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	Fre-quency 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)

3 SHANWICK OCEANIC CONTROL AREA (NORTH ATLANTIC REGION — NAT)

3.1 Description

Name	Lateral Limits	Vertical Limits and Classification (See note 2)	Controlling Authority
Shanwick Oceanic Control Area (OCA)	610000N 0300000W - RATSU (610000N 0100000W) 543400N 0100000W - DOGAL (540000N 0150000W) - DINIM (510000N 0150000W) - LESLU (510000N 0080000W) 450000N 0080000W - 450000N 0300000W 610000N 0300000W.	UNLTD ——— FL 55 Class A	Shanwick Oceanic. 'Shanwick Oceanic' For Comms see ENR 2.2 para 3.9.9

3.1.1 Provision of ATS has been delegated in certain parts of the Shanwick OCA to other ATC Agencies as shown below.

Name	Lateral Limits	Vertical Limits and Classification (See note 2)	Controlling Authority
Northern Oceanic Transition Area (NOTA)	DOGAL (540000N 0150000W) - SUNOT (570000N 0150000W) - GOMUP (570000N 0100000W) - 543400N 0100000W - DOGAL (540000N 0150000W).	UNLTD ——— FL 55 Class A	Shannon ACC.
Shannon Oceanic Transition Area (SOTA)	DINIM (510000N 0150000W) - LESLU (510000N 0080000W) 483000N 0080000W - BEDRA (490000N 0150000W) - DINIM (510000N 0150000W).	UNLTD ——— FL 55 Class A	Shannon ACC.
Brest Oceanic Transition Area (BOTA)	483400N 0084500W - 483000N 0080000W - 450000N 0080000W - 450000N 0084500W 483400N 0084500W.	UNLTD ——— FL 55 Class A	Brest ACC.
RATSU (61N 010W)	RATSU (610000N 0100000W).	UNLTD ——— FL 55 Class A	Reykjavik ACC.

Note 1: *See ICAO NAT Air Navigation Plan (ICAO DOC 8755) for Santa Maria, Madrid, New York, Gander and Reykjavik Oceanic Control Areas.*

Note 2: *Over the high seas the lower limit of all the NAT OCAs is FL 55, with no upper limit. Throughout the NAT Region, Airspace at and above FL 55 is Class A Controlled Airspace and below FL 55 Class G Uncontrolled Airspace.*

3.2 Air Traffic Service

Regional Supplementary Procedures DOC 7030.

3.2.1 Air Traffic Service for the Shanwick OCA is provided by the Oceanic Area Control centre at Prestwick supported by the communications station at Ballygirreen near Shannon, Ireland. The callsign SHANWICK will be used.

3.2.2 Aircraft operating along tracks through successive points on the northern or southern boundaries of Gander and Shanwick OCAs will be provided with Air Traffic Services by Gander or Shanwick as appropriate.

3.2.3 Air Traffic Service in the NOTA and SOTA is provided by Shannon Area Control Centre, using the callsign 'SHANNON'. Full details of the service provided and the procedures used are contained in AIP Ireland.

3.2.4 Air Traffic Service in the BOTA is provided by Brest Area Control Centre, using the callsign 'Brest Control'. Full details of the service provided and the procedures used are contained in AIP France.

3.3 Flight Rules

Annex 2, Annex 11 and Regional Supplementary Procedures DOC 7030.

3.3.1 Flight shall be conducted in accordance with the Instrument Flight Rules (even when not operating in Instrument Meteorological Conditions) when operated within the Shanwick OCA.

3.3.2 Clearances to climb or descend maintaining own separation while in Visual Meteorological Conditions shall not be issued.

3.4 Separation of Aircraft within the Shanwick OCA

Regional Supplementary Procedures DOC 7030.

3.4.1 Separation, including radar separation, of aircraft within the NOTA and SOTA will be to standards defined by the Irish ATC authorities. Separation, including radar separation, of aircraft within the BOTA will be to standards defined by the French ATC Authorities.

3.4.2 Reduced Vertical Separation Minima (RVSM) applies within the Shanwick OCA between FL 290 and FL 410 inclusive. Aircraft wishing to fly within this level band must meet the RVSM requirements.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.4.3 The French and Irish Authorities respectively designate the BOTA and NOTA/SOTA airspace between FL 290 and FL 410 inclusive for the purpose of transitioning non-RVSM approved aircraft operating to and from the North Atlantic Region.

3.5 NAT Organized Track System (NAT OTS)

Regional Supplementary Procedures DOC 7030.

3.5.1 Organized tracks are formulated and published as an AFTN Track Structure Message. The day-time structure, valid from 1130 UTC until 1900 UTC at 030°W is published by Shanwick, and the night-time structure, valid from 0100 UTC until 0800 UTC at 030°W by Gander.

3.5.2 All NAT Operators shall provide Company Preferred Route information providing Shanwick with the number of jet flights and routes likely to be requested during each of the main traffic periods, eg westbound flights crossing 030°W between 0800 and 1900 UTC and eastbound flights crossing 030°W between 2200 and 0900 UTC.

3.5.2.1 Shanwick can accept airlines Company Preferred Route information for westbound flights in two formats; The Preferred Route Message format (PRM) or alternatively a Flight Plan day minus 1 format (FPL-1).

3.5.2.2 Operators wishing to submit Company Preferred Route information via Flight Plan day minus 1 format (FPL-1) are required to pre-register by email at CPR@nats.co.uk before doing so.

3.5.2.3 The westbound PRM or FPL-1 is to be sent no later than 1900 UTC and the eastbound PRM no later than 1000 UTC. The format of the PRM, FPL-1 and the AFTN addresses to which they are to be sent are contained at ENR 2.2, paragraphs 3.23, 3.24 and 3.25.

3.5.3 The most northerly Track of a day Organized Track System (OTS) is designated as NAT Track Alpha, the adjacent Track to the south as NAT Track Bravo etc. In the case of the structure published for night use the most southerly Track is designated Zulu, the adjacent Track to the North is designated Yankee, etc.

3.5.4 Flight levels are allocated for use within the Track structure to make optimum use of the available airspace.

3.5.5 Pilots are encouraged to flight plan on published NAT tracks, when appropriate, although it is not mandatory to do so.

3.5.6 To permit an orderly change-over between successive OTSs a period of several hours is interposed between the termination of one system and the commencement of the next. During these periods, operators are expected to file random flight plans or use the co-ordinates of a track in the system about to come into effect. Appropriate flight planning levels are contained in the tables in paragraph 3.6.11.2. In all cases of doubt, advice should be sought by telephone from the appropriate OACC supervisor.

3.6 Flight Plans

Annex 2, Regional Supplementary Procedures DOC 7030 and PANS Doc 4444 ATM/501.

3.6.1 Pilots and operators are advised that as Shanwick is within the IFPS area, they are to ensure that all flight plans routing via the Shanwick Area of Responsibility are addressed to both EUCHZMFP and EUCBZMFP.

3.6.2 For flights conducted along one of the organized tracks from the entry point into the NAT Flight Information Regions to the exit point, the organized track shall be defined in the flight plan by the abbreviation 'NAT' followed by the code letter assigned to the track. For flights wishing to join or leave an organized track at some point between entry and exit fixes, full track details should be specified in the flight plan, the track letter should not be used to abbreviate any portion of the route in these circumstances.

3.6.3 Flights planned wholly or partly outside the organized tracks shall be planned along great circle tracks joining successive significant points. The latitude and longitude of each designated reporting line (eg 010W, 020W, 030W, 040W, 050W, 060W, Fishpoint and landfall), should be entered in Item 15 of the flight plan.

3.6.4 ATS requires flights entering or exiting the Gander OCA to flight plan in accordance with the published NAT OTS or, if exiting the Gander OCA by way of 58°N 050°W and south thereof, via the following named points and associated 050°W coordinates:

- CUDDY DCT 58N 050W (Midwest Traffic)
- DORYY DCT 58N 050W (Eastern Seaboard Traffic)
- ENNSO DCT 5730N 050W
- HOIST DCT 57N 050W
- IRLOK DCT 5630N 050W
- JANJO DCT 56N 050W
- KODIK DCT 5530N 050W
- LOMSI DCT 55N 050W
- MELDI DCT 5430N 050W
- NEEKO DCT 54N 050W
- PELTU DCT 5330N 050W
- RIKAL DCT 53N 050W
- SAXAN DCT 5230N 050W
- TUDEP DCT 52N 050W

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

- UMESI DCT 5130N 050W
- ALLRY DCT 51N 050W
- BUDAR DCT 5030N 050W
- ELSIR DCT 50N 050W
- IBERG DCT 4930N 050W
- JOOPY DCT 49N 050W
- MUSAK DCT 4830N 050W
- NICSO DCT 48N 050W
- OMSAT DCT 4730N 050W
- PORTI DCT 47N 050W
- RELIC DCT 4630N 050W
- SUPRY DCT 46N 050W
- RAFIN DCT 45N 050W

3.6.5 Estimated Times

3.6.5.1 For flights conducted wholly or partly outside the organized tracks in the NAT Region, accumulated estimated elapsed times over significant points en-route shall be specified in Item 18 of the flight plan.

3.6.5.2 For flights conducted along one of the organized tracks from the entry point into the NAT FIR to the exit point, the accumulated estimated elapsed time to the first Oceanic FIR Boundary should be specified in Item 18 of the flight plan.

3.6.5.3 For flights entering Shanwick OCA directly from the SOTA, the Estimated Elapsed Time (EET) for the Shanwick Boundary filed in Item 18 of the flight plan is to be the EET for the point of crossing the Shanwick/SOTA Boundary (RODEL/SOMAX/BEDRA/ KOGAD/OMOKO/TAMEL or LASNO).

3.6.5.4 For flights entering Shanwick OCA directly from the BOTA, the EET for the Shanwick Boundary filed in Item 18 of the flight plan is to be the EET for the point of crossing the Shanwick/BOTA Boundary (ETIKI/UMLER/SEPAL/BUNAV or SIVIR).

3.6.5.5 For flights exiting Shanwick OCA directly to the SOTA, the EET for the Shannon Boundary filed in Item 18 of the flight plan is to be the EET for the point of crossing the Shanwick/SOTA Boundary (RODEL/SOMAX/BEDRA/KOGAD/OMOKO/TAMEL or LASNO).

3.6.5.6 For flights exiting Shanwick OCA directly to the BOTA, the EET for the Brest Boundary filed in Item 18 of the flight plan is to be the EET for the point of crossing the Shanwick/BOTA Boundary (ETIKI/UMLER/SEPAL/BUNAV or SIVIR).

3.6.5.7 For flights entering Shanwick OCA directly from the NOTA, the EET for the Shanwick Boundary filed in Item 18 of the flight plan is to be the EET for the point of crossing the Shanwick/NOTA Boundary (VENER/RESNO/ETARI/PIKIL/BILTO/SUNOT or AGORI).

3.6.5.8 For flights exiting Shanwick OCA directly to the NOTA, the EET for the Shannon Boundary filed in Item 18 of the flight plan is to be the EET for the point of crossing the Shanwick/NOTA Boundary (VENER/RESNO/ETARI/PIKIL/BILTO/SUNOT or AGORI).

3.6.6 Flights Routing to/from GOMUP (57N 010W)

3.6.6.1 Flights will not be cleared to route along 57N between GOMUP (57N 010W) and SUNOT (57N 015W). Flights to/from GOMUP routing to/from 020W will be required to cross 020W at or north of 58N.

3.6.7 The designated reporting lines within the Shanwick OCA are:

For flights Europe — North America	Eastern boundary of the OCA, and longitudes 02000W and 03000W.
For flights Europe — Iceland	01000W and latitude 6100N (RATSU).
For flights Europe — Azores	00845W and latitude 4500N.

3.6.8 MACH Numbers

3.6.8.1 Jet aircraft intending to operate in the Shanwick OCA must indicate the MACH number planned to be used for any portion of the flight within the area in Item 15 of the flight plan.

3.6.8.1.1 Jet aircraft should indicate their proposed speeds in the following sequence:

(a) Cruising speed (TAS) in knots;

(b) Oceanic Entry Point and cruising MACH number;

(c) Landfall Fix and cruising speed (TAS) in knots.

3.6.8.2 All other aircraft: speed in terms of TAS in knots.

3.6.9 Minimum Navigation Performance Specification (MNPS)

3.6.9.1 If the flight is certified as being in compliance with Minimum Navigation Performance Specifications (MNPS) and intends to operate in the North Atlantic High Level Airspace (NAT HLA) for any portion of the flight, the letter ‘X’ shall be inserted after the

letter 'S' in item 10 of the flight plan to indicate that the flight has been approved for operations within the NAT HLA. It is the captain's responsibility to ensure that specific approval has been given for such operations by the State of Registry of either the aircraft or of the operator. See paragraph 3.17.1 (Application of MNPS in Shanwick OCA).

3.6.10 Reduced Vertical Separation Minima (RVSM)

3.6.10.1 If the flight is certified as being in compliance with the Minimum Aircraft System Performance Specification (MASPS) and intends to operate in RVSM Airspace for any portion of the flight, the letter 'W' shall be inserted after the letter(s) 'S' and 'X' (if applicable) in Item 10 of the flight plan to indicate that the flight has been approved for operations within RVSM Airspace. It is the Captain's responsibility to ensure that specific approval has been given for such operations by the State of registry of either the aircraft or the operator. See Paragraph 3.18.2 (Application of RVSM in Shanwick OCA).

3.6.11 **Flight Level Allocation Scheme (FLAS)**

3.6.11.1 Operators should use the Flight Level Allocation Scheme (FLAS) for flight planning guidance.

3.6.11.2 The Flight Level allocations under FLAS are:

FL 430	May be Flight Planned for both eastbound and westbound non-RVSM certified aircraft.
FL 410	Eastbound FL.
FL 320, 340, 360, 380, 400	Westbound FL (except within Eastbound OTS).
FL 310, 330, 350, 370, 390	Eastbound FL (except within Westbound OTS).
FL 300 and below	Even FLs westbound. Odd FLs eastbound.

3.6.11.3 The Tango route structure has no associated flight level allocation scheme. Operators are permitted to file flight plans at any flight level for a route which is wholly contained within the routing structure of T9, T213 and T16.

When the location of the organised track structure infringes these routes, operators are reminded that only flights equipped with FANS 1/A (or equivalent) CPDLC and ADS-C capability in accordance with the ICAO Data-link mandate (DLM) are permitted to operate within DLM airspace. For non data-link equipped aircraft, crews shall not request for an Oceanic clearance at DLM Levels of FL 350 to FL 390 inclusive when infringing any part of the Organised Track Structure.

3.6.11.4 To accommodate significant single direction demand during OTS times, OACCs may exchange Flight Levels on a tactical basis. This allows additional profiles for main direction flow.

3.6.11.5 During OTS times, aircraft intending to use the OTS may Flight Plan levels which are allocated to the published OTS. Additionally, to accommodate demand:

During the eastbound OTS, eastbound non-OTS aircraft may Flight Plan at FL 360 or FL 380.

During the westbound OTS, westbound non-OTS aircraft may Flight Plan at FL 310 or FL 330.

3.6.11.6 Unless suitable eastbound Tracks exist, during the eastbound OTS times, eastbound traffic originating in New York OACC, planned to enter Shanwick OACC, is recommended to Flight Plan as follows:

(a) FL 310 or FL 360 and restrict routing to landfall BEDRA or south.

(b) FL 340 or FL 380, and restrict routing to landfall either: BEDRA or south, or to remain south of the OTS, whichever is further south.

3.6.11.7 During the westbound OTS, random westbound aircraft, flight planned to enter Shanwick via Scottish airspace and routing at, or north of, AVUTI should not flight plan at FL 340. FL 340 is reserved for flights routing between Reykjavik OACC and Gander OACC.

3.6.11.8 For aircraft opposing the main flows during OTS periods, operators should Flight Plan optimum levels, in accordance with the direction of flight. ATC will endeavour to accommodate any requested levels, however priority will be given to main flow traffic.

3.6.11.9 If a flight is expected to be level critical, Operators should contact the initial OACC prior to filing the flight plan to determine the likely availability of such level(s).

3.6.11.10 Request for a suitable alternative flight level may be included in Item 18 of the flight plan.

3.6.11.11 Flight plans for flights departing from points within adjacent regions and entering the NAT Region, without intermediate stops, should be submitted at least 3 hours prior to departure. For addressing of Flight Plan messages see ENR 1.11.

3.6.11.12 Flight Plans for flights through NOTA/SOTA Airspace by aircraft not equipped with VHF RTF are to be annotated, in Item 18, COM/UHF only.

3.7 Clearance

Annex 11 and PANS Doc 4444 ATM/501.

3.7.1 Aircraft entering Shanwick OCA from domestic airspace are required to obtain an Oceanic Clearance from Shanwick using one of the methods indicated in paragraph 3.8.

3.7.1.1 For Westbound aircraft routing via RATSU (61N 010W), see paragraph 3.8.3.

3.7.2 An Oceanic clearance issued by Shanwick is effective from the Shanwick OCA Boundary. It is the pilots responsibility to ensure that the flight complies with this clearance, in particular, that the flight crosses the Shanwick OCA Boundary at the flight level contained in the clearance issued by Shanwick. For flights entering Shanwick OCA from Domestic airspace, it is the responsibility

of the pilot to obtain from the appropriate Domestic ATC authority any necessary clearance or re-clearance to enable the flight to comply with the Oceanic Clearance. It is the pilots responsibility, when necessary, to remain clear of Oceanic Airspace whilst awaiting the issuance of an Oceanic Clearance.

3.7.3 Aircraft entering Shanwick OCA from an adjacent OCA will normally be cleared to landfall by the authority controlling the adjacent OCA.

3.7.4 The ATC approved MACH number will be included in all Oceanic Clearances given to jet aircraft. After leaving Oceanic Airspace aircraft should maintain their assigned MACH number in domestic airspace unless the appropriate ATC unit authorizes a change.

3.7.5 All clearances issued by Shanwick are based on the aircraft's estimate for the Oceanic Boundary, so it is essential that this estimate is correct. If the estimate for the Oceanic Boundary last reported to Shanwick is found to be in error by 3 minutes or more, flights must transmit a revised estimate to Shanwick, as soon as possible.

3.7.6 Abbreviated Clearances

3.7.6.1 An abbreviated clearance is only issued when clearing an aircraft to fly along the whole length of an organized track. In all other circumstances full details of the cleared route will be given.

3.7.6.2 A pilot-in-command shall, if at any time in doubt, request a detailed description of the cleared route from ATS.

3.7.7 **Identification of NAT Track Messages and Clearance Delivery Procedures**

3.7.7.1 **Identification of Track Structure Message**

3.7.7.1.1 Shanwick OACC will identify each Westbound NAT Track Structure Message by using a 3 digit Track Message Identification number (TMI) in the remarks section of the Track Structure Message.

Example: Remarks: Track Message Ident 283.

3.7.7.1.2 Gander and Shanwick OACCs will generate a revised TMI number only when the change is to:

(a) Any NAT Track co-ordinate including named positions;

(b) NAT Track published levels;

(c) Named Points within European Routes West; or

(d) Any combination of (a), (b) or (c).

Note: *Both centres will continue to publish revisions regarding other items such as North American Routings (NARS), but revisions outside the above listed categories will not warrant a change to the TMI.*

3.7.7.1.3 Amendments will be identified by adding an Alpha character to the TMI number for each revision.

Example: (Remarks amended) Remarks: Amended Track Message Ident 283 A, B, C etc.

3.7.7.2 **Oceanic Clearance Delivery for NAT Tracks**

3.7.7.2.1 Shanwick will issue Oceanic clearances for NAT Tracks using the track letter without the current NAT Track message identification number.

Example of ATC issued clearance: 'TMA 159 is cleared to Washington via Track Bravo, from MIMKU (56N 010W) maintain Flight Level Three Five Zero, Mach decimal Eight Zero'.

3.7.7.2.2 Pilots are expected to include the NAT Track Message Identification in the read back of the Oceanic Clearance.

Example of pilot read back: 'TMA 159 is cleared to Washington via Track Bravo 283, from MIMKU (56N 010W) maintain Flight Level Three Five Zero, Mach decimal Eight Zero'.

3.7.7.2.3 If the Track Message Ident is included in the read back there is no requirement for the pilot to read back the NAT Track co-ordinates.

3.7.7.2.4 If any doubt exists as to the Track Message Ident or the NAT Track co-ordinates the pilot should request the full Track co-ordinates from Shanwick.

3.7.7.2.5 Similarly, if the pilot cannot correctly identify the Track Message Identification, Shanwick will read the cleared NAT Track co-ordinates in full and request a full read back of those co-ordinates.

3.7.7.3 **Oceanic Clearance Delivery for Random Routings**

3.7.7.3.1 For aircraft cleared on random routings, the present procedure of reading the full track co-ordinates as part of the Oceanic clearance and requesting from the pilot a full read back continues (See paragraph 3.7.6.1).

3.8 Requests for Oceanic Clearance

3.8.1 **Westbound Aircraft (Apart from Traffic as detailed in paragraph 3.8.2)**

3.8.1.1 Westbound aircraft operating within the United Kingdom UIR/FIR and the northern part of the France UIR should request Oceanic Clearance from 'Shanwick Oceanic' on VHF RTF. VHF coverage is contained within an area joined by the following points: 48N 010W - RATSU (61N 010W) - 61N 005W - 52N 004E - 48N 004W - 48N 010W. An Oceanic clearance should be requested when an accurate boundary estimate can be calculated, and submitted between 30 and 90 minutes prior to the Oceanic boundary ETA. United Kingdom departures are to request clearance as soon as possible after departure. Aircraft overflying the United Kingdom

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

UIR/FIR and the northern part of the France UIR are to request clearance when they consider that they are within the area specified above. Aircraft other than jet should request clearance at least 40 minutes before the ETA for the OCA entry point.

3.8.1.1.1 For Westbound aircraft routing via RATSU (61N 010W), see paragraph 3.8.3.

3.8.1.2 Aircraft unable to contact 'Shanwick Oceanic' on VHF should request clearance on a NARTEL HF frequency (North Atlantic en-route HF RTF Network) at least 40 minutes before the ETA for the Oceanic Boundary and thereafter maintain a SELCAL watch for receipt of the Oceanic Clearance.

3.8.1.3 Aircraft Communication Addressing and Reporting System (ACARS) equipped aircraft may request and receive their Westbound Oceanic clearance via datalink, utilising the Oceanic Clearance Link (OCL), for entry points on the Shanwick eastern boundary (from LUSEN to PASAS), without the requirement to contact Shanwick on RTF. Approval for the use of this system will be given by the Team Leader Asset Engineering Ops. Support at Shanwick Oceanic (Tel: +44 (0)1292-692772). This system should not be used by aircraft within 30 minutes of the Shanwick boundary; instead, VHF or HF RTF should be used.

3.8.1.4 While in communication with Shanwick for Oceanic Clearance, aircraft must also maintain communication with the ATC authority for the airspace within which they are operating. Aircraft unable to contact Shanwick on VHF or on NARTEL HF should request the ATC authority for the airspace in which they are operating to relay their request for Oceanic Clearance to Shanwick.

3.8.1.5 Aircraft entering Shanwick directly from the Madrid FIR/UIR should operate the procedures in paragraphs 3.8.1.2 and 3.8.1.4 at least 40 minutes before the ETA for 45N.

3.8.1.6 Requests for Oceanic Clearance shall include:

(a) Callsign;

(b) OCA entry point and ETA;

(c) requested MACH number and flight level;

(d) any change to flight plan affecting OCA;

(e) the highest acceptable flight level which can be maintained at the OCA entry point.

Note: *'Entry Points' are the boundary position between Shanwick OCA and domestic airspace, ie for SOTA these are: RODEL, SOMAX, KOGAD, BEDRA, OMOKO, TAMEL or LASNO, for BOTA these are: ETIKI, UMLER, SEPAL, BUNAV or SIVIR and for NOTA these are: VENER, RESNO, ETARI, PIKIL, BILTO, SUNOT or AGORI.*

Example of pilot request for Oceanic Clearance.
'ACA865 Request Oceanic Clearance; Estimating SUNOT at One One Three One, Request Mach decimal eight zero, Flight Level three five zero, able Flight Level three six zero, second choice Track Charlie'.

If the request also includes a change to the original Flight Plan, affecting OCA:
'BAW 123 Request Oceanic Clearance; Estimating PIKIL at One One Four Seven, Request Mach decimal eight zero, Flight Level three four zero, Now Requesting Track Charlie, able Flight Level three six zero, second choice Track Delta'.

3.8.1.7 All clearances other than abbreviated clearances described in paragraph 3.7.6 must be read back in full.

3.8.2 **Aircraft Requiring Oceanic Clearance Before Departure (Proximate Departure Procedures)**

3.8.2.1 Due to the short flying times between Scottish and Irish aerodromes and the Shanwick OCA boundary, pilots may be required to request and receive an Oceanic Clearance prior to departure.

3.8.2.2 The requirement to obtain Oceanic clearance prior to departure is detailed below:

<table>
<tr><th colspan="2">Aerodrome or Aerodrome group</th><th>Jet Departures</th><th>Non-jet Departures</th></tr>
<tr><td rowspan="3">Shannon FIR aerodromes</td><td>EIDW EIWT EIME</td><td colspan="2">For ALL Oceanic entry points, request when airborne.</td></tr>
<tr><td>EICK</td><td colspan="2">If flight planned to enter Shanwick airspace via OMOKO, TAMEL or LASNO, Oceanic clearance required prior to departure. All other Oceanic entry points, request when airborne.</td></tr>
<tr><td>All other EI**</td><td colspan="2">If flight planned to enter Shanwick airspace between ETILO and BEDRA (inclusive), Oceanic clearance required prior to departure. All other Oceanic entry points, request when airborne.</td></tr>
<tr><td>Belfast Aldergrove</td><td>EGAA</td><td rowspan="6">If flight planned to enter Shanwick at GOMUP or ETILO, oceanic clearance required prior to departure.
If flight planned to enter Shanwick at all other entry points, request when airborne.</td><td rowspan="6">Request when airborne.</td></tr>
<tr><td>Belfast/City</td><td>EGAC</td></tr>
<tr><td>Londonderry/Eglington</td><td>EGAE</td></tr>
<tr><td>Glasgow</td><td>EGPF</td></tr>
<tr><td>Prestwick</td><td>EGPK</td></tr>
<tr><td>All other aerodromes</td><td></td><td colspan="2">If the elapsed time to the Shanwick Entry Point is 40 minutes, or less, Oceanic clearance required prior to departure.</td></tr>
</table>

3.8.2.2.1 If Oceanic clearance is not required prior to departure, pilots are reminded that they should request clearance between 90 and 30 minutes prior to the Shanwick boundary. Aircraft entering Shanwick directly from the Madrid FIR/UIR are reminded that they should request clearance at least 40 minutes before the ETA for 45N, as outlined in paragraph 3.8.1.5.

3.8.2.3 **General**

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.8.2.3.1 Pilots are responsible for initiating a clearance request.

3.8.2.3.2 Aerodrome ATC should ascertain that, where a flight is required to obtain an Oceanic Clearance prior to departure (as per paragraph 3.8.2.2), that the flight has done so.

3.8.2.3.3 Pilots are reminded that the Oceanic Clearance (including level allocation) is valid only from the OCA Entry Point. Aerodrome ATC and/or Domestic ACC will issue ATC clearance to the OAC Entry Point.

3.8.2.3.4 An Oceanic clearance should be requested when an accurate boundary estimate can be calculated, and submitted between 30 and 90 minutes prior to the Oceanic boundary ETA. Requesting more than 90 minutes prior to the ETA may result in rejection of the Request for Clearance (RCL).

3.8.2.3.5 The request must contain an accurate boundary ETA, based on the expected ETD. Pilots are responsible for informing Shanwick to request a reclearance, as soon as possible, if the Shanwick boundary ETA changes by 3 minutes or more.

3.8.2.4 **OCL Equipped Aircraft**

3.8.2.4.1 The free-text field of the RCL should include the phrase, 'ETD <time><aerodrome name>', eg ETD 1137 EGAA.

3.8.2.4.2 Following completion of the OCL transaction, the crew must notify Aerodrome ATC of receipt of the Oceanic clearance, using the phrase 'Oceanic Clearance received' (confirming Oceanic entry point and required departure time).

3.8.2.5 **Voice Process**

3.8.2.5.1 The following phraseology is to be used:

(a) 'Request Oceanic Clearance'

(b) Flight Identification

(c) Oceanic Entry Point and ETA

(d) Requested Mach Number and Flight Level

(e) Any change to the flight plan affecting OCA

(f) 'ETD', Time, Aerodrome name - eg ETD 1137 EGPH.

3.8.2.5.2 **Civil-aerodromes (where ATC is provided)**

3.8.2.5.2.1 Request directly by telephone to Shanwick Oceanic (+44 (0)1292-692320). This may be done by the handling agent or operating company (at the request of the pilot) or by the crew. Aerodrome ATC may also be used, if requested, to relay the request.

3.8.2.5.2.2 Shanwick will issue the oceanic clearance to the appropriate aerodrome, for relay to the crew.

3.8.2.5.3 **Prestwick**

3.8.2.5.3.1 Pilots should contact Shanwick directly using the appropriate VHF frequency, for request and issue of Oceanic Clearance.

3.8.2.5.3.2 Following completion of the voice process, the crew must notify Aerodrome ATC of receipt of the oceanic clearance, using the phrase 'Oceanic Clearance received' (confirming oceanic entry point and required departure time).

3.8.2.5.4 **Military-aerodromes and civil-aerodromes (where ATC is NOT provided)**

3.8.2.5.4.1 Pilots should request directly to Shanwick, prior to or after departure, guided by the requirement to request between 90 and 30 minutes from the Oceanic boundary. Requests should be made using OCL or HF RTF, prior to departure, or OCL, HF or VHF after departure, as appropriate. Shanwick will issue the oceanic clearance by OCL, HF or VHF, as appropriate.

3.8.2.6 **Reclearances**

3.8.2.6.1 Pilots should inform Shanwick as soon as possible, preferably before departure, if the Shanwick boundary ETA changes by 3 minutes or more or if a profile modification is required.

3.8.2.6.2 Crew-initiated reclearances may use:

OCL,

or Scottish or Northern Ireland departure, relay via Aerodrome ATC,

or Irish Republic departures, relay via Shannon ACC.

3.8.2.6.3 Shanwick ATC-initiated reclearances will be sent to the aircraft via OCL or relayed by aerodrome ATC.

3.8.2.6.4 Pilots must notify aerodrome ATC if a reclearance is received and state the required departure time.

3.8.3 **Flights Routing via 6100N**

3.8.3.1 All aircraft entering the Reykjavik OCA at or above FL 55 via 6100N at or East of 01000W from Scottish Domestic Airspace are required to obtain an Oceanic Clearance from Reykjavik OACC, as detailed in AIP Iceland.

Note: *Flights routing via RATSU (6100N 01000W) do not require OCA clearance from Shanwick OAC. Therefore, aircraft intending to route via RATSU (6100N 01000W) must not contact Shanwick Clearance Delivery.*

3.8.3.2 ATC Procedures via 6100N (above FL 55)

3.8.3.2.1 An amended procedure for traffic between Scottish AC (Prestwick), Reykjavik OAC and Shanwick OAC in the vicinity of 6100N 01000W simplifies the ATC procedures used and makes use of reduced separation standards. A system of preferred routings is established between the Scottish UIR and the Reykjavik OCA as detailed below.

3.8.3.3 Routings

3.8.3.3.1 Dependent on anticipated traffic demands over the North Atlantic Area, Reykjavik OAC may establish NAT Tracks through the following points along 61N:

RATSU;
MATIK;
NALAN;
OSBON;
PEMOS;
RIXUN;
SOSAR.

Note: *The tracks will be published by Shanwick OAC on behalf of Reykjavik OAC using the normal NAT Track promulgation method.*

3.8.4 **Time Keeping Procedures**

3.8.4.1 Prior to entry into Oceanic Airspace, the pilot shall synchronise the time reference system(s) to be used during the flight for the calculation of waypoint Actual Time of Arrival (ATA) and Estimated Time of Arrival (ETA) to an acceptable international time source. The pilot passing ATAs and ETAs to ATC is to ensure that they are based on a time reference system that has been properly synchronised.

3.8.4.2 Acceptable international time sources are:

(a) **BBC** (United Kingdom, Greenwich) — H24 on 12095 kHz; 0200 - 2315 on 9410 kHz; 0430 - 0030 on 15070 kHz; 0800 - 1600 on 17705 kHz, 17640 kHz, 9760 kHz, 9750 kHz. Time is UTC and given every minute. within specified periods.

(b) **Global Positioning System**, corrected to UTC .

(c) **WWV** (USA Fort Collins, Colorado) — H24 on 2500 kHz, 5000 kHz, 10000 kHz, 15000 kHz, 20000 kHz (AM/SSB). Time is UTC and given every minute.

(d) **CHU** (National Research Council (NRC), Canada) — H24 on 3330 kHz, 7335 kHz, 14670 kHz (SSB). Time is UTC and given every minute.

Note: *Aircraft Communications Addressing and Reporting Systems (ACARS) are not suitable time sources due to the unknown delay involved between the time that the update message is generated and when it is received by the ACARS equipment on the aircraft.*

3.9 Communications

3.9.1 Aircraft operating in the Shanwick OCA must be capable of maintaining direct two-way communication with the appropriate aeronautical radio stations. The carriage of NARTEL HF frequencies in the Shanwick OCA is mandatory. The appropriate frequencies and service areas are detailed in paragraph 3 9.9.

3.9.2 Pilots of aircraft equipped with VHF communications only should plan their route outside the Shanwick OCA and ensure that they are within VHF coverage of appropriate ground stations throughout the flight. Theoretical coverage diagrams are shown at ENR 6-4-0-1 and ENR 6-4-0-2.

3.9.3 Continuous watch on emergency frequency 121.500 MHz.

3.9.3.1 The VHF emergency frequency of 121.500 MHz should be continuously guarded except for those periods when aircraft are carrying out communications on other channels, or when airborne equipment or cockpit duties do not permit the simultaneous guarding of two channels.

3.9.3.2 When contact has been established between aircraft on emergency frequency 121.500 MHz, subsequent communication should be conducted on another frequency mutually agreed between the aircraft concerned.

3.9.4 Pilots may use SATCOM voice for routine ATS communications in the Shanwick OCA.

Note: *At this time Shanwick only supports Quick-Dial Service via the INMARSAT system, for normal communications.*

3.9.4.1 A dedicated Quick-Dial satellite voice telephone number for Shanwick Radio has been programmed into the aeronautical Ground Earth Stations of the Inmarsat Signatories. The allocated airborne number for use via the aircraft satellite voice equipment is 425002.

3.9.4.2 SATCOM voice facilities are provided in addition to, but not as an alternative to, HF communications and pilots must adhere to all requirements pertaining to the carriage and use of HF radio. Pilots using this SATCOM number will continue to communicate with Shanwick OCA via Shanwick Radio and standard RTF phraseology should be used at all times.

3.9.4.3 A dedicated airborne number (423201) is provided for direct pilot/controller communication for use in emergency situations. GEN 3-6-5 refers. This dedicated Quick-Dial satellite voice telephone number has been programmed into the aeronautical Ground Earth Stations of the Inmarsat Signatories only and is not available through any other Satellite service provider.

3.9.4.4 SATCOM communications initiated due to HF propagation difficulties do not constitute an urgency situation and should be addressed to Shanwick Radio on 425002.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.9.5 If an aircraft within the Shanwick OCA is unable to communicate direct with Shanwick Oceanic, the pilot-in-command must endeavour to pass position reports by one of the following methods:

(a) By relay through any other Oceanic Centre with which communication has been established;

(b) if no other means is available, by relay through another aircraft on frequency 121.500 MHz.

3.9.6 While operating in an HF air-ground communications environment, pilots shall maintain a listening watch on the assigned radio frequency. This will not be necessary, however, if the aircraft is SELCAL equipped and correct use is ensured. Correct SELCAL use shall comprise:

(a) The inclusion of the SELCAL code in the flight plan;

(b) the issue of a correction to the SELCAL code if subsequently altered due to change of aircraft or equipment; and

(c) an operational check of the SELCAL equipment with the appropriate radio station at or prior to initial entry into Oceanic Airspace. This SELCAL check must be completed prior to commencing SELCAL watch.

Note: *SELCAL watch on the assigned radio frequency should be maintained, even in areas of the Region where VHF coverage is available and used for air-ground communications.*

3.9.7 Communications within NOTA and SOTA are carried out with Shannon ACC using VHF. The appropriate frequencies and service areas are detailed in AIP Ireland.

3.9.8 Communications within BOTA are carried out with Brest ACC using VHF. The appropriate frequencies and service areas are detailed in AIP France.

3.9.9 Communications within the Shanwick OCA are as follows:

(a) HF Aeromobile operations in the North Atlantic Region (NAT) are available for use in groups known as 'Families' and will be assigned as appropriate on first contact;

(b) As a general guide, the following frequency allocation principles are used:

Frequency Family	Usage
NAT A	Assigned to aircraft flying routes with reporting coordinates between 43N and 47N.
NAT B and C	Assigned to aircraft flying routes with reporting coordinates between 47N and 64N. Primary assignment for aircraft flying central routes.
NAT D	Assigned to aircraft flying routes with reporting coordinates North of 62N.
NAT F	Assigned on a tactical basis and coordinated between Shanwick Radio and Gander Radio.
NAT H, I and J	Assigned on a tactical basis and coordinated between Shanwick Radio, adjoining NARTEL Radio Stations and Domestic Air Traffic Control agencies.

Service	Callsign/Ident	Freq	Hours of Service	Operating Authority and Remarks
1	2	3	4	5
		SELCAL is available on all HF A/G frequencies.		
				Irish Aviation Authority.
A/G	Shanwick Radio	3016 kHz 5598 kHz 8906 kHz 13306 kHz	0100-0900, 1800-2200 H24 0900-2100 HO	**Family A.** To be used by all aircraft flying the Southern NAT Routes. Assigned to aircraft flying routes with reporting coordinates between 43N and 47N.
A/G	Shanwick Radio	2899 kHz 5616 kHz 8864 kHz 13291 kHz 17946 kHz	0000-0900, 1800-2400 H24 0900-2100 HO HO	**Family B.** Assigned to aircraft flying routes with reporting coordinates between 47N and 64N.
A/G	Shanwick Radio	2872 kHz 5649 kHz 8879 kHz 11336 kHz 13306 kHz 17946 kHZ	0000-0900, 1800-2400 H24 0900-2100 HO HO HO	**Family C.** Assigned to aircraft flying routes with reporting coordinates between 47N and 64N.
A/G	Shanwick Radio	2971 kHz 4675 kHz 8891 kHz 11279 kHz 17946 kHz	0100-0800 0100-0800, 1100-1800 HO HO HO	**Family D.** Assigned to aircraft flying routes with reporting coordinates North of 62N.
A/G	Shanwick Radio	3476 kHz 6622 kHz 8831 kHz 13291 kHz 17946 kHz	0100-0800 1000-1800 1000-1800 HO HO	**Family F:** Assigned on a tactical basis and coordinated between Shanwick Radio and Gander Radio.
A/G	Shanwick Radio	2965 kHz 3491 kHz 5584 kHz 6556 kHz 6667 kHz	HO	**Family H:** Assigned on a tactical basis and coordinated between Shanwick Radio, adjoining NARTEL Radio Stations and Domestic ATC agencies.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

Service	Callsign/Ident	Freq	Hours of Service	Operating Authority and Remarks
		10021 kHz 10036 kHz 11363 kHz		
A/G	Shanwick Radio	2860 kHz 2881 kHz 2890 kHz 3458 kHz 3473 kHz 3488 kHz 5484 kHz 5568 kHz 6550 kHz 6595 kHz 10066 kHz	HO	**Family I:** Used on a tactical basis and coordinated between Shanwick Radio, adjoining NARTEL Radio Stations and Domestic ATC agencies.
A/G	Shanwick Radio	2869 kHz 2944 kHz 2992 kHz 3446 kHz 3473 kHz 4651 kHz 4666 kHz 4684 kHz 5460 kHz 5481 kHz 5559 kHz 5577 kHz 6547 kHz 8843 kHz 8954 kHz 11276 kHz	HO	**Family J:** Used on a tactical basis and coordinated between Shanwick Radio, adjoining NARTEL Radio Stations and Domestic ATC agencies.
A/G	Shanwick Radio	2182 kHz 3023 kHz 5680 kHz	HO	Search and Rescue (SAR). Operated as required.
Hours of service of individual frequencies, or groups of frequencies, may vary as HF propagation conditions or operational requirements demand.				
A/G	Shanwick Radio	127.900 MHz 124.175 MHz	H24	To be used as far as practicable by aircraft when East of 020°W so as to reduce the loading on HF channels. Traffic received on this freq is handled in exactly the same way as if received on HF.
ATC	Shanwick Oceanic	123.950 MHz	H24 **(See note)**	NATS Ltd. For use by aircraft registered in States West of 030°W for requesting Oceanic clearance direct from OAC. ***Note:*** *If communication cannot be established on designated Channel, pilot should communicate on the alternative frequencies.*
ATC	Shanwick Oceanic	127.650 MHz	H24	For use by aircraft registered in States East of 030°W for requesting Oceanic clearance direct from OAC. For this purpose Australia is regarded as being East of 030°W.
Air-to-Air	—	123.450 MHz	H24	Air-to-Air inter-pilot frequency.

Service	Callsign/Ident	SATCOM number	Hours of Service	Operating Authority and Remarks
1	2	3	4	5
A/G	Shanwick Radio	425002	H24	Irish Aviation Authority Available for routine ATS messages via Shanwick Radio.
ATC	Shanwick Oceanic	423201	H24	NATS Ltd. Available for direct pilot/controller communications in emergency situations only

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.10 Air Ground Messages

Annex 2, Regional Supplementary Procedures DOC 7030 and PANS Doc 4444 ATM/501.

3.10.1 Standard Air/Ground message types and formats are used within the NAT Region. To enable the ground stations to process messages in the shortest possible time, pilots should observe the following rules:

(a) Use the correct type of message applicable to the data transmitted;

(b) state the message type on the contact call to the ground station or at the start of the message;

(c) adhere strictly to the sequence of information for the type of message;

(d) all times in each of the messages should be expressed in hours and minutes.

3.10.2 Position
Content and data sequence to be used for routine position reports:

(a) 'Position';

(b) flight Identification;

(c) present position;

(d) time over present position (hours and minutes);

(e) present Flight Level;

(f) next position on assigned route;

(g) estimated time for position (hours and minutes);

(h) next subsequent position;

(i) any further information eg MET data or Company Message.

Example: 'Position, LUFTHANSA420, SUNOT (57N 015W), 1235, FL 330, Est 56N 020W, 1310, Next 56N 030W'

3.10.3 Request Clearance

3.10.3.1 Content and data sequence to be used, in conjunction with a routine position report, to request a change of MACH number, Flight Level or route, and to request Westbound Oceanic Clearance prior to entering the Shanwick OCA:

(a) 'Request Clearance';

(b) flight Identification;

(c) present or last reported position;

(d) time over present or last reported position (hours and minutes);

(e) present Flight Level;

(f) next position on assigned route or Oceanic Entry point;

(g) estimate for next position or Oceanic Entry point;

(h) next subsequent position;

(i) requested MACH Number, Flight Level or route;

(j) further information or clarifying remarks.

Example: 'Request clearance TRANSWORLD 801, 56N 020W, 1245, FL 330, Est 56N 030W, 1320, Next 56N 040W. Request FL 350'.

3.10.3.2 When a change of MACH number, Flight Level or route is requested and a position report message is not appropriate, the content and data sequence may be limited to:

(a) 'Request Clearance';

(b) flight Identification;

(c) requested MACH number, Flight Level or route;

(d) further information or clarifying remarks.

Example: 'Request Clearance SPEEDBIRD 212, Request FL 370'.

3.10.4 Revised Estimate

3.10.4.1 Content and data sequence to be used to up date estimate for next position:

(a) 'Revised Estimate';

(b) flight identification;

(c) next position on route;

(d) revised estimate for next position (hours and minutes);

(e) further information.

Example: 'Revised Estimate SPEEDBIRD 212, 57N 040W, 0325'.

3.10.5 Miscellaneous

3.10.5.1 Content and data sequence to be used to pass information or make a request in plain language that does not conform with the content of other message formats. No message designator is required as this will be inserted by the ground station:
(a) Flight identification;
(b) general information or request in plain language and format free.

3.10.6 Time and Place of Position Reports

3.10.6.1 Position reports shall be made at the significant points of the current flight plan track.

3.10.6.2 Shanwick may require flights operating in an east-west direction to make additional position reports at any intermediate meridians spaced at intervals of 10 degrees of longitude between 005W and 030W.

3.10.6.3 Shanwick may require flights operating in a north-south direction to make position reports at any intermediate parallel of latitude.

3.10.6.4 In requiring aircraft to report their position at intermediate intervals, Shanwick will be guided by the requirement to have position information at approximately hourly intervals and also by the need to cater for varying types of aircraft and for varying traffic and meteorological conditions.

3.10.7 Contents of Position Report

3.10.7.1 Position information shall be based on the best obtainable navigation fix. The time of fixing aircraft position shall be arranged to provide the most accurate position information and estimates possible.

3.10.7.2 'Position' shall be expressed by the latitude and longitude of the point at which the fixed reporting line is crossed. For flights whose tracks are predominantly east or west, latitude shall be expressed in degrees and minutes, longitude in degrees only. For flights whose tracks are predominantly north or south, latitude shall be expressed in degrees only, longitude in degrees and minutes. Aircraft operating in the Organized Track System for supersonic aircraft operations may report their position by reference to the track code with the longitude of the reporting point.

3.10.7.3 'Next position' shall normally be expressed as the significant point at which the aircraft is next required to report its position.

3.10.7.4 If the estimated time for the next position last reported to ATC is found to be in error by 3 minutes or more a revised estimate shall be transmitted to the ATC units concerned, as soon as possible.

3.10.7.5 The name or co-ordinates of the significant point following the 'next position' shall be given when making a position report.

3.10.8 Addressing Position Reports

3.10.8.1 Position reports, made to Shanwick by flights operating in the Shanwick OCA at a distance of 60 nm or less from the common Boundary with an adjacent OCA (including aircraft operating on tracks through successive points on the Boundary) should also be addressed to the controlling authority of the adjacent OCA.

3.11 Special Procedures for In-flight Contingencies

Regional Supplementary Procedures DOC 7030

PANS Doc 4444 ATM/501.

3.11.1 The following procedures are intended for guidance only. Although all possible contingencies cannot be covered, they provide for the most frequent cases such as inability to continue a flight in accordance with its ATC clearance, inability to maintain assigned flight level, en-route diversion across the prevailing traffic flow and encounters with wake turbulence. The procedures are applicable primarily when rapid descent and/or turn-back or diversion is required. The pilot's judgement shall determine the sequence of actions to be taken, having regard to the prevailing circumstances. Air traffic control shall render all possible assistance.

3.11.2 General Procedures

3.11.2.1 If an aircraft is unable to continue flight in accordance with its ATC clearance a revised clearance shall be obtained, whenever possible, prior to initiating any action.

3.11.2.2 The radiotelephony distress or urgency signal, preferably spoken three times, shall be used as appropriate. Subsequent ATC action with respect to that aircraft shall be based on the intentions of the pilot and the overall air traffic situation.

3.11.2.3 If prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time and, until a revised clearance is received, the pilot shall:

(a) Leave the assigned route or track by initially turning at least 45 degrees to the right or to the left. When possible, the direction of the turn should be determined by the position of the aircraft relative to any organised route or track system. Other factors which may affect the direction of the turn are:

(i) the direction to an alternate airport, terrain clearance;

(ii) any lateral offset being flown; and

(iii) the flight levels allocated on adjacent routes or tracks;

(b) following the turn, the pilot should:

(i) if unable to maintain the assigned flight level, initially minimize the rate of descent to the extent that is operationally feasible;

(ii) take account of other aircraft being laterally offset from its track;

(iii) acquire and maintain in either direction a track laterally separated by 28 km (15 nm) from the assigned route; and

(iv) once established on the offset track, climb or descend to select a flight level that differs from those normally used by 150 m (500 ft);

(c) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including the ATS route designator or the track code, as appropriate) and intentions on the frequency in use and on 121.500 MHz (or, as a back-up, on the inter-pilot air-to-air frequency 123.450 MHz);

(d) maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped);

(e) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

(f) keep the SSR transponder on at all times; and

(g) take action as necessary to ensure the safety of the aircraft.

3.11.2.4 When leaving the assigned track to acquire and maintain the track laterally separated by 28 km (15 nm), the flight crew should, **where practicable**, avoid overshooting the track to be acquired. However, flight crew should avoid excessive bank angles to ensure an adequate margin above the stall speed associated with high altitude flight. If the turn cannot be contained within 2 8 km (15 nm) the flight crew should be prepared to continue the turn to regain the required offset track.

3.11.3 **Extended Range Operations by Aeroplanes with Two Turbine Power Units (ETOPS)**

3.11.3.1 If the contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved, and request expeditious handling.

3.11.4 **Weather Deviation Procedures**

Note: *The following procedures are intended for deviations around thunderstorms. All possible circumstances cannot be covered. The pilot's judgement shall ultimately determine the sequence of actions taken. ATC shall render all possible assistance.*

3.11.4.1 **Obtaining Priority from ATC When Weather Deviation is Required**

3.11.4.1.1 When the pilot initiates communications with ATC, a rapid response may be obtained by stating 'WEATHER DEVIATION REQUIRED' to indicate that priority is desired on the frequency and for ATC response. When necessary, the pilot should initiate the communications using the urgency call ‘PAN PAN’ (preferably spoken three times) to alert all listening parties to a special handling condition which will receive ATC priority for issuance of a clearance or assistance.

3.11.4.1.2 The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

3.11.4.2 **Actions to be Taken When Controller-Pilot Communications are Established**

3.11.4.2.1 The pilot should notify ATC and request clearance to deviate from track advising, when possible, the extent of the deviation expected.

3.11.4.2.2 ATC should take one of the following actions:

(a) When appropriate separation can be applied, issue clearance to deviate from track; or

(b) if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC shall:

(i) advise the pilot of inability to issue clearance for the requested deviation;

(ii) advise the pilot of conflicting traffic; and

(iii) request the pilot's intentions.

3.11.4.2.3 The pilot should take the following action:

(a) Comply with the ATC clearance issued; or

(b) advise ATC of intentions and execute the procedures detailed in paragraph 3.12.4.3.

3.11.4.3 **Actions to be Taken if a Revised ATC Clearance Cannot be Obtained**

3.11.4.3.1 If the aircraft is required to deviate from track to avoid adverse meteorological conditions and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received the pilot shall take the following actions:

(a) If possible, deviate away from an organised track or route structure;

(b) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions on the frequency in use and on 121.500 MHz (or, as a back-up, on the inter-pilot air-to-air frequency 123.450 MHz);

(c) watch for conflicting traffic both visually and by reference to ACAS (if equipped);

Note: *If, as a result of actions taken under the provisions of paragraphs 3.12.4.3.1 (b) and (c), the pilot determines that there is another aircraft at or near the same flight level with which a conflict might occur, then the pilot is expected to adjust the path of the aircraft, as necessary, to avoid conflict.*

(d) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

(e) for deviations of less than 19 km (10 nm) remain at a level assigned by ATC;

(f) for deviations greater than 19 km (10 nm), when the aircraft is approximately 19 km (10 nm) from track, initiate a level change in accordance with the table below:

Route Centre-Line Track	Deviations > 19 km (10 nm)	Level Change
EAST 000° - 179° magnetic	LEFT RIGHT	DESCEND 90 m (300 ft) CLIMB 90 m (300 ft)
WEST 180° - 359° magnetic	LEFT RIGHT	CLIMB 90 m (300 ft) DESCEND 90 m (300 ft)

(g) when returning to track, be at its assigned flight level when the aircraft is within approximately 19 km (10 nm) of the centre-line; and

(h) if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

3.11.5 **Procedure for Strategic Lateral Offsets in NAT Airspace**

Note 1: *The following incorporates lateral offset procedures for both the mitigation of the increasing lateral overlap probability due to increased navigation accuracy and wake turbulence encounters.*

Note 2: *The use of highly accurate navigation systems (such as the global navigation satellite system (GNSS)) by an increasing proportion of the aircraft population has had the effect of reducing the magnitude of lateral deviations from the route centre-line and, consequently, increasing the probability of a collision should a loss of vertical separation between aircraft on the same route occur.*

3.11.5.1 It has been determined that allowing aircraft conducting oceanic flight to fly lateral offsets, not to exceed **2 nm** right of centre-line, will provide an additional safety margin and mitigate the risk of conflict when non-normal events such as aircraft navigation errors, altitude deviation errors and turbulence-induced altitude-keeping errors occur.

3.11.5.2 This procedure provides for offsets within the following guidelines. Along a route or track there will be three positions that an aircraft can fly: **centre-line or one or two miles right.** Offsets will not exceed **2 nm** right of centre-line. The intent of this procedure is to reduce risk (add safety margin) by distributing aircraft laterally across the three available positions. The following provisions apply:

(a) Aircraft without automatic offset programming capability must fly the centre-line.

(b) Operators capable of programming automatic offsets may fly the centre-line or offset by **1 nm or 2 nm** right of centre-line to obtain lateral spacing from nearby aircraft (offsets will never exceed **2 nm** right of centre-line). An aircraft overtaking another aircraft should offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken.

(c) Pilots should use whatever means available to determine the best flight path to fly.

(d) Pilots should also fly one of the three positions shown above to avoid wake turbulence. Aircraft should not offset to the left of centre-line nor offset more than **2 nm** right of centre-line. Pilots may contact other aircraft on frequency 123.450 MHz, as necessary, to co-ordinate the best wake turbulence offset option.

Note: *It is recognised that pilots will use their judgement to determine the action most appropriate to any given situation and have the final authority and responsibility for the safe operations of the aircraft.*

(e) Pilots may apply an offset outbound at the oceanic entry point and must return to centre-line at the oceanic exit point.

(f) Aircraft transiting oceanic radar areas may remain on their established offset positions.

(g) There is no ATC clearance required for this procedure and it is not necessary that ATC be advised.

(h) Voice Position Reports should be based on the waypoints of the current ATC clearance and **not** on the offset positions.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.12 Adherence to ATC Approved Routes

Annex 2.

3.12.1 If an aircraft has inadvertently deviated from the route specified in the ATC clearance it shall forthwith take action to regain such route within 100 nm from the position at which the deviation was observed.

3.13 Flight Information Service

PANS Doc 4444 ATM/501.

3.13.1 SIGMET Information

3.13.1.1 SIGMET information shall be transmitted to aircraft by VOLMET broadcast, by a general call to a group of aircraft, or by directed transmissions to individual aircraft, as determined by the appropriate area control centre according to circumstances, bearing in mind the need to ensure timely receipt of the information by the aircraft and to keep the load of the HF en-route communication channels to a minimum.

3.13.1.2 SIGMET information passed to aircraft shall cover a portion of the route up to two hours flying time ahead of the aircraft.

3.14 Air Traffic Services Messages

Regional Supplementary Procedures DOC 7030. PANS Doc 4444 ATM/501.

3.14.1 Filed flight plan messages for flights intending to operate within the Shanwick OCA, at a distance of 60nm or less from the northern or southern boundaries of the Shanwick OCA, shall also be addressed to the controlling authority for the adjacent OCA.

3.15 Secondary Surveillance Radar (SSR)

Regional Supplementary Procedures DOC 7030.

3.15.1 Operation of transponders

3.15.1.1 Unless otherwise directed by ATC, aircraft equipped with SSR transponders in the NAT region shall operate transponders continuously on Mode A Code 2000 regardless of the direction of flight, except that the last assigned code shall normally be retained for a period of thirty minutes after entry into NAT airspace except for the following deviations:

(a) For all SSR equipped aircraft operating on T9 and T213 the last assigned code shall be retained for a maximum of ten minutes after entry into NAT airspace;

(b) For all SSR equipped aircraft with a routeing sequence Reykjavik-Shanwick- Scottish (BIRD-EGGX-EGPX) the last assigned code shall be changed to Mode A 2000 on transfer from Reykjavik and no later than 10 minutes after entering Shanwick airspace.

Note: *This procedure does not affect the use of Special Purpose Codes 7500, 7600 and 7700 in cases of unlawful interference, radio failure or emergency.*

3.15.2 Aircraft intending to fly in the SOTA are expected to be equipped with an SSR transponder capable of responding to Mode A interrogations with 4096 codes and Mode C interrogations with Automatic Pressure Altitude Reporting. Aircraft SSR codes will be allocated by Shannon ACC.

3.15.2.1 Exemptions from the SOTA SSR requirements for specific flights may be obtained from the Shannon ACC Supervisor before departure.

3.16 Action in the event of Air-Ground Communication Failure

3.16.1 The following procedures are intended to provide general guidance for North Atlantic (NAT) aircraft experiencing a communications failure. These procedures are intended to complement and not supersede State procedures/regulations. It is not possible to provide guidance for all situations associated with a communications failure.

3.16.2 General

3.16.2.1 If so equipped, the pilot of an aircraft experiencing a two way communications failure shall operate the secondary radar transponder on identity Mode A Code 7600 and Mode C.

3.16.2.2 The pilot shall also attempt to contact any ATC facility or another aircraft and inform them of the difficulty and request they relay information to the ATC facility with whom communications are intended.

3.16.3 Communications failure prior to entering NAT oceanic airspace.

3.16.3.1 Due to the potential length of time in oceanic airspace, it is strongly recommended that a pilot experiencing communications failure whilst still in European domestic airspace does not enter the Shanwick Oceanic Control Area but adopts the procedure as specified at ENR 1.1 sub-section 3. However, if the pilot elects to continue, then to allow the ATC organisation to provide adequate separation, adopt either the procedure at paragraphs 3.17.3.2 or 3.17.3.3.

3.16.3.2 If the pilot elects to operate **with** a received and acknowledged oceanic clearance, the pilot shall enter oceanic airspace at the cleared oceanic entry point level and speed and proceed in accordance with the received and acknowledged oceanic clearance. Any level or speed changes required to comply with the oceanic clearance shall be completed in domestic airspace within the vicinity of the oceanic entry point.

3.16.3.3 If the pilot elects to operate **without** a received and acknowledged oceanic clearance, the pilot shall enter oceanic airspace at the first oceanic entry point level and speed as contained in the filed flight plan and proceed via the filed flight plan route to landfall. That first oceanic level and speed shall be maintained to landfall.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.16.4 Communications failure prior to exiting NAT oceanic airspace.

3.16.4.1 If cleared on flight plan route, the pilot shall proceed in accordance with the last received and acknowledged oceanic clearance to the last specified oceanic route point, normally landfall, then continue on flight plan route. Maintain the last assigned oceanic level and speed to landfall. After passing the last specified oceanic route point, conform with the relevant State procedures/regulations.

3.16.4.2 If cleared **on other than** flight plan route, the pilot shall proceed in accordance with the last received and acknowledged oceanic clearance to the last specified oceanic route point, normally landfall. After passing this point, rejoin the filed flight plan route by proceeding directly to the next significant point ahead of the track of the aircraft as contained in the filed flight plan. Where possible use published ATS route structures, then continue on the flight plan route. Maintain the last assigned oceanic level and speed to the last specified oceanic route point. After passing this point conform with the relevant State procedures/regulations.

3.16.5 **Emergency Satellite Voice Calls from Aircraft** (See GEN 3.6, paragraph 6.4).

3.17 Minimum Aircraft System Performance Specification (MASPS)

3.17.1 **Application of Minimum Navigation Performance Specification (MNPS) in Shanwick OCA**

3.17.1.1 MNPS applies in that part of the Shanwick Oceanic Control Area from FL 285 to FL 420 inclusive. Aircraft using the NAT High Level Airspace (NAT HLA) shown at ENR 6-2-2-4-3 are required to have a navigation performance capability such that:

(a) Pre-PBN navigation:

- The standard deviation of lateral track errors shall be less than 6.3 nm;
- the proportion of total flight time spent by aircraft 30 nm or more off the cleared track shall be less than 5.3×10^{-4};
- the proportion of the total flight time spent by aircraft between 50 and 70 nm off the cleared track shall be less than 13×10^{-5}.

These mathematical standards can be approximated operationally as follows:

- Aircraft must be operated so that lateral deviations from track remain less than 12.6 nm for at least 95 per cent of the time the system is required for navigation;
- the navigation system must demonstrate a continuing capability to keep lateral deviations from cleared track in excess of 30 nm to less than 53 per 100 000 flight hours in the system; and
- keep lateral deviations between 50 and 70 nm from cleared track to less than 13 per 100 000 flight hours in the system.

(b) Area Navigation (RNAV) Specifications:

- RNAV 10 (RNP 10) specification shall be applicable to navigation systems used to support a minimum lateral separation of 60 nm between aircraft that the requirements to operate in the NAT HLA provided that a portion of the route of the aircraft is within, above or below NAT HLA. In addition RNAV 10 can support a minimum lateral separation of 50 nm between aircraft operating in the New York Oceanic East FIR.

(c) Required Navigation Performance (RNP) Specifications:

- RNP 4 specification shall be applicable to navigation systems used to support minimum lateral separations as in (b) above and is required to support minimum lateral separations of 30 nm between aircraft operating within the control area of the New York Oceanic East FIR.

Note 1: *Aircraft that have been NAT MNPS approved by the State of Registry or the State of the Operator prior to 1 January 2015 shall be permitted to operate in NAT HLA until 30 January 2020. As of 1 January 2015 new NAT MNPS approvals shall not be granted.*

Note 2: *RNAV 10 (RNP 10) and RNP 4 approved aircraft require a NAT HLA MNPS approval to demonstrate compliance with the MNPS established for the NAT HLA.*

Note 3: *Except for the navigational portion the requirements for a NAT HLA MNPS approval are equivalent to the 3 requirements that were associated with granting NAT MNPS approvals.*

3.17.1.2 These mathematical standards can be approximated operationally as follows:

(a) Aircraft must be operated so that lateral deviations from track remain less than 12.6 nm for at least 95 per cent of the time the system is required for navigation;

(b) the navigation system must demonstrate a continuing capability to keep lateral deviations from cleared track in excess of 30 nm to less than 53 per 100 000 flight hours in the system; and

(c) keep lateral deviations between 50 and 70 nm from cleared track, to less than 13 per 100 000 flight hours in the system.

3.17.1.3 In order to ensure that the required navigation standards are being observed within the NAT HLA, a continuous monitoring of the navigation accuracy of aircraft in this airspace takes place using land based radars in Canada, Ireland, France, Iceland and the UK. Where large navigation errors are observed the pilot of the aircraft concerned will be notified by the ATC Unit observing the error. The subsequent investigation to determine the cause of the error will involve the ATC Unit, the operator, and the State of Registry.

3.17.1.4 Lateral separation minima for aircraft operating in the NAT HLA are set out in the Regional Supplementary Procedures, NAT Region (ICAO Doc 7030/5). It is implicit in the concept of MNPS and essential to the application of these quoted separation minima, that all operations in the NAT HLA – be they Public Transport or General Aviation – achieve the highest standards of

navigation performance accuracy. Thus all flights within the NAT HLA must have the specific approval of either the State of Registry of the aircraft or the State of Registry of the operator for such operations. UK registered aircraft are approved by the UK CAA in accordance with Article 121 of the Air Navigation Order 2009. Such approvals will encompass all aspects of the expected navigation performance accuracy of the aircraft, navigation equipment carried, installation and maintenance procedures and crew navigation procedures and training.

3.17.1.5 The inherent obligations placed upon crews and operators of UK registered aircraft by the NAT HLA requirements can be summarized as follows:

(a) The flight MUST have prior approval for operations in NAT HLA;

(b) the approved aircraft minimum navigation installation MUST be serviceable and MUST have been checked for accuracy prior to entry into NAT HLA;

(c) whilst in NAT HLA the approved operating procedures MUST be adhered to. Except in emergency, diversions from the ATC cleared track MUST NOT be made without prior approval of the controlling ATC Unit;

(d) if subsequent unserviceability reduces the navigational capability below the required minimum for MNPS operations after entry into NAT HLA then the controlling ATC Unit MUST be advised so as to allow for any adjustments of separation from adjacent aircraft;

(e) there MUST be a high standard of supervision, monitoring and cross checking of data inserted into automatic navigation system to prevent large errors arising from erroneous waypoint entries;

(f) there MUST be a high standard of co-ordination with ATC Units to ensure that misunderstandings over the route to be flown do not occur.

3.17.1.5.1 Westbound flights requesting clearance from Shanwick to enter North Atlantic High Level Airspace (NAT HLA) may be invited to confirm that they have been approved for operating within NAT HLA by their State of Registry or their State of Operator.

3.17.1.5.2 The submission of a Flight Plan alone does **NOT** constitute NAT HLA operating approval. Pilots/operators unable to provide such confirmation will be issued with an Oceanic Clearance to operate outside NAT HLA (below FL 285 or above FL 420). Details of the flight will be passed to the NAT Central Monitoring Agency (CMA) for follow-up action by the relevant State Aviation Authority.

3.17.1.6 Navigation Equipment for Unrestricted NAT HLA Operations

3.17.1.6.1 In order to justify consideration for State approval for future unrestricted operation in the NAT HLA an aircraft will be required to be equipped as follows:

(a) **Two** fully serviceable Long Range Navigation Systems (LRNS).
A LRNS may be one of the following:

(i) One Inertial Navigation System (INS);

(ii) one Global Navigation Satellite System (GNSS); or

(iii) one navigation system using the inputs from one or more Inertial Reference System (IRS) or any other sensor system complying with the NAT HLA requirement.

(b) each LRNS must be capable of providing to the flight crew with a continuous indication of the aircraft position relative to desired track.

(c) it is highly desirable that the navigation system employed for the provision of steering guidance is capable of being coupled to the auto-pilot.

Note 1: *currently the only GPS system fully operational and for which approval material is available is GPS.*

Note 2: *A GPS installation must be approved as follows:*
If the two required LRNSs are both GPS they must be approved in accordance with the current version of FAA Advisory Circular AC-20—138D Appendix 1. AC-20-138 requires that GPS systems used in Oceanic airspace must have a FDE function. States other than the USA may set their own standards for operational approval of GPS to provide Primary Means of Navigation in Oceanic and remote areas but in all cases these approvals will include the requirement to carry out Pre-Departure Satellite Navigation Prediction Programmes. If, however, GPS serves as only one of the two required LRNSs then it must be approved in accordance with FAA TSO-C129 or later standard as Class A1, A2, B1, B2, C1 or C2 or with equivalent European Aviation Safety Agency (EASA) documentation ETSO-C129a. In this instance individual States vary in their insistence upon the need for the conduct of pre-departure satellite navigation prediction programmes (viz. FDE/RAIM).

Note 3: *Currently equivalent approval material for GLONASS is not under development but it will need to be available prior to approval of any GLONASS equipped aircraft for NAT HLA operations.*

3.17.1.7 **Provisions for Partial Loss of the full MNPS Navigational Capability**

3.17.1.7.1 In the event of an aircraft **having State approval for un-restricted operation in NAT HLA** suffering partial loss of navigation capability (only one long range navigation system serviceable) prior to entry into Oceanic Airspace, the pilot should either avoid NAT HLA or consider using the following routes:

(a)

Stornoway Benbecula	}	ATSIX (60N 010W) - 61N 01234W - ALDAN - Keflavik; RATSU (61N 010W) - ALDAN - Keflavik;

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

(b)

Machrihanish Glasgow Belfast Shannon	**}**	GOMUP (57N 010W) - 60N 015W - 61N 01630W - BREKI - Keflavik;

(c) Keflavik - SOPEN - Kulusuk - Kangerlussuaq - Frobay;

(d) Keflavik - EPENI - 63N 030W - 61N 040W - Prins Christian Sund;

(e) Prins Christian Sund - 59N 050W - AVUTI - PRAWN - Nain;

(f) Prins Christian Sund - 59N 050W - CUDDY - PORGY - Hopedale;

(g) Prins Christian Sund - 58N 050W - HOIST - LOACH - Goose VOR.

3.17.1.7.2 These routes are subject to the following conditions:

(a) Sufficient navigation capability remains to meet the MNPS and the requirements in Annex 6, Part I, Chapter 7 (paragraph 7.2 and paragraph 7.3) can be met by relying on the use of short-range navigation aids;

(b) a revised flight plan is filed with the appropriate ATS Units; and

(c) an appropriate ATC clearance is obtained.

Note 1: *A revised oceanic ATC clearance will be issued after co-ordination between all the OAC's concerned.*

Note 2: *Should the Organized Track System at the time of the incident extend to the Northern part of the NAT Region, the aircraft concerned may be required to accept a lower than optimum flight level in its revised oceanic clearance, especially during peak traffic periods.*

Note 3: *The above guidance material in no way relieves the pilot from the obligation to take the best possible course of action in the light of prevailing circumstances.*

3.17.1.8 Special Routes for Aircraft fitted with a Single LRNS

3.17.1.8.1 Aircraft, **having State approval for operating in NAT HLA,** which are equipped with normal short-range navigation equipment (VOR/DME, ADF) and at least one fully operational Long Range Navigation System (see paragraph 3.17.1.6.1) are considered capable of meeting the MNPS while operating along the following routes:

Note: *Routes (a) to (g) below have become known as 'Blue Spruce' routes and it has been determined that continuous VHF coverage exists on these routes at FL 300 and above except where stated.*

(a)

Stornoway Benbecula	**}**	ATSIX (60N 010W) - 61N 01234W - ALDAN - Keflavik; (HF is required on this route); RATSU (61N 010W) - ALDAN - Keflavik; (VHF coverage exists and, subject to prior coordination with Scottish AC (Prestwick) (Scottish Control) and Shanwick, this route can be used by non HF equipped aircraft);

(b)

Machrihanish Glasgow Belfast Shannon	**}**	GOMUP (57N 010W) - 60N 015W - 61N 01630W - BREKI - Keflavik; (HF is required on this route);

(c) Keflavik - SOPEN - Kulusuk - Kangerlussuaq - Frobay (HF is required on this route);

(d) Keflavik - EPENI - 63N 030W - 61N 040W - Prins Christian Sund;

(e) Prins Christian Sund - 59N 050W - AVUTI - PRAWN - Nain;

(f) Prins Christian Sund - 59N 050W - CUDDY - PORGY - Hopedale;

(g) Prins Christian Sund - 58N 050W - HOIST - LOACH - Goose VOR;

(h)

See AIP Ireland	}	LASNO - BEGAS	}	- Asturias VOR or - Santiago VOR	(HF is required on this route);

(i) Funchal/Porto Santo - Santa Maria/Ponta Delgada/Lajes;

(j) Lisboa/Porto/Faro - Ponta Delgada/Santa Maria/Lajes.

3.17.1.9 Special Routes for Aircraft Fitted with Short-Range Navigation Equipment Operating Between Iceland and Other Parts of Europe

3.17.1.9.1 Aircraft **having State approval for operating in NAT HLA** provided with normal short-range navigation equipment (VOR/DME, ADF) operating on the routes below and within NAT HLA are considered capable of meeting the MNPS:

(a) Flesland - Myggenes - INGO Keflavik (G3);

(b) Sumburgh - Akraberg - Myggenes (G11).

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.17.2 **Application of Reduced Vertical Separation Minima (RVSM) in Shanwick OCA**

3.17.2.1 RVSM applies in the MNPS Area of the Shanwick Oceanic Control Area from FL 290 to FL 410 inclusive. Aircraft using this Area, shown at ENR 6-2-2-4-4, are required to have a height keeping performance capability as defined in the appropriate ICAO Documents/JAA Temporary Guidance Leaflet.

3.17.2.2 In order to ensure that the overall standard of required height keeping is being achieved within RVSM airspace a technical height keeping monitoring program has been established in accordance with ICAO guidance.

3.17.2.3 In order to ensure that the required altimetry standards are being observed within RVSM airspace, a technical height keeping monitoring programme has been initiated.

3.17.2.3.1 For the task of monitoring technical height keeping accuracy, a hybrid system comprising of a Height Monitoring Unit (HMU) and GPS Monitoring Systems (GMS) is employed. The HMU element consists of an unmanned ground-based HMU near Strumble (United Kingdom).

3.17.2.3.2 The GMS consists of air portable Global Positioning System Monitoring Units (GMUs), GPS reference stations, access to Mode C and MET information, post-flight processing facilities and logistic support.

3.17.2.4 It is implicit in the concept of RVSM airspace and essential to the application of this quoted vertical separation minimum, that all operations in the NAT High Level Airspace/RVSM airspace - be they Public Transport or General Aviation - achieve the highest standards of navigation performance accuracy. Thus all flights within the NAT High Level Airspace must have the specific approval of either the State of Registry of the aircraft, or the State of Registry of the Operator, for such operations. UK Registered aircraft are approved by the UK CAA in accordance with Article 122 of the Air Navigation Order 2009. Such approvals will encompass all aspects of the expected height keeping performance accuracy of the aircraft; altitude measuring equipment carried; installation and maintenance procedures and crew navigation procedures and training.

3.17.2.4.1 The inherent obligations placed upon crews and operators of UK registered aircraft by the NAT RVSM airspace requirements can be summarized as follows:

(a) The flight **MUST** have prior approval for operations in NAT RVSM airspace;

(b) the approved aircraft minimum altitude measuring installation **MUST** be serviceable and **MUST** have been checked for accuracy prior to entry into RVSM airspace;

(c) whilst in RVSM airspace the approved operating procedures **MUST** be adhered to. Except in emergency, diversions from the ATC cleared Flight level **MUST NOT** be made without prior approval of the controlling ATC Unit;

(d) if subsequent unserviceability reduces the altitude measuring capability below the required minimum for RVSM operations after entry into RVSM airspace then the controlling ATC Unit **MUST** be advised so as to allow for any adjustments of separation from adjacent aircraft;

(e) there **MUST** be a high standard of supervision, monitoring and cross checking of altimeters to prevent a large discrepancy from the cleared flight level (less than 300 ft);

(f) an automatic Altitude Keeping Device (AKD) should be operative and engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or the onset of turbulence, require disengagement. In any event, adherence to cruise altitude should be accomplished by reference to one of the two primary altimeters;

(g) there **MUST** be a high standard of co-ordination with ATC Units to ensure that misunderstandings over the cleared flight level do not occur.

3.17.2.5 Westbound flights requesting clearance from Shanwick to enter North Atlantic (NAT) Reduced Vertical Separation Minima (RVSM) airspace may be invited to confirm that they have been approved for operating within RVSM airspace by their State of Registry or their State of Operator.

3.17.2.5.1 The submission of a Flight Plan alone does **NOT** constitute NAT RVSM operating approval. Pilots/Operators unable to provide such confirmation will be issued an Oceanic Clearance to operate outside RVSM airspace (below FL 290 or above FL 410). Details of the flight will be passed to the NAT Central Monitoring Agency (CMA) for follow-up action by the relevant State Aviation Authority.

3.17.2.6 Altitude Measuring Equipment or Features for Unrestricted RVSM airspace Operations

3.17.2.6.1 In order to justify consideration for State approval for future unrestricted operation in the RVSM airspace, an aircraft will be required to be equipped as follows:

(a) at least two primary altitude measurement systems meeting the MASPS requirements;

(b) a static source error correction (SSEC)/position error correction (PEC) must be applied automatically;

(c) an altitude deviation warning system that shall alert when the altitude displayed to the flight crew deviates from selected altitude by more than a nominal value. This nominal value shall not be greater than 300 ft. For aircraft whose application for type certification was made after 1 January 1997, the nominal value should not be greater than 200 ft. The overall equipment tolerance in implementing this nominal value shall not exceed 50 ft; and

(d) an automatic altitude-alerting device which is required to be capable of controlling altitude within +/- 65 ft of the selected altitude, when the aircraft is operated in straight and level flight, under non-turbulent, non-gust conditions.

3.17.2.7 Suspension of RVSM due to actual or forecast Turbulence

3.17.2.7.1 On receipt of information indicating actual or forecast Turbulence, ATC should take the following action:

(a) if possible, establish increased vertical, longitudinal or lateral separation; or

(b) suspend RVSM operations in the affected area.

3.17.3 In order to assist operators and crews to achieve the required standard of navigation and height keeping accuracy two documents have been published:

(a) Guidance and Information Material concerning Air Navigation in the NAT Region, including RVSM, is produced by and available from the ICAO Paris Office. The material in this Document deals primarily with planning and management of operations in the NAT Region and is mainly addressed to States and Operators;

(b) The North Atlantic Operations and Airspace Manual. This manual has been developed specifically for use by pilots intending to operate in the NAT HLA. This manual is available for download from the EUR/NAT Regional Office section of the ICAO website www.icao.int.

3.17.4 Operators of UK registered aircraft intending to fly in NAT High Level Airspace can obtain further information on the measures necessary to gain CAA approval from the following:

Equipment and Installation Approvals:

The Chief Surveyor,

Post: CAA Safety Regulation Group, Aviation House, South Area, London Gatwick Airport, West Sussex RH6 0YR.
Phone: +44-(0)1293-573362;

Operational Approvals:

Post: Civil Aviation Authority, Flight Operations Department (Attn: Flight Operations Policy), Aviation House, 1W, South Area, London Gatwick Airport, West Sussex RH6 0YR.
Phone: +44-(0)1293-573521
Fax: +44-(0)1293-573991;

Further Information on other aspects of MNPS/RVSM Operations (including height-monitoring requirements):

Post: North Atlantic Central Monitoring Agency, c/o NATS Limited, Room G41, Atlantic House, Fresson Avenue, Prestwick, Ayrshire, KA9 2GX.
Phone: +44-(0)1292-692412 HMU Status (recorded message)
Phone: +44-(0)1292-692760
Fax: +44-(0)1292-692754
Email: natcma@nats.co.uk

3.18 Routes Between Northern Europe and Spain/Canaries/Lisbon FIRs

3.18.1 Operators are recommended to Flight Plan using the following routes:

Route	Compulsory Reporting Points
Tango Nine (T9)	LASNO, BEGAS
Tango Two One Three (T213)	TAMEL, BERUX
Tango Sixteen (T16)	OMOKO, GONAN, ETESO, NAVIX

3.18.2 For fuel planning purposes, operators should note that optimum cruising levels may not be available on the Tango Routes.

3.19 Alerting and Search and Rescue Services

(See GEN 3.6 of the UK AIP).

3.20 Procedures — Westbound

(a) Westbound flights are advised to flight plan the routes through UK Airspace that are offered by the Standard Routes Document published on the AIS CD-ROM.

(b) Westbound flights departing from UK airports that are not listed are to flight plan via the published UK Upper ATS route structure.

(c) For the UK Upper ATS Routes for the Westbound North Atlantic Flow refer to the Standard Routes Document published on the AIS CD-ROM.

3.21 Procedures - In the Event of Shanwick Oceanic Area Control Centre Evacuation

3.21.1 Scottish and Oceanic Area Control Centre includes both Scottish Radar and Shanwick Oceanic Control. Should Shanwick OACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Shanwick OCA and Scottish Radar units. The HF radio communications for the Shanwick Oceanic Centre are remotely located, so will not be affected.

3.21.2 In the event that Shanwick OACC is evacuated, Gander Oceanic will assume responsibility for the provision of Air Traffic Services (ATS) within the Shanwick OCA to the best of their ability.

3.21.3 As soon as possible after evacuation a contingency message will be sent to the operators and agencies that receive the NAT track message. A NOTAM shall also be issued. Recipients of both messages shall advise the affected traffic.

3.21.4 On receipt of the contingency message pilots are requested to broadcast to other flights on 121.500 and 123.450 MHz. A listening watch on these frequencies must be maintained.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.21.5 HF congestion is likely. Communications should be kept to a necessary minimum. Unnecessary route changes will not be issued.

3.21.6 The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

3.21.7 **Procedures - Westbound Flights**

3.21.7.1 In the event that Shanwick OACC must be evacuated, only aircraft with received and acknowledged Oceanic Clearances shall be permitted to transit Shanwick OCA.

3.21.7.2 If unable to obtain or acknowledge an Oceanic Clearance, flights should plan to re-route around the Shanwick OCA or to land at an appropriate aerodrome.

3.21.7.3 Due to the uncertainty surrounding the contingency situation pilots are strongly advised to re-route around the Shanwick OCA or to land at an appropriate aerodrome even if they are in receipt of an acknowledged Oceanic Clearance.

3.21.7.4 Aircraft operating with a received and acknowledged Oceanic Clearance can, at pilot's discretion, continue, but must expect a limited ATC service within the Shanwick FIR. Due to the remote location of the HF service provider communications will be unaffected.

3.21.7.5 **Westbound Flights within Scottish FIR**

3.21.7.5.1 If Scottish radar is subject to evacuation also, pilots of flights operating within the Scottish FIR may elect to continue, the flight must be operated in accordance with the last received and acknowledged Oceanic Clearance from eastern boundary until last specified route point, normally landfall. Flights not at the cleared Oceanic Flight Level should follow the procedure specified in paragraph 3.22.7.5.4.

3.21.7.5.2 Whilst operating within the Scottish FIR all flights are requested to make position reports on the last assigned frequency, stating position, level and next fix.

3.21.7.5.3 Flights may also elect to contact Scottish FIR aerodromes for assistance.

3.21.7.5.4 The following communications procedures have been developed in accordance with the Traffic Information Broadcast by Aircraft (TIBA) procedures recommended by ICAO (Annex 11 - Air Traffic Services, Attachment C). These procedures should be applied when completing an altitude change to comply with the Oceanic Clearance.

At least 3 minutes prior to the commencement of a climb or descent the flight should broadcast on the last assigned frequency, 121.500, 243.000 and 123.450 MHz the following:

ALL STATIONS
(callsign)
(direction)
DIRECT FROM (landfall fix) TO (Oceanic entry point)
LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (distance)(direction) FROM (Oceanic entry point) AT (time)

When the level change begins, the flight should make the following broadcast:

ALL STATIONS
(callsign)
(direction)
DIRECTION FROM (landfall fix) TO (Oceanic entry point)
LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

When level, the flight should make the following broadcast:

ALL STATIONS
(callsign)
MAINTAINING FLIGHT LEVEL (number)

3.21.7.6 **Westbound Flights within the Shanwick Oceanic Control Area**

3.21.7.6.1 Gander Oceanic shall endeavor to provide an ATC service throughout the Shanwick OCA as soon as evacuation commences.

3.21.7.6.2 All flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate, and subsequent position. This also applies to flights using automated position reports (ADS/ FMC) because those reports may not have been received by the next agency.

3.21.7.6.3 When ADS equipped flights are notified of a Shanwick evacuation they must revert to voice position reporting until clear of Shanwick OCA, or notified otherwise. Pilots should note that they may be asked to log-on to CYQX when within the Shanwick OCA. They should not initiate this action until instructed to do so.

3.21.7.6.4 Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

3.21.7.6.5 If unable to establish radio contact, flights may use SATCOM voice or satellite telephone to provide position reports.

3.21.7.6.6 Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

3.21.8 **Procedures for Eastbound Flights within the Shanwick Oceanic Control Area**

3.21.8.1 Gander Oceanic shall endeavour to provide an ATC service throughout the Shanwick OCA as soon as evacuation commences.

ENR 2.2 OTHER REGULATED AIRSPACE (continued)

3.21.8.2 Flights operating with a received and acknowledged Oceanic Clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

3.21.8.3 When ADS equipped flights are notified of a Shanwick evacuation they must revert to voice position reporting until clear of Shanwick OCA, or notified otherwise. Pilots should note that they may be asked to log-on to CYQX when within the Shanwick OCA. They should not initiate this action until instructed to do so.

3.21.8.4 Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

3.21.8.5 If unable to establish radio contact, flights may use SATCOM voice or satellite telephone to provide position reports.

3.21.8.6 Flights making automatic position reports are required to make voice position reports whilst within the Shanwick OCA, unless advised otherwise.

3.21.8.7 Communications with the next ATSU should be established at the earliest opportunity. Where no contact can be established, Shanwick Radio should be contacted on HF for advice.

3.21.8.8 **Procedures for Eastbound Flights entering the Scottish FIR**

3.21.8.8.1 Unless instructed otherwise, flights entering the Scottish FIR should use the following contingency routes:

(a) RATSU DCT GUNPA contact Reykjavik Oceanic Control - 126.750 MHz;

(b) LUSEN DCT ELKOG DCT KESEG UN603 SUM UM125 ORVIK contact Stavanger Control - 135.675 MHz;

(c) ATSIX UP60 AKIVO - UP60 - FORTY UP600 KLONN contact Stavanger Control - 120.650 MHz;

(d) ORTAV DCT ODPEX DCT STN UN591 ADN UN581 ELSAN contact Copenhagen Control - 134.675 MHz;

(e) BALIX UP59 ASKAM UL7 contact Maastricht Control - 132.085 MHz;

(f) ADODO DCT AMTAP DCT NEVIS DCT FINDO UM982 TOPPA contact Maastricht Control - 132.085 MHz;

(g) ERAKA DCT ETSOM DCT GOW UL602 UMBEL contact London Control - 128.125 MHz;

(h) ETILO DCT EVNAL DCT MAC UN57 DCS contact London Control - 132.860 MHz;

(i) GOMUP DCT GINGA DCT SOSIM contact London Control - 135.580 MHz.

3.21.8.8.2 Flights operating close to the Reykjavik or Shannon northern boundaries should, where possible, establish communications with those units in order to negotiate a re-route to avoid the Scottish FIR.

3.21.9 **Procedures for Flights Flight Planned to enter Shanwick OCA from other Oceanic Centres**

3.21.9.1 Flights within Reykjavik or Santa Maria Oceanic airspace, can anticipate a large re-route to avoid the Shanwick OCA and Scottish FIR. Reykjavik and Santa Maria will issue advice on procedures to be followed.

3.22 Enquiries and Comments

3.22.1 Enquiries and comments about ATS procedures applicable to the Shanwick OCA should be addressed to:

Manager PC Procedures and Development,

Post: Room F-059, NATS Prestwick, Prestwick Centre, Fresson Avenue, Prestwick, Ayrshire, KA9 2GX.

3.22.2 Advice on day-to-day operations is available from Shanwick Oceanic Watch Manager Prestwick.

Phone: 01294-655300.

3.23 Format of NAT Company Preferred Routing Messages (CPR PRM)

Westbound:

(PRIORITY) (DESTINATION ADDRESS)
(DATE TIME OF ORIGIN) (ORIGIN ADDRESS)
(MESSAGE TYPE) — (COMPANY) — (WESTBOUND) — (YYMMDD AT 30W)
(DEP / DEST) (FIRST UK POINT) (ANCHOR POINT) (OCA RPS) (LANDFALL)
(INLAND FIX) (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
111824 LSZHSWRW
PRM — SWR — W — 930212 —
LSZH / KJFK BNE BEL 55/10 56/20 57/30 55/40 53/50 YAY TOPPS 02
LSZH / KIAD BNE BURAK 53/15 53/20 52/30 51/40 50/50 YQX TUSKY 01

Eastbound:

(PRIORITY) (DESTINATION ADDRESS)
(DATE TIME OF ORIGIN) (ORIGIN ADDRESS)
(MESSAGE TYPE) — (COMPANY) — (EASTBOUND) — (YYMMDD AT 30W)

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 2.2 OTHER REGULATED AIRSPACE (continued)

Designation and Lateral Limits	Vertical Limits and Classification	Controlling Authority
Humber Gateway TMZ - the area bounded by: 535410N 0001037E - 534902N 0001650E - 534153N 0002245E - 533714N 0002412E - 533258N 0001703E thence in an anti-clock-wise direction by an arc of a circle radius 5 nm centred on 532830N 0001315E to 533330N 0001305E - 533902N 0001056E - 534919N 0000046W - 535410N 0001037E.	FL 100 ——— SFC (Class G)	Anglia Radar (128.925 MHz (backup 125.275 MHz)) - from surface up to and including FL 65, between 0630-2200 UTC Winter (Summer 1hr earlier). Swanwick Military (135.075 MHz) - above FL 65 to FL 100, H24. Additionally from surface up to and including FL 65 between 2200-0630 UTC 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 Humber Gateway TMZ is not subject to ATC approval. Access to the Humber Gateway 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
London Array (Area A) 513906N 0012459E - 514036N 0012507E - 514305N 0012824E - 514304N 0013112E - 514050N 0013459E - 513722N 0013646E - 513341N 0013627E - 513306N 0013414E - 513325N 0012642E - 513516N 0012327E - 513552N 0012310E - 513906N 0012459E.	FL 65 ——— SFC (Class G)	Southend Radar 130.775 MHz
London Array (Area B) 513906N 0012459E - 513552N 0012310E - 513814N 0012201E - 514036N 0012507E - 513906N 0012459E.	5500 ft ——— SFC (Class G)	Southend Radar 130.775 MHz
Note 1: *Providing aircraft have and operate secondary surveillance radar equipment, as defined in GEN 1.5 paragraph 5.3, access to the London Array TMZ is not subject to ATC approval.* ***Note 2:*** *The pilot of an aircraft that wishes to operate in the London Array TMZ without serviceable transponder equipment as defined in GEN 1-5 paragraph 5.3 may be granted access to the TMZ subject to specific ATC approval. This approval may be obtained from Southend Radar/Approach on frequency 130.775 MHz.*		

5 En-Route Radio Mandatory Zones

5.1 There are currently no en-route Radio Mandatory Zones.

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