EGCC — MANCHESTER

EGCC AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EGCC — MANCHESTER

EGCC AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	Lat: 532114N Long: 0021630W Mid point of Runway 05L/23R.
2	Direction and distance from city	7.5 nm SW of Manchester.
3	Elevation / Reference temperature	257 ft / 18 C
4	Geoid undulation at AD ELEV PSN	167 FT
5	Magnetic Variation/ Annual Change	1.53°W (2017) / 0.16°
6	AD Administration, address, telephone, telefax, AFS, e-mail address, website address	MANCHESTER AIRPORT PLC Post: Manchester Airport, Manchester M90 1QX Phone: 0161-209 2835 (ATC) Phone: 0161-489 3331 (Airfield Duty Manager) Phone: 0161-499 5502 (AFTN) Phone: 0871-271 0711 (Manchester Airport PLC - General Enquiries) Phone: 0161-493 1850 (Airport Co-ordination Ltd - PPR Mon-Fri; 0900-1700) Fax: 0161-489 2889 (Airfield Duty Manager) Fax: 0161-499 5501 (AFTN) AFS: EGCC
7	Type of Traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	All telephone calls to ATC will be recorded.

EGCC AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	H24
2	Customs and Immigration	H24
3	Health and sanitation	H24 (Port Health)
4	AIS Briefing Office	
5	ATS Reporting Office (ARO)	
6	MET Briefing Office	
7	Air Traffic Service	H24 See also AD 2.18.
8	Fuelling	H24
9	Handling	H24
10	Security	H24
11	De-icing	H24
12	Remarks	Refer to AD 2.20 item 1.

EGCC AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities	HILOs 15 and 18.6 m and 9 m conveyor belts. 9 ton fork lift. Nearest railway siding: Heald Green 1.3 nm
2	Fuel and oil types	AVTUR JET A-1 (anti-icing additive not included). W80, W100 and W120 98, 390, 500.
3	Fuelling facilities/capacity	Hydrants at all pier stands for AVTUR JET A-1. No over-wing fuelling.
4	De-icing facilities	Contact: Swissport, Airline Services.
5	Hangar space for visiting aircraft	Limited. Signature Flight Support.
6	Repair facilities for visiting aircraft	By arrangement with Flybe, Monarch, Signature Flight Support, Thomas Cook.
7	Remarks	Oxygen and related servicing, by arrangement with handling agent. A nominated handling agent is Mandatory for all visiting aircraft.

EGCC AD 2.4 HANDLING SERVICES AND FACILITIES (continued)

		Signature Flight Support – Tel: 0161-436 6666. Fax: 0161-436 3450. E-mail: man@signatureflight.co.uk. Telex: 668777. VHF Company Frequency 130.650 MHz (Northside facility). Premiere Handling – Tel: 07958 877 500 Email: operations@premierehandling.com Other handling agents based at Manchester are: Menzies – Swissport – dnata – WFS UK – Aviator – ASIG

EGCC AD 2.5 PASSENGER FACILITIES

1	Hotels	6
2	Restaurants	Restaurants in all Terminals.
3	Transportation	Buses, trains, taxis and car hire. Nearest railway station: Airport.
4	Medical facilities	Medical Response H24 - First aid only.
5	Bank and Post Office	Post office Terminal 1. Bureau de Change.
6	Tourist Office	
7	Remarks	

EGCC AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	RFF Category A10
2	Rescue equipment	
3	Capability for removal of disabled aircraft	170,000 kg. Contact 0161-489 3331 (Airfield Duty Manager).
4	Remarks	

EGCC AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Type of clearing equipment	Mechanical, Chemical anti-icing.
2	Clearance priorities	During snowfall, aerodrome may be SNOCLO and Runway 05R/23L may not be cleared and available.
3	Remarks	Latest information from Snow State/Clearance Programme Tel: 0161-489 3331 (Airfield Duty Manager).

EGCC AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Surface: Concrete. PCN 56/R/C/W/T Surface: Concrete. PCN 97/R/B/W/T
2	Taxiway width, surface and strength	Taxiway ALPHA: 23 m. Surface: Concrete and asphalt. PCN 66/F/C/W/T PCN between Alpha-Echo and Bravo: 46 F/C/W/T Taxiway SIERRA: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway TANGO: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway UNIFORM: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway VICTOR: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway VICTOR ALPHA: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway VICTOR BRAVO: 23 m. Surface: Concrete and asphalt.

EGCC AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA (continued)

		PCN 79/R/C/W/T Taxiway VICTOR CHARLIE: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway WHISKEY: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway YANKEE: 23 m. Surface: Concrete and asphalt. PCN 79/R/C/W/T Taxiway OTHER TAXIWAYS: 23 m. Surface: Concrete and asphalt. PCN 95/R/C/W/T
3	Altimeter checkpoint location and elevation	Pier A: 240 - 243 ft amsl. Pier B: 233 - 236 ft amsl. Pier C: 228 - 232 ft amsl. Western Apron 221 - 231 ft amsl. Apron 238 ft amsl.
4	VOR checkpoints	
5	INS checkpoints	See Aircraft Ground Movement/Parking/Docking Chart
6	Remarks	Taxiways Quebec and Papa may be used for aircraft parking. In darkness or if Low Visibility Procedures are in force a 'Follow-me' vehicle will be provided. Stands 100 and 101 have localised slopes in excess of ICAO require-ments. Downward slopes of 1.5% from centre of stand towards Taxiway Delta.

EGCC AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Terminal 1 comprises Stands 1-12, 15, 21-29, 31 and 32. Stand 12 has additional centre-lines designated 12L and 12R. Aircraft docking on all Terminal 1 stands (except Stands 12L and 21) is by Safedock. Aircraft docking on Stands 12L and 21 is by Marshaller's instructions. Terminal 2 has a single pier serving Stands 201-215. Stands 201, 203, 205, 207, 209, 211, 213 and 215 have a single centre-line. Stands 202, 204, 206, 208, 210, 212 and 214 have two centre-lines. The main (widebody) centre-line is designated by the stand number only. The subsidiary centre-line is designated Left. For example; Stand 206 and 206L. Aircraft docking on all Terminal 2 stands (except Stand 201) is by Safedock. Aircraft docking on Stand 201 is by Marshaller's instructions. Terminal 3 comprises pier served Stands 16-18, 41-44 and 47-55, and remote Stands 56-58. Stand 44 has additional centre-lines designated 44L and 44R. Aircrews are to note that Stands 44L and 44R are demarked by alternate yellow/white dashed painted centre-lines. Aircraft docking on all Terminal 3 stands is by Safedock (except Stands 44 and 56-58). Aircraft docking on Stands 44 and 56-58 is by Marshaller's instructions. Stands 100 and 101 are located on an island between Taxiways Delta and Lima. Stand 100 can accommodate aircraft with a maximum wingspan of 31 m. Stand 101 can accommodate aircraft with a maximum wingspan of 29 m. Aircraft to enter stands from Taxiway Delta only, and to exit via Taxiway Lima only. Aircraft parking is by Marshaller's instructions. Remote stands 61-74 and 80-86 have additional centre-lines designated Left and Right. Stands 217-219 and 231-249 have a single centre-line. Stand 216 has two centre-lines, designated 216 and 216R. Aircrew are to note that all stand entry guidance systems are activated by their ground handling agent. Pilots must not enter an aircraft stand unless the Stand Entry Guidance has been activated and the correct aircraft type is displayed, or a MA marshaller has signalled clearance to proceed. In the event of there being no activated SEG upon approach to a stand, flight crews must hold position on the taxiway and advise GMC. Flight crews must not attempt to self-park.
2	Runway and taxiway markings and lighting	**Runway marking aid(s):** 05L/23R: Runway designation. Runway threshold, runway centre-line, edge, TDZ and fixed distances. Runway width is designated by side stripe markings. 05R/23L: Runway designation. Runway threshold, runway centre-line, edge, TDZ and fixed distances. Runway width is designated by side stripe markings. Turning circle has unlit painted yellow centre-line and inset blue edge lighting beyond runway edges.**Taxiway light(s):** : Green centre-line with blue edge lights on sharp curves, red stop bars at holding points. Runway Exits have alternate green/yellow centre-line lights to the edge of the localiser sensitive area. Runway Taxi holding position. Runway Guard lights. Taxiways Quebec and Papa have painted yellow centre-lines only - during Sunset to Sunrise these taxiways only to be used with a Follow-Me vehicle.
3	Stop bars	Stopbars at runway entrance points are in operation H24

EGCC AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS (continued)

4	Remarks	Some obstacle marking. Illuminated wind direction indicators. Pilot attention is drawn to the use of additional paint markings at specified runway entrance and exit points. These markings are provided as an additional measure to raise situational awareness and to reduce the runway incursion risk. Additional markings for 'NO ENTRY' are located at the exit point RET AE. All Ground Movement is under ATC Control.

EGCC AD 2.10 AERODROME OBSTACLES

In Approach/Take-off areas						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
23R/APPROACH 05L/TAKE-OFF	Hotel	532150.28N 0021528.83W	285 ft		Yes	
23L/APPROACH	Tree	532056.86N 0021621.94W	255 ft		No	

In circling area and at aerodrome						
Obstacle ID/Designation	**Obstacle Type**	**Obstacle Position**	**Elevation/Height**		**Obstruction Lighting Type/Colour**	**Remarks**
1	**2**	**3**	**4**		**5**	**6**
	Control Tower	532126.64N 0021646.98W	434 ft		No	
	Tree	532105.47N 0021354.38W	345 ft		No	
	Electricity Pylon	531905.19N 0021705.85W	397 ft		No	

EGCC AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	MET OFFICE EXETER.
2	Hours of service MET Office outside hours	H24
3	Office responsible for TAF preparation Periods of validity	MET OFFICE EXETER. 30 Hours
4	Trend forecast Interval of issuance	TREND 30 minutes.
5	Briefing/consultation provided	
6	Flight documentation Language(s) used	
7	Charts and other information available for briefing or consultation	
8	Supplementary equipment available for providing information	
9	ATS units provided with information	MANCHESTER.
10	Additional information (limitation of service, etc.)	Current weather on ATIS.

EGCC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY Number	True bearing	Dimensions of RWY	Surface of RWY/ SWY/ Strength (PCN)	THR co-ordinates/ THR Geoid undulation	THR elevation/ Highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
05L	051.06°	3048 x 45 m	RWY surface: PCN 94/F/C/W/T Concrete/Un-grooved Asphalt	532051.20N 0021715.95W 167 ft	THR 212 ft
23R	231.09°	3048 x 45 m	RWY surface: PCN 94/F/C/W/T Concrete/Un-grooved Asphalt	532140.75N 0021533.41W 167 ft	THR 249 ft
05R	051.04°	3050 x 45 m	RWY surface: PCN 79/F/C/W/T Concrete/Grooved Asphalt	531955.10N 0021838.38W 167 ft	THR 186 ft
23L	231.07°	3050 x 45 m	RWY surface: PCN 79/F/C/W/T Concrete/Grooved Asphalt	532053.35N 0021637.95W 167 ft	THR 227 ft

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
05L - 0.49% Up 23R - 0.49% Down		215 x m	x 300 m	Yes	RWY 05L RWY 05L Landing Threshold Displaced by 427 m. 05L/23R Runway shoulders are widened to 23 m each side giving a total paved width of 91 m. 05L/23R has a turning circle at the northeastern end, abeam Link Juliet, for use by aircraft up to A380. All turning circles have unlit painted centre-line and blue edge lighting beyond runway edges. Aircraft should follow the painted centre-line in a clock-wise direction, unless directed otherwise by ATC RESA's are: Runway 05L: 240 x 90 m STRIP DIMENSIONS 05L/23R: 300 m wide over full length extending to 60 m beyond each end of pavement.
05L - 0.49% Up 23R - 0.49% Down		300 x m	x 300 m	Yes	RWY 23R RWY 23R Landing Threshold Displaced 183 m. 05L/23R Runway shoulders are widened to 23 m each side giving a total paved width of 91 m. 05L/23R has a turning circle at the northeastern end, abeam Link Juliet, for use by aircraft up to A380.

EGCC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS (continued)

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					The last quarter of Runway 23R has a downslope of 0.88% All turning circles have unlit painted centre-line and blue edge lighting beyond runway edges. Aircraft should follow the painted centre-line in a clock-wise direction, unless directed otherwise by ATC RESA's are: Runway 23R: 240 x 90 m STRIP DIMENSIONS 05L/23R: 300 m wide over full length ex-tending to 60 m be-yond each end of pavement.
05R - 0.46% Up 23L - 0.48% Down		300 x m	x 300 m	Yes	RWY 05R 05R/23L has one turn-ing circle: At 1820 m from 23L threshold for use by aircraft up to B767; All turning circles have unlit painted centre-line and blue edge lighting beyond runway edges. Aircraft should follow the painted centre-line in a clock-wise direction, unless directed otherwise by ATC RESA's are: Runway 05R: 351 x 90 m STRIP DIMENSIONS 05R/23L: 300 m wide over full length from 60 m beyond end of pave-ment, except between links Victor Alpha and Tango where strip nar-rows to 56 m on the southern side of Run-way 23L starter exten-sion only
05R - 0.46% Up 23L - 0.48% Down		300 x m	x 300 m	Yes	RWY 23L Runway 23L has a starter extension of 150 x 30 m. Hard shoulder width at starter extension is 15 m. Hard inner shoulders along full length of Runway 05R/ 23L have a width of 7.5 m and a PCN of 42 R/ C/W/T. A stabilised grass outer shoulder is prepared to a width of 7.5 m along the full length of the runway. 05R/23L has one turn-ing circle: At 1820 m from 23L threshold for use by aircraft up to B767; All turning circles have unlit painted centre-line and blue edge lighting beyond runway

EGCC AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS (continued)

Slope of RWY/ SWY	SWY dimensions	Clearway dimensions	Strip Dimensions	OFZ	Remarks
7	8	9	10	11	12
					edges. Aircraft should follow the painted centre-line in a clock-wise direction, unless directed otherwise by ATC RESA's are: Runway 23L: 242 x 90 m STRIP DIMENSIONS 05R/23L: 300 m wide over full length from 60 m beyond end of pave-ment, except between links Victor Alpha and Tango where strip nar-rows to 56 m on the southern side of Run-way 23L starter exten-sion only

EGCC AD 2.13 DECLARED DISTANCES

Runway desig-nator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
05L	3014 m	3229 m	3014 m	2587 m	
23R	2897 m	3197 m	2897 m	2714 m	
05L	2036 m	2251 m	2036 m		Take-off from intersection at Taxiway Bravo.
05L	2771 m	2986 m	2771 m		Take-off from intersection at Taxiway Alpha Golf.
05L	2432 m	2647 m	2432 m		Take-off from intersection at Taxiway Alpha Fox
23R	2567 m	2867 m	2567 m		Take-off from intersection at Taxiway Mike.
23R	2121 m	2421 m	2121 m		Take-off from intersection at Taxiway Ho-tel.
05R	3047 m	3347 m	3047 m	2864 m	
23L	3200 m	3500 m	3200 m	2864 m	Using 150 m starter exention TORA of 3200 m and TODA of 3500 m available. Use Taxiway T for access
23L	3121 m	3421 m	3121 m		Take-off from intersection at Taxiway Vic-tor Alpha.
23L	2955 m	3255 m	2955 m		Take-off from intersection at Taxiway Vic-tor Bravo.
23L	2849 m	3149 m	2849 m		Take-off from intersection at Taxiway Uni-form.
23L	2504 m	2804 m	2504 m		Take-off from intersection at Taxiway Vic-tor Charlie

EGCC AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
05L	914 m Light intensity high.	HI Green with flush HI Green wingbars	PAPI Right/3° 62 ft	900 M	Colour coded 15 m spacing HI	Bi-directional flush fitted HI 60 m spacing	Red.		**Approach Lighting:** Coded centre-line with five crossbars

EGCC AD 2.14 APPROACH AND RUNWAY LIGHTING (continued)

RWY	Approach lighting Type/ Length/ Intensity	Threshold lighting Colour/ Wing bars	VASIS/ MEHT/ PAPI	TDZ lighting Length	Runway Centre Line lighting Length/ Spacing/ Colour/ Intensity	Runway edge lighting Length/ Spacing/ Colour/ Intensity	Runway end lighting Colour/ Wing bars	Stopway lighting Length/ Colour	Remarks
1	2	3	4	5	6	7	8	9	10
									Supplementary lighting: inner 300 m **PAPI dist from THR:** 325 m from displaced threshold
23R	914 m Light intensity high.	HI Green with flush HI Green wingbars	PAPI Left/3° 60 ft	900 M	Colour coded 15 m spacing HI	Bi-directional flush fitted HI 60 m spacing	Red.		**Approach Lighting:** Coded centre-line with five crossbars **Supplementary lighting:** inner 300 m **PAPI dist from THR:** 357m from displaced threshold
05R	900 m Light intensity high.	HI Green with flush HI Green wingbars	PAPI Left/3° 66 ft		Colour coded 30 m spacing HI	Bi-directional flush fitted Full length 61 m spacing White HI	Red Wingbars only		**Approach Lighting:** Coded centre-line with five crossbars **PAPI dist from THR:** 437m
23L	900 m Light intensity high.	HI Green with flush HI Green wingbars	PAPI Left/3° 75 ft		Colour coded 30 m spacing HI	Bi-directional flush fitted Full length 61 m spacing White HI	Red.		**Approach Lighting:** Coded centre-line with five crossbars **PAPI dist from THR:** 561m from displaced threshold

EGCC AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	
2	LDI location and lighting Anemometer location and lighting	Anemometer: 23R - 532130.48N 0021544.16W, 23L - 532043.10N 0021648.99W, 05R - 531959.29N 0021819.61W, 05L - 532054.33N 0021659.67W.
3	TWY edge and centre line lighting	Taxiway: . Edge. Yes, except Taxiways Quebec and Papa. Blue edge lighting provided on selected taxiways. Taxiway: . Centre line. Yes, except Taxiways Quebec and Papa.
4	Secondary power supply/switch-over time	Yes/1 second.
5	Remarks	Obstacle lighting. Apron Floodlighting.

EGCC AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	
2	TLOF and/ or FATO elevation	
3	TLOF and FATO area dimensions, surface, strength, marking	FATO :
4	True bearing of FATO	
5	Declared distance available	
6	Approach and FATO lighting	
7	Remarks	See AD 2.20, paragraph 5.

EGCC AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Remarks
1	2	3	4	5	6
MANCHESTER CTR 533011N 0024123W - 533124N 0023102W - 532056N 0023103W - 532638N 0022258W - 533430N 0020400W - 532730N 0015400W - 531616N 0020131W - 531055N 0022207W - 531050N 0023224W - 531130N 0023744W - 532708N 0023744W - 533011N 0024123W	Upper limit: 3500 ft ALT Lower limit: SFC	D	MANCHESTER RADAR English	5000 ft	
MANCHESTER CTA 1 533430N 0020400W - 532734N 0030310W - 533200N 0025000W - 533430N 0020400W	Upper limit: 3500 ft ALT Lower limit: 2500 ft ALT	D	MANCHESTER RADAR English	5000 ft	
MANCHESTER CTA 2 531047N 0020459W - 530602N 0022246W - 530626N 0024349W - 531427N 0030140W - 531050N 0023224W - 531055N 0022207W - 531616N 0020131W - 531047N 0020459W	Upper limit: 3500 ft ALT Lower limit: 2500 ft ALT	D	MANCHESTER RADAR English	5000 ft	
MANCHESTER CTA 3 533650N 0015216W - 532719N 0014617W - 532656N 0015000W - 530732N 0020056W - 531047N 0020459W - 532730N 0015400W - 533430N 0020400W - 533650N 0015216W	Upper limit: 3500 ft ALT Lower limit: 3000 ft ALT	D	MANCHESTER RADAR English	5000 ft	
MANCHESTER CTA 4 533011N 0024123W - 532708N 0023744W - 531130N 0023744W - 531309N 0025059W - 532902N 0025059W - 533011N 0024123W	Upper limit: 3500 ft ALT Lower limit: 2500 ft ALT	D	MANCHESTER RADAR English	5000 ft	
MANCHESTER CTA 5 533124N 0023102W - 532056N 0023103W - 532638N 0022258W - 533430N 0020400W - 533124N 0023102W	Upper limit: 3500 ft ALT Lower limit: 2000 ft ALT	D	MANCHESTER RADAR English	5000 ft	
MANCHESTER ATZ A circle, 2.5 nm radius centred at 532114N 0021630W on longest notified runway (05L/23R)	Upper limit: 2000 ft Lower limit: SFC	D	MANCHESTER RADAR English	5000 ft	

EGCC AD 2.18 AIR TRAFFIC SERVICES COMMUNICATION FACILITIES

Service Designation	Callsign	Channel(s)	Hours of Operation	Remarks
1	2	3	4	5
APP	MANCHESTER RADAR	118.575 MHz DOC 40 nm/15,000 ft.	H24	ATZ hours coincident with Approach hours.
		135.000 MHz DOC 40 nm/15,000 ft.	As Directed by ATC	
	MANCHESTER DIRECTOR	121.350 MHz DOC 25 nm/10,000 ft.	As Directed by ATC	
TWR	MANCHESTER TOWER	118.625 MHz DOC 25 nm/10,000 ft.	H24	
		119.400 MHz DOC 25 nm/10,000 ft.	H24	
	MANCHESTER DELIVERY	121.700 MHz Departing aircraft are to make initial call on 121.700 MHz to 'Manchester Delivery' or 'Manchester Ground' as appropriate.	Winter: 0630-2200. Summer: 0530-2100.	
	MANCHESTER GROUND	121.850 MHz DOC 5 nm/GND.	Winter: 0630-2200. Summer: 0530-2100.	
	MANCHESTER GROUND	121.700 MHz Departing aircraft are to make initial call on 121.700 MHz to 'Manchester Delivery' or 'Manchester Ground' as appropriate.	Winter: 2200-0630. Summer: 2100-0530.	
Arrival ATIS	MANCHESTER INFORMATION	128.175 MHz DOC 60 nm/20,000 ft.	H24	
	MANCHESTER INFORMATION	113.550 MHz DOC 60 nm/20,000 ft. Broadcast on Manchester VOR.	H24	
Departure ATIS	MANCHESTER DEPARTURE INFORMATION	121.975 MHz DOC 5 nm/GND.	H24	Also available by telephone: 0161-209 2860. ATIS broadcast does not include NOTAM information and should not be solely relied upon for flight planning purposes.
Other	MANCHESTER FIRE	121.600 MHz Non-ATS frequency.	Available when Fire vehicle on the ground attending aircraft in an emergency.	

EGCC AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS III 1.53°W (2017)	IMM	109.500 MHz	HO	532149.90N 0021514.46W		
ILS/GP	IMM	332.600 MHz	HO	532053.81N 0021700.17W		3° ILS Ref Datum Hgt 57 ft.
ILS III 1.53°W (2017)	INN	109.500 MHz	HO	532026.80N 0021806.41W		False Localiser Capture may be experienced when approaching Rwy 23R from the North and South.
ILS/GP	INN	332.600 MHz	HO	532131.27N 0021542.66W		3° ILS Ref Datum Hgt 55 ft.
DME	IMM	32X 109.500 MHz		532111.39N 0021623.02W	263 ft	DME I MM (RWY 05L) Range 15 nm.

EGCC AD 2.19 RADIO NAVIGATION AND LANDING AIDS (continued)

Type of Aid CAT of ILS/MLS (For VOR/ILS/MLS, give VAR)	Ident	Frequency	Hours of Operation	Position of transmitting antenna co-ordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
						Zero range indicated at THR of runway in use. DME freq paired with ILS I MM and I NN.
ILS I 1.53°W (2017)	IMC	111.550 MHz	HO	532105.45N 0021612.92W		
ILS/GP	IMC	332.750 MHz	HO	531958.49N 0021820.74W		3° ILS Ref Datum Hgt 50 ft.
DME	IMC	52Y 111.550 MHz	HO	531958.58N 0021820.74W	200 ft	
DME/VOR	MCT	82Y	Hours of operation for aerodrome purposes: HO	532125.29N 0021544.24W	282 ft	
DME	INN	32X 109.500 MHz	HO	532111.39N 0021623.02W	263 ft	I NN (RWY 23R) Range 15 nm. Zero range indicated at THR of runway in use. DME freq paired with ILS I MM and I NN.

EGCC AD 2.20 LOCAL TRAFFIC REGULATIONS

1 Airport Regulations

(a) Use governed by regulations applicable to Manchester CTR.

(b) All aircraft inbound to Manchester are to report aircraft type, latest ATIS received and cleared level on first contact with Manchester Approach.

(c) All flights are at all times subject to PPR. The filing of a flight plan with NATS Ltd does not constitute permission to use Manchester Aerodrome.

(d) Available H24, subject to the procedure and requirements listed at paragraph (f).

(e) Subject to paragraph g Operators of General and Business Aviation aircraft may only operate it they obtain permission to do so from the aerodrome operator in advance of each movement.

(f) Applications for prior permission and runway slots should be addressed as follows:

(i) All requests for slots during office hours (0900-1700 local) are to be directed to Airport Co-ordination Ltd (ACL) Tel: 0161-493 1850/1851/1852, E-mail: manchester@acl-uk.org, SITA: LONACXH;

(ii) Slots outside office hours can be requested from Manchester Airport Plc, Airfield Operations, Tel: 0161-489 3657

These applications must include the following information:

(1) Aircraft Owner/Operator;

(2) aircraft type and registration;

(3) flight number (if applicable);

(4) Requested time of arrival and departure at Manchester;

(5) Nominated handling agent at Manchester.

(g) Diversion Procedure — All operators are advised that before filing Manchester as an alternate, they are required to have made arrangements for ground handling; this arrangement is subject to the agreement of the Airport Management. Nothing in this procedure shall, however, prevent an aircraft that has declared an emergency from landing.

(h) Fixed Electrical Ground Power must be used wherever available and serviceable. Use of GPU and APU should be limited to minimise environmental impact.

2 Ground Movement

(a) All surface movement of aircraft, vehicles and persons on the Manoeuvring area is subject to ATC authority.

(b) Start-Up Procedures

EGCC AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(i) ATC are responsible for clearance delivery.

(ii) Pilots are requested to call Manchester Delivery for ATC clearance (stating aircraft type, stand number and code letter of latest ATIS received) at least 10 minutes, but not more than 15 minutes before start-up to allow for departure data to be processed.

(iii) Start up and push-back clearance is given by Ground Movement Control. **Start-up approval does not imply approval to push-back**.

(iv) Pilots are required to inform Clearance Delivery when ready to start.

(v) When requesting start-up or push-back pilots should give the full call sign, type and stand number. Aircraft must be ready in all respects to start and if necessary push-back before calling on the appropriate frequency. **Pilots should only request push-back when they are actually ready to do so**.

(vi) When requesting push-back clearance, pilots are to inform ATC if headset communication with ground crew is not established. Push back clearance must not be requested until the ground crew has confirmed to the flight deck that the aircraft is closed up and the tug is manned and fully ready to move.

(vii) If within 30 minutes of a previously issued CTOT the flight is unable to comply with that CTOT, the pilot should advise Manchester Delivery as soon as possible.

(viii) Pilots are advised that delays in excess of 10 minutes can be expected at the Holding Point during busy morning and evening periods. Sufficient time should be allowed for start, push-back and taxi to take account of such a delay especially if to comply with an CTOT.

(c) **Manchester Delivery** will be responsible for:

(i) passing ATC clearance to aircraft prior to start-up. **Push-back approval will not be given**.

(d) **Ground Movement Control (GMC)** will be responsible for:

(i) the surface movement of all aircraft on the manoeuvring area excluding the runway(s) in use;

(ii) issuing start-up and push-back/taxi clearance within the apron areas;

(iii) the control of arriving aircraft after they leave the runway(s) in use, except in the case of landing on Runway 05R when aircraft will be transferred to Manchester Tower on 118.625 MHz for crossing Runway 05L;

(iv) Communicating allocated parking stand number.

(e) **Push-back Procedures**

(i) All aircraft making requests for taxiing or towing clearance on the GMC frequency should state their location in the initial call.

(ii) Aircraft requesting push-back must be in direct communication with the tug crew, via a headset person. Aircraft must inform ATC if they have no direct communication with a headset person.

(iii) Aircraft will not be permitted to reverse off pier-served stands under their own power. Aircraft may be permitted to reverse off remote stands at the discretion of the aerodrome authority. Permission must be obtained from the Airfield Duty Manager (Ext. 3331) via ATC prior to manoeuvre.

(f) **Push and Park Procedures**

(i) A policy is in force at Manchester where flights subject to en-route ATC delays may request, or may be required, to push off stand and re-position at a remote location awaiting CTOT.

(ii) Airlines must co-ordinate push and park requests via Handling Agent, who must liaise with Airfield Control (telephone (0)161 489 3695).

(iii) Requests to push and park are to be made on the Clearance Delivery frequency.

(iv) ATC clearance for push and park manoeuvre will be given on the GMC frequency to the tug crew and not to the flight deck crew. Flight deck crew should monitor GMC frequency and note the instructions given.

(v) Remote locations for push and park are limited and subject to the conditions stated in the Manchester Airport Aerodrome Manual.

(vi) When in position at the remote location flight crew must monitor Clearance Delivery frequency.

(vii) Aircraft may taxi away from a remote parking location with caution and using minimum power.

(g) **Push and Hold Procedures**

(i) A policy is in force at Manchester where flights subject to en-route ATC delays may request, or may be required, to push off stand and re-position at a remote location awaiting CTOT.

(ii) Airlines must co-ordinate push and hold requests via Handling Agent, who must liaise with Airfield Control (telephone (0)161-489 3695).

(iii) Requests to push and hold are to be made on the Clearance Delivery frequency.

EGCC AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(iv) ATC clearance for push and hold manoeuvre will be given on the GMC frequency to the flight deck crew. Flight deck crew should monitor GMC frequency and note the instructions given.

(v) Remote locations for push and hold are limited and subject to the conditions stated in the Manchester Airport Aerodrome Manual.

(vi) When in position at the remote location flight crew must monitor Clearance Delivery frequency.

(vii) Aircraft may taxi away from a remote parking location with caution and using minimum power.

(h) **Ground Movement Restrictions**

(i) Vehicular traffic operating on apron roadways to the rear of aircraft stands, parallel to taxi-lanes. Distance from taxi-lane centre-line to roadway varies between 34 m and 38.5 m for Code E taxi-lanes, the closest being alongside Taxiways J, L and R. There are also several roadway crossings of taxi-lanes (Vehicular traffic on these roadways is not under ATC control but is required to give way to aircraft. Pilots should be aware of proximity of road traffic whilst manoeuvring around the apron taxi-lanes).

(ii) Taxiways Quebec and Papa will be used during peak movement rates. In darkness or if Low Visibility Procedures are in force a 'Follow-Me ' will be provided.

(iii) Taxiway Golf, east of Stand 55 is restricted to aircraft with a maximum wingspan of 36 m.

(iv) AN-124 aircraft will be provided with wing-tip escort vehicles on taxiways northside of Runway 05L/23R.

(v) Pilots of long-wheelbase aircraft such as B777-300 and A340-600 should exercise caution when negotiating taxiway curves and intersections as main-gear to pavement edge clearance may be limited.

(vi) A380 aircraft - Taxiway routes available to A380 are shown on aerodrome chart AD 2-EGCC-2-3, marked in yellow. Reduced taxiway centre-line to object clearance of 49 m applies along Taxiways Alpha and Juliet (between J1 and J4).

(i) **Ground Manoeuvring Restrictions**

(i) ATC instructions will normally specify the taxi route to be followed. This does not necessarily guarantee clearance from other aircraft, vehicles and obstructions on the manoeuvring area.

(ii) Pilots are reminded of the need to exercise caution on wingtip clearances from other aircraft when manoeuvring in close proximity on the ground. Particular care should be taken in the runway holding areas and at runway crossing points.

(iii) B777, A340-600 and A380 aircraft are prohibited from using Taxiway Lima.

(iv) Pilots are reminded not to cross red stop bars unless authorised to do so by ATC.

(j) **Aircraft Blast Warnings**

(i) Jet aircraft are to engage minimum power when using Taxiways Alpha, Bravo and Charlie due to the proximity of light aircraft operations in this area.

(ii) Aircraft using Taxiway Lima are to use minimum power.

(iii) Minimum power to be used by outbound aircraft using Taxiway Delta between holding point D7 and abeam Stand 32 (Pier C).

(k) **General Apron Safety**

(i) The wearing of high visibility clothing by all employed on the apron areas, including flight crew and flight attendants is mandatory.

(l) It may not be recommended by aircraft manufacturers to conduct ‘operational towing’. Operational towing is described as manoeuvring an aircraft under tow (with or without tow bar) that contains passengers, cargo or fuel. Airline operators shall satisfy themselves that operational towing can be conducted on their aircraft and ensure any restrictions to undertake towing manoeuvres are communicated to the relevant ground handling agent and Manchester Airport. It remains the airline operator’s responsibility to assess the risks posed to its aircraft associated with any push-back or towing procedures.

3 CAT II/III Operations

(a) Runway 05L is available for Category II/III operations, however due to terrain profile Category II approaches may only be made by aircraft in ICAO Category A and B (Vat no greater than 120 kt), and when the ILS status is Category III. Runway 23R is available for Category II and III operations, CAT II approaches may only be made when ILS status is CAT III.

(i) **Manchester Airport operates two stages of Low Visibility Procedures in Category II/III operations. ATC LOW VISIBILITY PROCEDURES and ATC LOW VISIBILITY PROCEDURES DUE CLOUD CEILING, as follows:**

(1) IRVR less than 600 m (ATC Low Visibility Procedures)

(aa) Reversion to a single runway operation 23R or 05L. For any residual departures from 23L/05R, the centre-line lights are spaced at 30 m intervals which requires that, except where an AOC holder has less restrictive state authorised take-off minima, departures in IRVR of less than 400 m are not permitted.

EGCC AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(bb) Departing Aircraft: ATC will require departing aircraft to use the following Category lll holding points.

Runway 23R – Juliet 1.

Runway 05L – Alpha 1.

(cc) Arriving Aircraft: Only the following designated exits will be illuminated for aircraft to vacate:

Runway 23R via Rapid Exit Taxiways Bravo Delta, Alpha Echo or Link Alpha

Runway 05L via Link Juliet.

(2) IRVR 600 m or greater and Cloud Ceiling of 200 ft or Less (ATC Low Visibility Procedures Due Cloud Ceiling)

(aa) Runway 23L/23R dual runway operation OR Runway 05L single runway operation.

All available runway exits associated with either Runway 23R or Runway 05L will be illuminated. Aircraft may vacate at any of these exits.

Note: *23L/23R dual runway operation will require departing aircraft to 'hold short' of Runway 23R at the following Category lll holding points as instructed, Hotel 1, Foxtrot 1 or Delta 1. Pilots are required to read back all ATC 'hold short' instructions.*

(bb) Ground Movement Radar (GMR) is normally available to monitor pilot 'Runway vacated' reports. When GMR is not available runway (LSA) vacation will be assessed by receipt of a pilot report that the aircraft has passed the last alternate yellow and green centre-line lights. These lights denote the extent of the ILS Localiser Sensitive Area.

(dd) Pilots will be informed of the relevant procedure that is in operation by Arrival and Departure ATIS or by RTF.

(ee) When Low Visibility Procedures are in force a much reduced landing rate can be expected due to the requirement for increased spacing between arriving aircraft. In addition to the prevailing weather conditions such factors as equipment serviceability may also have an effect on actual landing rates. For information and planning purposes, the approximate landing rates that can be expected are:

IRVR (m)	Expected landing Rate
Between 1000 and 600	20
Between 600 and 400	12
Less than 400	10

4 Warnings

(a) Flocks of up to 100 racing pigeons may be encountered flying across the airfield below 100 ft during the racing season, April - September.

(b) Pilots of aircraft equipped with radio altimeters are warned that such altimeters may show large height fluctuations when approaching to land on Runway 05L due to the aircraft flying over the Bollin Valley at the south western end of the runway.

(c) 4 high visibility bright lights from golf driving range. 1500 m left of threshold of Runway 23R. (SS-2130 winter; SS-2030 summer).

(d) Pilots are warned, when landing on Runway 23R in strong north westerly winds, of the possibility of turbulence and large windshear effects.

5 Helicopter Operations

(a) All rotary-wing aircraft will be treated as fixed wing operations and will be instructed to land and take-off on a runway. Aircraft unable to groundtaxi will be escorted by an Airfield Operations vehicle whilst in the hover.

6 Use of Runways

(a) General operating principles for two runway segregated operations. The two runways at Manchester are 390 m apart and staggered by 1850 m in order to comply with ICAO rules for Simultaneous Operations on parallel or near-parallel Instrument Runways (SOIR). Therefore in normal operations arrivals can operate independently on one runway whilst departures use the other.

(i) Dual runway segregated operations are normally in force during the following seasonal periods (all times local): Summer: Mon-Fri 0630-1030 and 1300-2000. Sat 0630-1030 and 1300-1600. Sun 1300-1700. Winter: Mon-Fri 0630-1030 and 1600-2000. Sat 0630-1030. Sun 1600-2000. At all other times, single runway, mixed-mode operations are in force using Runway 05L/23R.

(ii) Pilots requiring use of Runway 05R/23L for aircraft performance reasons outside dual runway segregated hours should advise ATC at the earliest opportunity. Efforts will be made to make Runway 05R/23L available, however, some delay may be experienced. Returning this runway to service may take in excess of 30 minutes and it should not be assumed to be available as a diversion alternate to Runway 05L/23R.

EGCC AD 2.20 LOCAL TRAFFIC REGULATIONS (continued)

(iii) Due to local planning constriants, Runway 05R/23L is not normally available between the hours of 2200-0600 (local) daily.

Note: *Pilots are required to read back all ATC 'hold short' instructions.*

(b) Pilots should note that Runway 05L-23R has a convex 'hump-backed ' profile, the highest point of which is abeam Link Hotel-Zulu. This characteristic has these significant operational implications:

(i) When lined up for take-off the full length of the runway surface may not be visible from the flight deck.

(ii) When landing on Runway 23R, the apex of the runway lies 700m into the TDZ. Should the aircraft still be flared beyond this point the runway surface will be falling away at a significant rate, with the risk of a late touchdown.

(c) Special runway utilisation procedures are detailed at GEN 3.3.

(d) Minimum Runway Occupancy Time

(i) Departures

(1) Whenever possible, cockpit checks should be completed prior to line up and any checks requiring completion whilst on the runway should be kept to the minimum required. Pilots should ensure that they are able to commence the take-off roll immediately after take- off clearance is issued.

(2) Wake Vortex Departures: The following Links are considered by ATC to be the same departure points for the purposes of Vortex Wake separation:

Runway 23R –	Links Juliet and Mike;	Runway 05L –	Links Alpha and Alpha Golf;
Runway 23L –	Links Tango, Victor Alpha and Victor Bravo, or Links Victor Alpha, Victor Bravo and Uniform, or Links Victor Bravo and Uniform.	Runway 05R –	Links Whiskey and Yankee

When in receipt of a line-up clearance, the pilot must inform ATC **before** entering the runway if greater wake vortex separation will be required behind the preceding aircraft. Failure to do so may result in additional delay.

(ii) Arrivals

(1) Wake Vortex Separation - Arrival: For the purposes of spacing in the approach phase certain aircraft types are classified as Upper Medium and following aircraft will be provided with additional separation. All other 'Medium' aircraft types are classified as Lower Medium. Wake Vortex separations are in accordance with the 5 group scheme.

(2) Pilots are reminded that rapid exits from the landing runway enable ATC to apply minimum spacing on final approach that will achieve maximum runway utilisation and will minimise the occurrence of 'go-arounds'.

(3) Runway 05L arrivals. Link F is available as a runway exit during daylight hours only. Link D is not available as a runway exit.

(4) Runway 05R arrivals. All aircraft must vacate the runway no later than Victor Bravo and proceed direct to Taxiway Victor. Aircraft remaining on the runway to vacate at Victor Alpha or Tango will infringe the ILS LLZ critical area. Similarly Taxiway Sierra is not to be used.

(5) Runway 23R arrivals. Links D and F are not available as runway exits.

(6) During dual-runway operations, in the event of a blockage/unserviceability on the arrival runway, ATC may offer pilots a visual switch of approach from Runway 23R to 23L, or from Runway 05R to 05L. This will only happen when the landing aircraft is more than 4 nm from touchdown and when visibility is greater than 5 km.

(e) Runway 23R/05L only. The hard shoulders outboard of the runway side stripes have only 25% of the runway bearing strengths and should not be used by aircraft turning on the runway or when backtracking. The grass verges are unstrengthened and when wet unlikely to sustain loads.

7 Training

(a) Simulated engine failure training is not to be carried out by aircraft departing from Runway 05L/05R.

EGCC AD 2.21 NOISE ABATEMENT PROCEDURES

(a) All aircraft inbound or outbound from this airport are required to conform to the following procedures, not withstanding that these may at any time be departed from to the extent necessary for avoiding immediate danger:

(i) Every operator of aircraft using the airport shall ensure at all times that aircraft are operated in a manner calculated to cause the least disturbance practicable in areas surrounding the airport.

(ii) After take-off every jet aircraft shall, in addition to complying with the Noise Preferential Routeings specified for each runway, be operated in such a way that it is at a height of not less than 1000 ft aal, at the point nearest to the relevant noise monitoring terminal (AD 2-EGCC-3-2). Details of noise monitoring locations and performance are obtainable from the Environment Department. (Tel: +44 (0)161 489 3504 Email: environment@manairport.co.uk).

(iii) Unless otherwise authorised by ATC, aircraft using the ILS in IMC and VMC shall not descend below 2000 ft before intercepting the glidepath, not thereafter fly below it. An aircraft approaching without assistance from ILS or radar shall follow a descent path which will not result in its being at any time lower than the approach path which would be followed by an aircraft using the ILS glidepath.

(iv) Every jet aircraft using the airport shall, after take-off or 'go-around' maintain, after passing the relevant monitoring point, a rate of climb of at least 500 ft per minute at power settings which will ensure progressively decreasing noise levels at points on the ground under the flight path beyond the monitoring point.

For visual approaches, or following a visual circuit, to Runway 23R/23L the following additional limitations apply:

(1) Jet aircraft shall not join the final approach at a height of less than 1500 ft aal.

(2) Propeller driven aircraft whose MTWA exceeds 5700 kg shall not join the final approach at a distance of less than 3 nm from the landing threshold and at a height of less than 1000 ft aal.

(v) To minimise disturbance in areas adjacent to the airport, Captains are requested to avoid the use of reverse thrust after landing, consistent with safe operation of the aircraft, especially between 2300 and 0700 (local time).

(vi) The Noise Preferential Routes specified in the following table are compatible with ATC requirements and the tracks are to be flown by all departing aircraft until the level defined in the table below is reached except:

(1) aircraft whose MTWA does not exceed 5700 kg;

(2) those aircraft instructed by ATC to make Early Turns In order to expedite traffic flow, such instructions may be issued during the period 0700-2300 local time, to propeller aircraft whose MTWA does not exceed 23000 kg and the following jet aircraft types: BAe 146 (Avro RJ Series), Canadair Regional Jet, Embraer EMB-135/145

(3) unless otherwise instructed by ATC or deviations are required in the interests of safety.

The use of these routes is supplementary to noise abatement take-off techniques. After take-off, pilots should ensure that they are at a minimum height of 500 ft aal before commencing any turn.

Take-off Runway	ATC Clearance	Procedure	NPR Termination	Take-off Runway	ATC Clearance	Procedure	NPR Termination
05L	Via LISTO	At MCT DME 1.2, turn right onto track 150°MAG. At MCT DME 2.7 turn right onto POL VOR R188	5000 ft	05R	Via LISTO	At MCT DME 1.2, turn right onto POL VOR R188 to LISTO	5000 ft
	Via ASMIM or MONTY	At MCT DME 2, turn left onto track 300°MAG towards XOBRO to intercept WAL VOR R083.	4000 ft		Via ASMIM or MONTY	At MCT DME 2, turn left onto track 300°MAG towards XOBRO to intercept WAL VOR R083.	4000 ft
	Via Pole Hill VOR	Straight ahead on MCT VOR R055. At MCT DME 7 turn left onto POL VOR R182	4000 ft		Via Pole Hill VOR	Straight ahead on MCT VOR R055. At MCT DME 7 turn left onto POL VOR R182	4000 ft
	Via DESIG	Straight ahead on MCT VOR R055. At MCT DME 14 turn right onto OTR VOR R265.	4000 ft		Via DESIG	Straight ahead on MCT VOR R055. At MCT DME 14 turn right onto OTR VOR R265.	4000 ft
23R	Via LISTO †	At MCT DME 2 turn left onto track 163°MAG to establish on HON VOR R340.	5000 ft	23L	Via LISTO †	At MCT DME 3.2 turn left onto track 156°MAG to establish on HON VOR R340	5000 ft
	Via EKLAD, MONTY or KUXEM	At MCT DME 3 turn right onto track 275° MAG to intercept MCT VOR R256.	3000 ft		Via EKLAD, MONTY or KUXEM	At MCT DME 3.2 turn right onto track 285° MAG to intercept MCT VOR R256.	3000 ft
	Via Pole Hill VOR	At MCT DME 3 turn right onto track 345°MAG towards XUMAT. At MCT DME 8 turn right onto POL VOR R221.	4000 ft		Via Pole Hill VOR	At MCT DME 3.2 turn right onto track 345°MAG towards XUMAT. At MCT DME 8 turn right onto POL VOR R221.	4000 ft

EGCC AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

Take-off Run-way	ATC Clear-ance	Procedure	NPR Termin-ation	Take-off Run-way	ATC Clear-ance	Procedure	NPR Termin-ation
	Via SONEX	At MCT DME 3 turn right onto track 345°MAG towards XUMAT . At MCT DME 8 turn right onto OTR VOR R265.	4000 ft		Via SONEX	At MCT DME 3.2 turn right onto track 345°MAG towards XUMAT. At MCT DME 8 turn right onto OTR VOR R265.	4000 ft
	Via SANBA	At MCT DME 3 turn right onto track 275° MAG. At MCT DME 5 turn left to TABLY to intercept HON VOR R335	5000 ft		Via SANBA	At MCT DME 3.2 turn right onto track 285° MAG. At MCT DME 5 turn left to TABLY to intercept HON VOR R335.	5000 ft

† LISTO SIDs only available to:

(aa) Non-Jet aircraft; and

(bb) The following jet aircraft

All aircraft up to 35,000 kg MTOW, plus Bae 146 (Avro RJ series), Embraer E135, E145, Bombardier CRJ1, CRJ2, CRJ7, CRJ9, BD700 Global Express and Gulfstream 5.

(vii) Unless otherwise required by ATC, Runway 23R/23L shall be used for all movements when there is a head wind component and when a tail wind component is not greater than 5 kt on either runway or at 2000 ft.

(viii) Link Alpha should be used for all jet aircraft and all large propeller-driven aircraft departing from Runway 05L. However between the hours of 0600 and 2330 (local), any aircraft may depart from Links AG, AF and B subject to operational requirements by ATC/pilots. Between the hours of 2330 and 0600 (local), all jet aircraft and large propeller-driven aircraft shall depart from the most westerly link available.

(ix) Every aircraft using the airport shall, after take-off be operated in the quietest possible manner, aircraft exceeding the following noise levels will be subject to an initial penalty of £750 sterling, plus an additional £150 sterling for each decibel thereafter.

Period (local time)	Max level dB(A)
0600 to 0700	82
0700 to 2300	90
2300 to 2330	82
2330 to 0600	81

(b) In the interests of noise abatement, certain restrictions are imposed on night jet flights at this airport; operators concerned are advised to obtain details from the Airfield Duty Manager.

(c) ATC will approve idle ground engine runs. A safety man must be positioned behind the aircraft to warn road traffic. Permission for ground testing in excess of idle must be requested through the Airfield Duty Manager, Ext 3331, at all times. All engine tests above idle must commence in the Engine Test Bay. Times of operation are 0600-2300. Engine testing on the open airfield will only be allowed for Chapter 2 aircraft between 0900 and 1700 and Chapter 3 aircraft between 0600 and 2200 (Monday to Friday) and between 0730 and 2200 (Saturday and Sunday). Propeller driven aircraft are to be classified as Chapter 3.

(d) Training flights by all aircraft shall be subject to the approval of the Airfield Duty Manager

(e) Non-standard departure instructions will not normally be issued between 2300 and 0700.

(f) Night Jet Restrictions/Allocations

(i) Runway 23L/05R will not normally be used between 2200-0600 (local) except when Runway 23R/05L is closed for maintenance

(ii) Manchester Airport operates a night Jet Policy restricting operations of certain types of aircraft during the periods of 2300-0700 hours (local).

(iii) The penalty scheme will be administered by a panel set up under the auspices of the Scheduling Committee which includes members of the Airlines Operators Committee and the Airport Authority

(iv) Records of night infringements for this purpose will be available to the co-ordinators at the IATA scheduling conferences for summer seasons.

(v) Between the hours of 2300 to 0700 local, visual approaches will not be permitted. Aircraft shall be positioned, by radar, to join the final approach at a distance of not less than 7 nm from touchdown. This restriction does not apply to non jet aircraft whose MTWA is 5700 kg or below.

(g) Scheduling Restrictions.

(i) Between 2330 and 0559 (local) QC4 aircraft will not be scheduled to depart.

EGCC AD 2.21 NOISE ABATEMENT PROCEDURES (continued)

(h) Operational Restrictions

(i) Between 2300 and 0659 (local) QC16 and QC8 aircraft will not be allowed to arrive or depart, except in case of emergency or where exempt.

(i) Jet and turbo-prop aircraft approaching Manchester Airport are expected to minimise noise disturbance by use of low power, low drag and (during the period 2200-0559 (local)) continuous descent approach procedures.

EGCC AD 2.22 FLIGHT PROCEDURES

1 Radio Communications Failure Procedure

(a) In the event of complete communication failure in an aircraft, the pilot will adopt the appropriate procedures notified at ENR 1.1, Section 3.4.

Note: *No visual signals available at Manchester.*

2 Procedures for Inbound Aircraft

(a) **Clearance to enter the CTR**

(i) Aircraft flying the Airways System will be cleared into the CTR without having to request a specific entry clearance.

(ii) Aircraft wishing to enter the CTR or TMA under IFR direct from the London FIR must observe the normal procedure for joining Airways at one of the following Reporting Points:

Pole Hill VOR, Wallasey VOR and Whitegate NDB.

(iii) Aircraft unable to comply with these procedures because they are not equipped for flight on Airways may, traffic and weather conditions permitting, be cleared to proceed to Manchester or Barton, in accordance with the procedures described at paragraph 5.

(b) **Type of Approach**

(i) All inbound IFR aircraft will be radar vectored to an ILS approach unless otherwise informed by ATIS/Approach Radar.

(ii) Inbound IFR aircraft on STARS must not proceed beyond the end point of the STAR without specific ATC clearance. Inbound holding can be expected during busy periods.

(c) **Holding**

(i) From the Holding Point aircraft will be directed by Radar Traffic Director to Final Approach.

(d) **Approach Procedures under Radar Control to Manchester Airport**

(i) When inbound traffic is being sequenced by Radar, that part of the approach between the holding fix and the Final Approach Track (FAT) will be flown under directions from the Radar Controller. Once the aircraft is under Approach Radar Control, changes of heading or level/altitude will be made only on instructions from the Radar Controller except in the case of radio communication failure in the aircraft or at the Radar Unit. When cleared to descend, aircraft should descend at a rate of at least 500 ft per minute.

(e) **Detailed Procedures**

(i) Turbine powered aircraft approaching Manchester Airport will be expected to conform to the low-power, low-drag approach procedures. To facilitate this technique, aircraft should fly within the speed band 210 kt to 240 kt during the approach phase, reducing to within the band 160 kt to 180 kt at a range of 12 nm from touchdown and maintain 160 kt from 8 nm to 4 nm from touchdown. However, during radar vectoring, aircraft landing on Runway 23R should observe the Speed Limit Point in paragraph 3 (a) to reduce the risk of GPWS warnings. In the interest of accurate spacing, ATC may request specific speeds and pilots are requested to comply with any speed adjustments as promptly as is feasible within their own operational constraints. If circumstances necessitate a speed change for aircraft performance reasons, ATC should be advised accordingly.

(ii) When cleared to descend aircraft should descend at a rate of at least 500 ft per minute (whilst above the transition altitude). ATC will advise pilots of an estimate of the track distance to run to touchdown when clearance to descend below the Transition Altitude is given. Further information on the distance from touchdown will be given between this descent clearance and the instruction to turn onto the intercept heading to the ILS Localizer. **Pilots are reminded that due to the high ground east of the Airport, descent below 3000 ft QNH will be in accordance with AD 2-EGCC-5-1**.

(f) **Radar Vectoring Procedure for Runway 23R/23L - Manchester Airport ONLY**

(i) Speed Limit Point. When Runway 23R/23L is in operation, all traffic inbound to Manchester from the south and southeast at FL 140 or below should be flown at 210 kt (IAS) or less when north of an arc drawn 17 DME from the Trent VOR in sector 300° MAG to 350° MAG unless otherwise authorised by ATC.

(ii) IFR traffic entering the Manchester TMA from Controlled Airspace will be cleared initially to not less than 3500 ft QNH, except that descending IFR traffic entering the airspace between the TMA boundary and the boundary of the

EGCC AD 2.22 FLIGHT PROCEDURES (continued)

Radar Vectoring Area (RVA) intercepted between the extended centre-line of Runway 23R/23L and a line drawn 170° MAG from Manchester VOR, will be cleared initially to not less than 4000 ft QNH.

(iii) ATC will not clear aircraft for descent below 3500 ft QNH, or 4000 ft QNH as appropriate, until within the RVA.

(iv) In certain weather conditions, and perhaps for reasons of safety, pilots may not be able to comply with the speed limits quoted. In such circumstances, they should advise ATC immediately, stating the minimum speed acceptable.

(g) **Approach Procedures Without Radar Control**

(i) Not available at Manchester.

3 Procedures for Outbound Aircraft

(a) Speed Limit

(i) A speed limit of 250 kt applies to all departures whilst flying below FL 100 unless previously removed by ATC.

(ii) In certain weather conditions and perhaps for other reasons of safety, pilots may not be able to comply with the speed limit . When such circumstances are anticipated, the pilot should inform ATC when requesting start-up clearance, stating the minimum speed acceptable. In this event, pilots will be informed before take-off of any higher speed limitation. Similarly, should such circumstances arise during flight, the pilot should immediately advise ATC, stating the minimum speed acceptable.

(b) Allocation of Cruising Levels

(i) When a re-clearance of Altitude/Flight Level is issued after take-off by ATC, it is the responsibility of the pilot to comply with at least the minimum altitudes shown in the SID procedure during the climb to the new assigned Altitude/ Flight Level.

(ii) Exceptionally, when ATC issue a re-clearance below the final SID altitude pilots must not climb above this revised altitude until further clearance is received. Aircraft on certain SIDs will be required to ‘confidence check’ the departure routing.

(c) Communications

(i) To reduce flight-deck workload immediately after take-off from Manchester Airport, the appropriate 'Scottish Control' frequency to be used is detailed on the SID Chart. This will enable pilots to pre-select the frequency on an alternative communications channel. **It is essential that the frequency change is not made until instructed to do so by 'Manchester Tower' and the instruction has been acknowledged by the pilot. Due to interaction with go-arounds all departures can expect to stay on Tower frequency until passing 2500 ft.** When the aircraft is not operating on a SID clearance the appropriate 'Scottish Control' frequency to be used, when instructed, will be included in the ATC clearance message.

(d) Radio Failure Procedure

(i) In the event of complete radio communication failure in an outbound aircraft, the pilot will adopt the appropriate procedure notified at ENR 1.1, Section 3.4.

(ii) For the purpose of radio failure, climb to flight-planned level should be commenced after the last position shown in column 4 of the SIDs where an altitude is specified.

4 Procedures for flights between Manchester and Liverpool

(a) IFR flights between Manchester and Liverpool Airports will normally be cleared via the appropriate EKLAD or ASMIM (dependent on runway in use) Standard Instrument Departure.

5 VFR and Special VFR Flights

(a) Special VFR clearance for flights within the Control Zone may be requested and may be given in accordance with rules applicable to Class D airspace.

(b) The use of Special VFR clearances is intended to be confined to light aircraft below 5700 kg MTWA which cannot comply with full IFR requirements and wish to proceed to or from an aerodrome within the Zone or wish to transit the Zone at the lower levels.

(c) Special VFR clearances to operate within the Manchester Control Zone will not be granted to fixed-wing aircraft when

(i) Proceeding inbound to Manchester Airport, if the reported meteorological conditions at the airport are 2800 m or less visibility and/or cloud ceiling less than 1000 ft; or

(ii) outbound from Manchester Airport, if the reported meteorological conditions at the airport are 1800 m or less visibility and/or cloud ceiling less than 600 ft

(d) VFR clearance in the Control Zone will be given for flights operating in VMC. Routeing instructions and/or altitude restrictions may be specified in order to integrate VFR flights with other traffic. Pilots are reminded of the requirement to remain in VMC at all times and to comply with the relevant parts of SERA and the Rules of the Air Regulations 2015, and must advise ATC if at any time they are unable to comply with the clearance instructions issued.

EGCC AD 2.22 FLIGHT PROCEDURES (continued)

(e) VFR/SVFR flights within the Manchester CTR, in the vicinity of Holmes Chapel (531055.00N 0022207.00W), may encounter paramotor activity. Paramotors may operate not above 500 ft agl when within Class D Airspace

6 VFR and Special VFR Routes to/from Manchester Airport

(a) In order to integrate VFR and Special VFR flights to/from Manchester Airport with the normal flow of IFR traffic, a number of Standard Routes are established along which ATC VFR and Special VFR clearances will be issued subject to the conditions specified above. These routes are defined by prominent ground features (eg Motorways) and are detailed below.

(b) In order to reduce RTF congestion of Clearance Delivery frequencies, the standard outbound Visual Routes are allocated Route Designators. Pilots are to ensure that they are familiar with the route alignment and altitude restrictions prior to departure.

Standard Outbound Visual Routes

Exit Point	Runway	Route Designator	Route	Maximum Altitude (QNH)	Remarks
Thelwall Viaduct VRP	05L/05R	Thelwall 2 Visual	Cross M56 Motorway. Route north of M56 to Thelwall Viaduct VRP, then via the Low Level Route.	1300 ft	(a) Avoid overflying Lymm. (b) Inbound traffic operates south of M56 for Rwy 05L and 05R. (c) **Warning:** Traffic in Low Level Route is unknown to ATC. Traffic information will not be passed.
Macclesfield South VRP	23R/23L	Macclesfield 1 Visual	Left turn towards Alderley Edge Hill VRP. Route west then south of Alderley Edge Hill and join the Macclesfield Entry/Exit Lane at Prestbury Station. Keep the railway line on the left and leave the CTR via Macclesfield South VRP	2500 ft (Notes 1, 2 and 6)	(a) Maximum altitudes 1500 ft between Manchester and the northern edge of Macclesfield, 2500 ft south of the northern edge of Macclesfield to the CTR Boundary. (b) **Warning:** High ground to the east of the Entry/Exit Lane. (c) Aircraft may be routed direct from Manchester to Prestbury Station, or via disused Woodford aerodrome. (d) Aircraft must not leave the confines of the Entry/Exit Lane without prior co-ordination with ATC. (e) **Caution:** Alderley Edge 650 ft amsl.

Standard Inbound Visual Routes

Entry Point	Runway	Route Designator	Route	Maximum Altitude (QNH)	Remarks
Stretton Aerodrome VRP	05L/05R	Stretton 1 Visual	From Stretton Aerodrome VRP, route via M56 Motorway, keeping the Motorway on the left. Join left base Runway 05L.	1300 ft	(a) Outbound traffic operates north of M56. (b) Aircraft may be held at Stretton VRP or Rostherne VRP.
Macclesfield South VRP	23R/23L	Macclesfield 1 Visual	From CTR Boundary east of Macclesfield VRP, route via the Macclesfield Entry/Exit Lane (keeping railway line on left) to disused Woodford Aerodrome. Join left base for Runway 23R/23L.	2500 ft (Notes 1, and 5)	(a) Maximum altitudes 2500 ft between CTR Boundary and the northern edge of Macclesfield, 1500 ft north of Macclesfield. (b) Aircraft may be held at Hilltop VRP, which is defined as the open area 1 nm North West of the disused Woodford aerodrome factory. Pilots must hold by visual reference to ensure that the holding pattern does not

EGCC AD 2.22 FLIGHT PROCEDURES (continued)

Entry Point	Runway	Route Designator	Route	Maximum Altitude (QNH)	Remarks
					deviate to the north, which would come into conflict with Runway 23R final instrument approach, particularly in a southerly wind. (c) When Runway 23L is in use as the landing runway, Hilltop VRP will not be used. VFR inbound aircraft can expect to hold overhead disused Woodford aerodrome. (d) Pilots should contact Manchester Radar inially on 118.575 MHz. (e) **Warning:** High ground to the east of the Entry/Exit Lane. (f) Aircraft must not leave the confines of the Entry/Exit Lane without prior co-ordination with ATC. (g) Aircraft experiencing a radio failure **inbound** to Manchester whilst in the Macclesfield Entry/Exit Lane, or holding at Hilltop, are to carry out the Radio Communication Failure procedure detailed at ENR 1-2-2, paragraph 2.9 ***Note:*** *No visual signals available at Manchester*

7 Special Low Level Route

(a) The Special Low Level Route is 4 nm in width bounded by the following co-ordinates: 533124N 0023102W - 531411N 0023105W - 531050N 0022814W - 531050N 0023224W - 531130N 0023744W - 532708N 0023744W - 533011N 0024123W - 533124N 0023102W.

(b) Within the Low Level Route helicopters or aeroplanes may fly without individual ATC clearance subject to the following:

(i) They remain clear of cloud and in sight of the ground;

(ii) maximum altitude: 1300 ft, Manchester QNH; Manchester QNH available from ATIS broadcast frequency 128.175 MHz;

(iii) minimum flight visibility: 4 km;

Note: *Flights using the Low Level Route are responsible for their own separation from all other flights when operating within the Low Level Route airspace at all times.*

(c) Pilots are advised that the Special Low Level Route is not aligned on the M6 Motorway, or on any railway line, and these should not therefore, be used as a navigational line feature for transit throughout the route. However, to the northwest and southeast of the route, stubs are aligned on the M6 and the Crewe-Winsford railway line to enable pilots to access the route accurately.

(d) For the purposes of SERA.3105 Minimum Heights, an aircraft flying within the Manchester Control Zone Special Low Level Route is permitted to fly below 1000 ft above the highest obstacle within a radius of 600 m from the aircraft if:

(i) It is flying on a special VFR flight; or

(ii) it is operating in accordance with the procedures notified for the route;

(iii) it is flown no closer than 500 ft to any person, vessel, vehicle or structure.

(e) The Special Low Level Route is also notified for the purposes of Schedule 7, Private Pilots Licence (Aeroplanes), sub-paragraph 2(c)(ii) and Basic Commercial Pilots Licence (Aeroplanes) sub-paragraph 3(g)(ii), of the Air Navigation Order 2009 when there is a flight visibility of at least 4 km. The Low Level Route is illustrated at AD 2-EGCC-4-1.

EGCC AD 2.22 FLIGHT PROCEDURES (continued)

8 Flying Within 5 nm of the Manchester CTR

(a) Pilots flying within 5 nm of Manchester CTR and maintaining a listening watch only on the Manchester Approach frequency may select code 7366. Selection of 7366 does not imply the receipt of an ATC service. Aircraft displaying the code are not expected to contact ATC under normal circumstances, remain responsible for their own navigation, separation, terrain clearance and are expected to remain clear of the Manchester CTR at all times. When an aircraft ceases to maintain a listening watch or is no longer flying within 5 nm of the Manchester CTR, the pilot will deselect transpoder code 7366.

9 Visual Reference Points (VRP)

(a) For the benefit of pilots on VFR flights who prefer to determine their position by radio navigation aids, rather than by visual pin-points, suitably defined VRPs for Manchester are given below:

Manchester CTR

VRP	VOR/DME FIX	VRP	VOR/DME FIX
Alderley Edge Hill 531743N 0021244W	MCT 156°/4 nm	Macclesfield South 531410N 0020805W	MCT 150°/8.6 nm
Burtonwood 532500N 0023817W	WAL 087°/18 nm MCT 287°/14 nm	M56 Junction 10 532004N 0023417W	MCT 265°/11 nm
Buxton 531521N 0015446W	MCT 118°/14 nm	M56 Junction 11 531938N 0023837W	MCT 265°/14 nm WAL 105°/18 nm
Congleton 530954N 0021051W	MCT 168°/12 nm TNT 292°/20 nm	M60/M62/M66 Heaton Interchange 533300N 0021540W	MCT 002°/11.6 nm
Dovestones Reservoirs 533215N 0015812W	MCT 046°/15.1 nm	Reebok Stadium 533450N 0023208W	MCT 326°/17 nm
Glossop 532626N 0015504W	MCT 070°/13.4 nm	Rostherne 532114N 0022307W	MCT 270°/4 nm
Haydock Park Racecourse 532842N 0023720W	MCT 302°/15 nm WAL 076°/23 nm	Sale Water Park 532600N 0021810W	MCT 345°/5 nm
Hilltop 532030N 0021027W	MCT 108°/3 nm TNT 315°/25 nm	Stretton Aerodrome 532046N 0023135W	MCT 268°/10 nm WAL 099°/22 nm
Holmes Chapel 531055N 0022207W	MCT 202°/11.2 nm	Swinton Interchange 533124N 0022136W	MCT 343°/11 nm
Irlam 532620N 0022447W	MCT 314°/7.4 nm	Thelwall Viaduct 532326N 0023021W	MCT 285°/9 nm
Jodrell Bank 531411N 0021833W	MCT 195°/7 nm	Whaley Bridge 531935N 0015930W	MCT 103°/9.7 nm
Lamaload Reservoir 531620N 0020233W	MCT 125°/9.4 nm	Winsford Flash 531106N 0023044W	MCT 223°/14 nm
Leigh Flash 532923N 0023335W	MCT 309°/13 nm		

Note 1: *Burtonwood/M56 Junction 11. Remain to the east of these VRPs to remain clear of Liverpool CTR.*

Note 2: *Stretton AD/Thelwall Viaduct. Remain to the west of these VRPs to remain clear of Manchester CTR.*

Note 3: *Winsford Flash. Remain to the west of VRP to avoid over flying Winsford.*

EGCC AD 2.23 ADDITIONAL INFORMATION

Not applicable

EGCC AD 2.24 CHARTS RELATED TO AN AERODROME

Figure: AERODROME CHART - ICAO

AD 2-EGCC-2-1

Figure: AIRCRAFT PARKING/DOCKING CHART - ICAO

AD 2-EGCC-2-2

Figure: AERODROME CHART A380 GROUND MOVEMENT - ICAO

AD 2-EGCC-2-3

Figure: CONTROL ZONE AND CONTROL AREA CHART

EGCC AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

AD 2-EGCC-3-1

Figure: NOISE PREFERENTIAL ROUTINGS CHART

AD 2-EGCC-3-2

Figure: CONTROL ZONE AND CONTROL AREA - ENTRY/EXIT LANES AND VRPs CHART

AD 2-EGCC-4-1

Figure: ATC SURVEILLANCE MINIMUM ALTITUDE CHART

AD 2-EGCC-5-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) MONTY 1R 1S 1Y 1Z - ICAO

AD 2-EGCC-6-1

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) ASMIM 1S 1Z/KUXEM 1R 1Y/EKLAD 1R 1Y - ICAO

AD 2-EGCC-6-2

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) LISTO 2S 2Z - ICAO

AD 2-EGCC-6-3

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) (Restricted Use) LISTO 2R 2Y - ICAO

AD 2-EGCC-6-4

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) POL 5R 4S 1Y 1Z- ICAO

AD 2-EGCC-6-5

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) SONEX 1R 1Y/DESIG 1S 1Z - ICAO

AD 2-EGCC-6-6

Figure: STANDARD DEPARTURE CHART - INSTRUMENT (SID) (Jet Aircraft Only) SANBA 1R 1Y - ICAO

AD 2-EGCC-6-7

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via ROSUN (north) - ICAO

AD 2-EGCC-7-1

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via DALEY (north) (MCT VOR u/s) - ICAO

AD 2-EGCC-7-2

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via ROSUN (east) - ICAO

AD 2-EGCC-7-3

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via DALEY (east) (MCT VOR u/s) - ICAO

AD 2-EGCC-7-4

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via MIRSI - ICAO

AD 2-EGCC-7-5

Figure: STANDARD ARRIVAL CHART - INSTRUMENT (STAR) via DAYNE - ICAO

AD 2-EGCC-7-6

Figure: INSTRUMENT APPROACH CHART ILS/DME (I-MC) RWY 05R - ICAO

AD 2-EGCC-8-1

Figure: INSTRUMENT APPROACH CHART ILS/DME (MCT) RWY 05R - ICAO

AD 2-EGCC-8-2

Figure: INSTRUMENT APPROACH CHART LOC/DME (I-MC) RWY 05R - ICAO

AD 2-EGCC-8-3

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 05R - ICAO

AD 2-EGCC-8-4

Figure: INSTRUMENT APPROACH CHART ILS/DME (I-MM) RWY 05L - ICAO

AD 2-EGCC-8-5

Figure: INSTRUMENT APPROACH CHART ILS/DME (MCT) RWY 05L - ICAO

AD 2-EGCC-8-6

EGCC AD 2.24 CHARTS RELATED TO AN AERODROME (continued)

Figure: INSTRUMENT APPROACH CHART LOC/DME RWY 05L - ICAO

AD 2-EGCC-8-7

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 05L - ICAO

AD 2-EGCC-8-8

Figure: INSTRUMENT APPROACH CHART ILS/DME (I-NN) RWY 23R - ICAO

AD 2-EGCC-8-9

Figure: INSTRUMENT APPROACH CHART ILS/DME (MCT) RWY 23R - ICAO

AD 2-EGCC-8-10

Figure: INSTRUMENT APPROACH CHART LOC/DME RWY 23R - ICAO

AD 2-EGCC-8-11

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 23R - ICAO

AD 2-EGCC-8-12

Figure: INSTRUMENT APPROACH CHART VOR/DME RWY 23L - ICAO

AD 2-EGCC-8-13

Figure: INSTRUMENT APPROACH CHART RNAV(GNSS) RWY 23L - ICAO

AD 2-EGCC-8-14

Figure: INSTRUMENT APPROACH PROCEDURE CODING TABLES RNAV(GNSS) RWY 23L - ICAO

AD 2-EGCC-8-15