer).

Note 6 Y91
CDR Category One (CDR 1)
1600 Friday-0800 Monday (winter)
1500 Friday-0700 Monday (summer).

Note 7 N180
CDR Category One and Three (CDR 1 and 3) H24.
Availability subject to SWM24 activity.

Note 8 N601
Part or all of this airspace may not be available when activity associated with D510, Spadeadam requires access to the area. Non-availability of airspace will be notified to GAT by Scottish Control (Prestwick).

Note 9 N601
Between the hours of 1700 to 0900 each day Monday - Friday and 1700 Friday to 0900 Monday + public holiday (1 hour earlier in summer) (see GEN 2.1-2, para 8 for public holidays) two areas of controlled airspace, Class C above FL195, are part of N601:
Area 1 bounded by the following points:
551150N 0020427W-551240N 0035320W-551241N 0023052W-545912N 0022555W-545910N 0024159W-551730N 0022427W.
Area 2 bounded by great circle lines joining:
545912N 0022555W-541500N 0021021W-544628N 0022620W-545910N 0024159W-545912N 0022555W.
Part or all of this area of airspace may not be available when MoD requires access to the area. Non availability will be notified to GAT by Scottish Control (Prestwick).

Note 10 N864
ASNUD to Berry Head VOR (BHD) available only during:
1600 Friday - 0800 Monday (winter).
1500 Friday - 0700 Monday (summer).

Note 11 N864
Between Dean Cross DME (DCS) and Wallasey VOR (WAL). N864 is only available from 1900 on Fridays or the day preceding a public holiday until 0800 on Mondays, or the day following a public holiday winter (summer 1 hour earlier). For limited periods during these times, this part of airway N864 may be required for use by the MoD. These activities will be promulgated by Scottish Control (Prestwick) and the alternative route will be as directed by ATC.

Note 12 P18
CDR Category One (CDR 1) between Aberdeen VOR (ADN) and NATEB.
CDR 1: Tuesday-Friday 0530-0900 and from 1630 on Friday or the day preceding a public holiday to 1000 Monday or the day following a public holiday (1 hour earlier in summer). Additionally available 2nd-30th May-September: Monday-Thursday 0530-0900. (see GEN 2.1-2, para 8 for Scottish public holidays). The airway is not available for use during those periods when MoD requires access to the airspace.

Note 13 N863
CDR Category One and Three (CDR 1 and 3) H24.
The use of this airway can be interrupted when MoD (Navy) requires the activation of Danger Area EG D021 (Surface - 5000ft) or Danger Area EG D026 above ALT 19000ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. Non-availability of N863 will be notified to GAT by Brest Control and traffic will be routed to ORIST Y170 and L980.

Note 14 TEMPORARY RESERVED AREAS (TRA)
Hours (except TR006):
Monday - Friday 0730 to 1700 (winter).
Monday - Friday 0730 to 1700 (summer).
TR006:
Monday - Friday 0900 to 1700 (winter).
Monday - Friday 0800 to 1800 (summer).
Excluding English Public Holidays. TRAs may be activated at other times by NOTAM.

Note 15 N866
CDR Category One and Three (CDR 1 and 3) H24.
N866 is only available when N864 is notified as unavailable due to activity above ALT 22000 ft within Danger Area EG D023.

Note 16 N867 (GARIM - KATHY) and P87
CDR Category One and Three (CDR 1 and 3) H24.
The use of these airways may be interrupted when MoD (Navy) requires the activation of Danger Area EG D038 above ALT 19000 ft. Closures will be notified by NOTAM and CRAM. There may also be circumstances when London Control (Swanwick) is given a minimum of only 2 hours notice of Danger Area activity. Non-availability of P87 and/or P87 will be notified to GAT by Brest Control and traffic will be routed to ORIST Y170 and L980.

CHANGE (3/17): NOTE 15 UN866 REDESIGNATED N866