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List of pages in this Trip Kit

General Information

Location: MANCHESTER GBR
ICAO/IATA: EGCC / MAN
Lat/Long: N53° 21.22', W002° 16.50'
Elevation: 257 ft

Airport Use: Public
Daylight Savings: Observed
UTC Conversion: +0:00 = UTC
Magnetic Variation: 1.0° W

Fuel Types: Jet A-1
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0508 Z
Sunset: 1910 Z

Runway Information

Runway: 23L
Length x Width: 10007 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 227 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 611 ft

Runway: 05L
Length x Width: 10000 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 226 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1401 ft

Runway: 05R
Length x Width: 10007 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 187 ft
Lighting: Edge, ALS, Centerline

Runway: 23R
Length x Width: 10000 ft x 148 ft
Surface Type: concrete
TDZ-Elev: 257 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 600 ft

Communication Information

ATIS: 128.180 Arrival Service
ATIS: 121.980 Departure Service
ATIS: 113.550 Arrival Service
Manchester Tower: 118.630
Manchester Tower: 119.405
Manchester Ground: 121.855
Manchester Ground: 121.705
Manchester Clearance Delivery: 121.705
Manchester Fire Emergency: 121.600
Manchester Direct (Approach Control Radar): 121.355
Scottish Control ACC: 128.055 RCO
Scottish Control ACC: 134.430 RCO
Scottish Control ACC: 135.715 RCO

1. GENERAL

1.1. ATIS

D-ATIS Arrival 128.180 113.550
D-ATIS Departure 121.980

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. GENERAL

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger. Every operator of ACFT using the APT shall ensure at all times that ACFT are operated in a manner calculated to cause the least disturbance practicable in areas surrounding the APT.

1.2.2. PREFERENTIAL RWY

RWY 23R/L shall be used for all movements when tailwind component is not greater than 5 KT on RWY or at 2000'.

1.2.3. NIGHTTIME RESTRICTIONS

Restrictions are imposed on jets, details to be obtained from the Airfield Duty Manager.

RWYs 23L/05R will not normally be used between 2200-0600LT, except when RWYs 23R/05L closed for maintenance.

Between 2330-0559LT ACFT in group QC 4 will not be scheduled to depart.

OPERATIONAL RESTRICTIONS:

Between 2300-0659LT ACFT in groups QC 8 and QC 16 will not be scheduled to take-off and land except in emergency or if exempt.

Jet and turbo-prop ACFT approaching Manchester APT are expected to minimize noise disturbance by use of low power, low drag continuous descent approach procedures. For monitoring purposes, a descent will be deemed to have been continuous provided that no segment of level flight longer than 2.5NM occurs below 600' and 'level flight' is interpreted as any segment of flight having a height change of not more than 50' over a track distance of 2NM or more, as recorded in the APT noise and track-keeping system.

Noise Level Band (EPNdB)	QUOTA Count	Noise Level Band (EPNdB)	QUOTA Count
84 - 86.9	0.25	96 - 98.9	4
87 - 89.9	0.5	99 - 101.9	8
90 - 92.9	1	more than 101.9	16
93 - 95.9	2		

1.2.4. RUN-UP TESTS

ATC will approve idle ground engine runs. A safety man must be positioned behind the ACFT to warn road traffic.

Permission for ground testing in excess of idle must be requested through the Airfield Duty Manager, Ext 3331. Engine test above idle must commence in the Engine Test Bay.

Times of operation are 0600-2300LT.

Engine testing on the open airfield will only be allowed for Chapter 3 ACFT between 0900-1700LT (Monday to Friday) and between 0730-2200LT (Saturday to Sunday). Chapter 4 and 14 ACFT 0600-2200LT.

Propeller-driven ACFT are to be classified as Chapter 3.

1.2.5. AUXILIARY POWER UNITS (APUs)

Fixed Electrical Ground Power Units (GPUs) must be used where available, use of GPUs and APUs should be limited.

1. GENERAL

1.3. LOW VISIBILITY PROCEDURES (LVP) DURING CAT II/III OPERATIONS

1.3.1. GENERAL

Pilots will be informed by Arrival and Departure ATIS or by RTF when these procedures are in operation.

- Departing ACFT: ATC will require departing ACFT to use the following holding points:
  RWY 23R: J1, M1.
  RWY 05L: A1, AG1, AF1.
- Arriving ACFT: All appropriate RWY exits will be illuminated and pilots should select the first convenient exit. Pilots are to delay the call "RWY vacated" until the ACFT has completely passed the end of the green/yellow color-coded TWY CL lights. These lights denote the extent of the ILS LSA.
- Surface Movement Radar (SMR) is available to monitor pilot "RWY vacated" reports. TWYs lit stopbar block-to-block ACFT separation in operation at or below RVR 200m.
- When LVP are in force, the appropriate landing rates that can be expected are:

RVR(m)	Expected Landing Rate
Between 1000m and 600m	20
Between 600m and 400m	12
Less than 400m	10

1.4. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

APT is equipped with an advanced surface movement radar utilising Mode S.

ACFT operators should ensure that Mode S transponders are able to operate when the ACFT is on the ground.

Flight crew should select XPNDR or the equivalent according to specific installation, AUTO if available, not OFF or STDBY, and the assigned Mode A code:

- From the request for push-back or taxiing, whichever is earlier;
- After landing, continuously until the ACFT is fully parked on stand.

After parking the Mode A code 2000 must be set before selecting OFF or STDBY.

Flight crew of ACFT equipped with Mode S having an ACFT identification feature should also set the ACFT identification. This setting is the ACFT identification specified in item 7 of the ICAO flight plan. The ACFT identification should be entered from the request for push-back or taxiing, whichever is earlier, through the FMS or the transponder control panel.

1.5. RWY OPERATIONS

General operating principles for two RWY segregated operations. The two RWYs are 1280'/390m apart and staggered by 6070'/1850m in order to comply with ICAO rules for simultaneous operations on parallel or near-parallel instrument RWYs (SOIR). Therefore in normal operations arrivals can operate independently on one RWY whilst departures use the other.

Dual RWY segregated operations are normally in force during the following periods in Summer: MON-FRI 0515-1900, SAT 0515-1500, SUN 0515-0830 and 1200-1900. At other times, single RWY, mixed-mode operations are in force using RWY 05L/23R.

Pilots requiring use of RWY 05R/23L for ACFT performance reasons outside dual RWY segregated hours should advise ATC at the earliest opportunity. Efforts will be made to make RWY 05R/23L available, however, some delay may be experienced.
Returning this RWY to service may take in excess of 30 minutes, and it should not be assumed to be available as a diversion alternate to RWY 05L/23R.
Due to local planning constraints, RWY 05R/23L is not normally available between 2200-0600LT.

1. GENERAL

1.6. TAXI PROCEDURES

Jet ACFT are to engage MIM power when using TWYs A, B and D (vicinity of holding point D1) due to the proximity of light ACFT OPS in this area.

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

AN-124 ACFT will be provided with wing-tip escort vehicles on TWYs North side of RWY 05L/23R.

Pilots are reminded of the need to exercise caution on wingtip clearances from other ACFT when maneuvering in close proximity on the ground. Particular care should be taken in the RWY holding areas and at RWY crossing points.

Do not cross red stop bars unless authorized to do so by ATC.

It is the Commander's responsibility not to accept an ATC clearance into an area not approved for the type of ACFT.

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

It is not recommended by ACFT manufacturers to conduct operational towing when ACFT contains passengers, cargo or fuel. Airline operators shall satisfy themselves that operational towing can be conducted and ensure any restrictions to undertake towing maneuvers are communicated to relevant ground handling agent and Manchester APT. It remains the airline operator's responsibility to assess the risks associated with push-back or towing procedure.

For Wing Span Restrictions refer to 10-9 charts.

1.7. PARKING INFORMATION

TWYs NB and Q may be used for ACFT parking. In darkness or if LVP are in force, a Follow-me car will be provided.

All Terminal 1 stands (except stands 12L and 21), all Terminal 2 stands at Pier 1, all Terminal 3 stands (except stands 44, 44L, 44R, 57 and 58) and stands 901 thru 919 and 925 thru 929 are equipped with SAFEDOCK.

On stands 12L, 21, 44, 44L, 44R, 57, 58 and all remote stands (except 901 thru 919 and 925 thru 929) marshaller required.

Pilots must not enter a stand unless the Stand Entry Guidance has been activated and the correct ACFT type is displayed, or a marshaller has signalled clearance to proceed. If SEG is not activated upon approach to a stand, flight crews must hold position on the TWY and advise GMC. Flight crews must not attempt to self-park.

1.8. OTHER INFORMATION

1.8.1. GENERAL

Pilots should note that RWY 05L/23R has a convex profile, the highest point is ABEAM TWY HZ. Due to aerodrome capacity and associated works in progress, operators of ACFT with wingspan more than 118'/36m scheduled to arrive between 0300 and 0800 are advised to plan arrival in accordance with Scheduled In Blocks Time (SIBT). ACFT estimated to arrive before SIBT may be subject to extended air and ground holding delays.

1.8.2. WARNING

Pilots are warned, when landing on RWY 23R in strong northwesterly winds, of the possibility of turbulence and large wind shear effects.

Flocks of up to 100 racing pigeons may be encountered flying across the APT below 100' during the racing season, April-September.

Four high visibility bright lights from golf driving range 1500m/0.8NM Left of THR 23R.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

2.1.1. GENERAL

Unless otherwise authorized by ATC, ACFT using the ILS shall not descend below 2000' before intercepting GS, nor thereafter fly below it. ACFT approaching without ILS or radar assistance 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 ACFT using the ILS GS.

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

- Jet ACFT shall not join the final approach at a height of less than 1760'.
- Propeller-driven ACFT whose MTWA exceeds 5700kg shall not join the final approach at a distance of less than 3NM from the landing THR and at a height of less than 1260'.

2.1.2. NIGHTTIME RESTRICTIONS

Between 2300-0700LT, visual approaches are not permitted. ACFT shall be positioned, by RADAR, to join the final APP at a distance of not less than 7NM from touchdown. This restriction does not apply to non-jet ACFT whose MTWA is 5700kg or less.

2.1.3. REVERSE THRUST

Avoid use of reverse thrust consistent with the safe operation of the ACFT, especially between 2300-0700LT.

2.2. CAT II/III OPERATIONS

RWY 05L and 23R, subject to serviceability of the required facilities, are suitable for CAT II/III operations. However, due to terrain profile, RWY 05L CAT II approaches may only be made by ACFT CAT A and B (Vat not greater than 120 KT), and when the ILS status is CAT III.

2.3. RWY OPERATIONS

2.3.1. MINIMUM RWY OCCUPANCY TIME

Pilots are reminded that rapid exits from the landing RWY enable ATC to apply minimum spacing on final approach that will achieve maximum RWY utilization and will minimise the occurrence of "go-arounds". Pilots should pre-plan their landing and roll-out to target the first suitable exit point that provides for a safe and expeditious exit from the RWY.

RWY 05R arrivals:

05R	VD	VC	U
Dist from THR ft(m)	6411' (1954m)	7395' (2254m)	8983' (2738m)
Design Exit Speed	52 KT	52 KT	-

Note: Landing ACFT are to vacate expeditiously. When applicable, a suitable roll-out speed is to be maintained to RET VD to minimise RWY occupancy time. Arriving ACFT are to ensure fully vacated before stopping. TWY U is not a rapid exit TWY.

All ACFT must vacate the RWY no later than VB and proceed direct to TWY V.

ACFT remaining on the RWY to vacate at VA or T will infringe the ILS LOC critical area.

Similarly TWY S is not to be used.

2. ARRIVAL

RWY 05L arrivals:

05L	F	H	M
Dist from THR ft(m)	4747' (1447m)	5833' (1778m)	7379' (2249m)
Design Exit Speed	-	-	-

Note: Landing ACFT are to vacate expeditiously. Arriving ACFT are to ensure fully vacated before stopping. TWYs F, H and M are not rapid exit TWYs.

TWY F available as exit during daylight hours only. TWY P is not available as RWY exit.

RWY 23R arrivals:

23R	BD	AE	AG
Dist from THR ft(m)	4514' (1376m)	6260' (1908m)	8445' (2574m)
Design Exit Speed	52 KT	52 KT	-

Note: Landing ACFT are to vacate expeditiously. Arriving ACFT are to ensure fully vacated before stopping. TWYs P and F are not available as RWY exits. TWY AG is not a rapid TWY.

2.4. OTHER INFORMATION

2.4.1. GENERAL

When landing on RWY 23R, the apex lies 2300'/700m into the TDZ. Should the ACFT still be flared beyond this point, the RWY surface will be falling away at a significant rate, with the risk of a late touchdown.

2.4.2. LOW POWER/LOW DRAG PROCEDURES

ACFT should descend at a rate of at least 500' per minute, ATC will advise an estimate of track distance to touchdown when clearance to descend below the transition altitude is given. Further distance information will be given between descent clearance and the instruction to turn onto the intercept heading to the ILS localizer.

Due to high ground East of the APT, descent below 3000' will be in accordance with chart Manchester 10-1R.

Recommended speeds:
210 KT-240 KT intermediate approach;
160 KT-180 KT at a range of 12NM from touchdown;
160 KT from 8NM to 4NM from touchdown.

ATC may request specific speeds for accurate spacing and pilots are requested to comply with any speed adjustments as promptly as feasible within operational constraints. If a speed change for ACFT performance reasons is necessary, advise ATC.

3. DEPARTURE

3.1. START-UP, PUSH-BACK AND TAXI PROCEDURES

Pilots are required to inform MANCHESTER Delivery when ready to start. Aircrew shall include their cleared departure SID in this call.

Start-up and push-back clearance is given by MANCHESTER Ground.

Start-up approval does not imply approval to push-back.

When requesting start-up or push-back, pilots should give the full call sign, type and stand number.

ACFT must be ready in all respects to start before calling on the appropriate frequency. Pilots should only request push-back when they are actually ready to do so.

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 ground crew has confirmed to flight deck, that ACFT is closed up and tug is manned and fully ready to move.

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 delay especially if to comply with a Calculated Take-off Time (CTOT).

ACFT will not be permitted to reverse off pier-served stands under own power.

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

ACFT that require to depart from holding position T1 on RWY 23L for performance reasons must inform MANCHESTER Delivery prior to requesting push-back.

Flights subject to en-route ATC delays may request, or may be required to push off stand and reposition at a remote location awaiting CTOT. Airlines must coordinate push and park requests via Handling Agent, who must liaise with Airfield Control. Requests to push and park are to be made to Delivery. Clearance for push and park maneuver will be given on the GND frequency to the tug crew and not to the flight crew. Flight crew should monitor MANCHESTER Ground frequency and note instructions given. Remote locations for push and park are limited and subject to the conditions stated in the Manchester APT Aerodrome Manual. At remote location flight crew must monitor Delivery frequency. ACFT may taxi away from a remote parking location with CAUTION and using MIM power.

3.2. NOISE ABATEMENT PROCEDURES

Link Alpha should be used for all jet ACFT and all large propeller-driven ACFT departing from RWY 05L.

Between 0600-2330LT any ACFT may depart from links AG, AF and B subject to operational requirements by ATC/pilots.

Between 2330-0600LT all jet ACFT and large propeller-driven ACFT shall depart from the most westerly link available.

After take-off operate every jet ACFT so that it is at or above 1260' at the point nearest to the noise monitoring terminal for the relevant departure.

ACFT are to be operated in the quietest possible manner, ACFT exceeding the following nois e levels will be subject to an initial penalty as detailed in the APT conditions o f use.

Period (LT)	MAX Level dB(A)
0600-0700	82
0700-2300	90
2300-2330	82
2330-0600	81

3. DEPARTURE

Details of noise monitoring locations and performance are obtainable from:

Flight Evaluation Unit
(Email: flightevaluationunit @magairports.com).

Jet ACFT maintain a minimum climb gradient of at least 500' per minute at power settings to ensure progressively decreasing noise levels at points on the ground under the flight path beyond the monitoring terminal.

The noise preferential routes and procedures depicted on chart 10-4 and on Manchester SID charts are to be flown by all departing ACFT until the level defined stated below is reached:

Via	Termination preferential route
- LISTO from RWYs 05L/R, 23R/L	5000'
- ASMIM, DESIG or MONTY from RWYs 05L/R	4000'
- EKLAD, KUXEM or MONTY from RWYs 23R/L	3000'
- POL, SONEX from RWYs 05L/R, 23R/L	4000'
- SANBA from RWYs 23R/L	5000'

Exempted are:

- ACFT of 5700kg MTWA or less;
- Those ACFT instructed by ATC to make early turns in order to expedite traffic flow, such instructions may be issued between 0700-2300LT, to propeller ACFT of 23000kg MTWA or less and the following jet ACFT:

  All ACFT of 35000kg MTWA or less plus BAe 146 (Avro RJ Series), CRJ1, CRJ2, CRJ7, CRJ9, EMB-135/145, BBD700 Global Express and Gulfstream 5;
- And 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 altitude of 760' before commencing any turn.

Non-standard departure instructions will not normally be issued between 2300-0700LT.

3.3. RWY OPERATIONS

3.3.1. MINIMUM RWY OCCUPANCY TIME

Whenever possible, cockpit checks should be completed prior to line-up, and any checks requiring completion whilst on the RWY 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.

3.4. OTHER INFORMATION

When lined up for take-off from RWY 05L/23R, the full length of the RWY surface may not be visible from the flight deck.

3. DEPARTURE

3.5. DE-ICING

3.5.1. REMOTE DE-ICING

Manchester has three remote de-icing pads:

- TWY NB between TWYs NC and E, controlled by Maverick, which can accommodate up to a maximum one B757 ACFT;
- TWY B between intermediate holding positions B4 and B5, controlled by Iceman, which can accommodate up to a maximum one B757 ACFT;
- TWY J between intermediate holding position J2 and RWY holding position J1, controlled by Goose, which can accommodate one code E ACFT.

ACFT intending to use the remote de-icing pad will inform MANCHESTER Delivery when they request start-up.

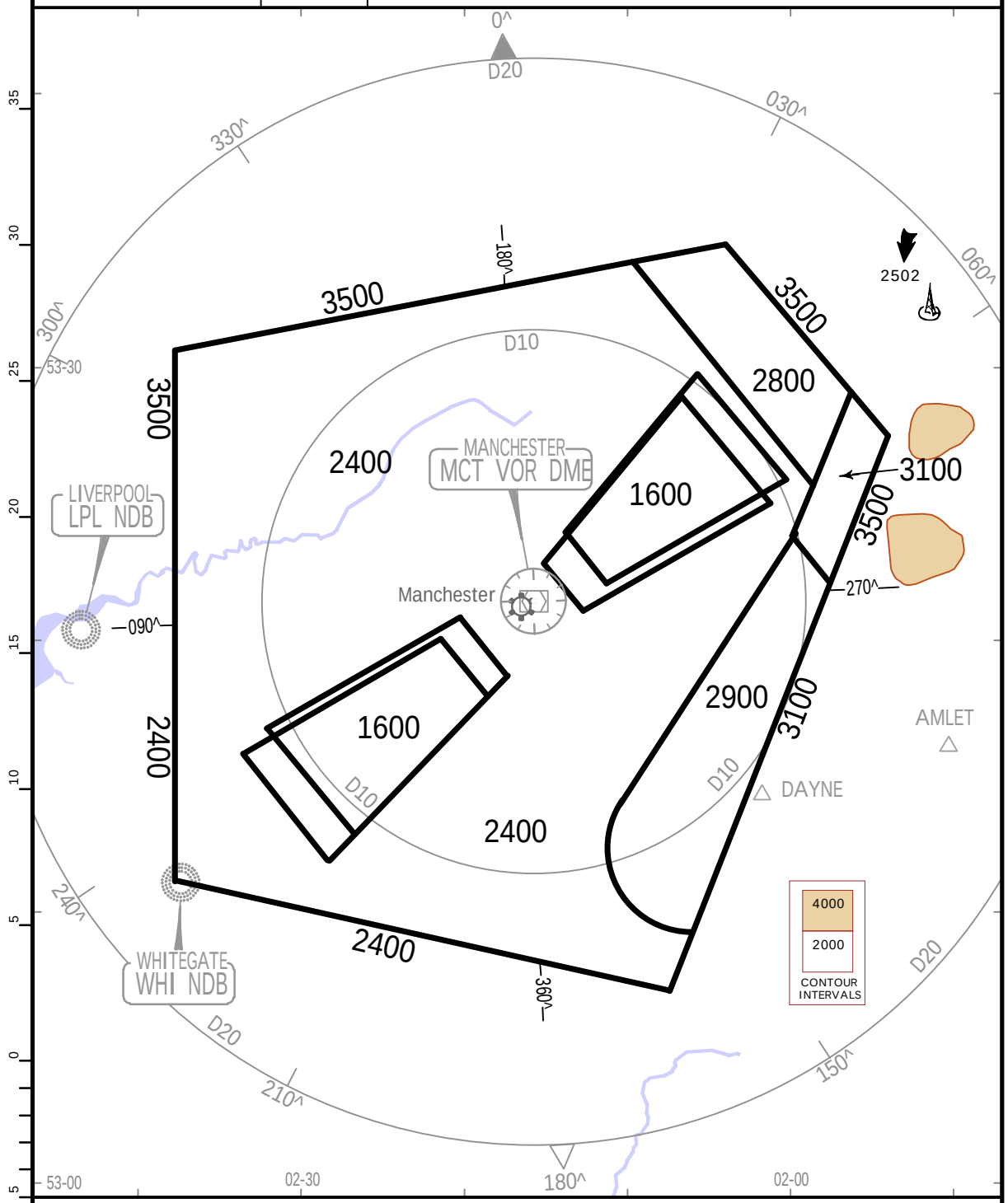
De-icing of ACFT is performed with engines running.

Propeller ACFT are de-iced on the apron ramp. De-icing is performed with engines switched off.

The ATC frequency 121.855 has to be monitored during de-icing on TWY NB and TWY B.

Due to its proximity to the RWY, the ATC frequency 118.630 has to be monitored during de-icing on TWY J.

MANCHESTER Radar (APP)	Apt Elev	Alt Set: hPa
118.58	257	Trans level: By ATC Trans alt: 5000



OUTSIDE THE DESIGNATED RADAR MINIMUM ALTITUDE AREA

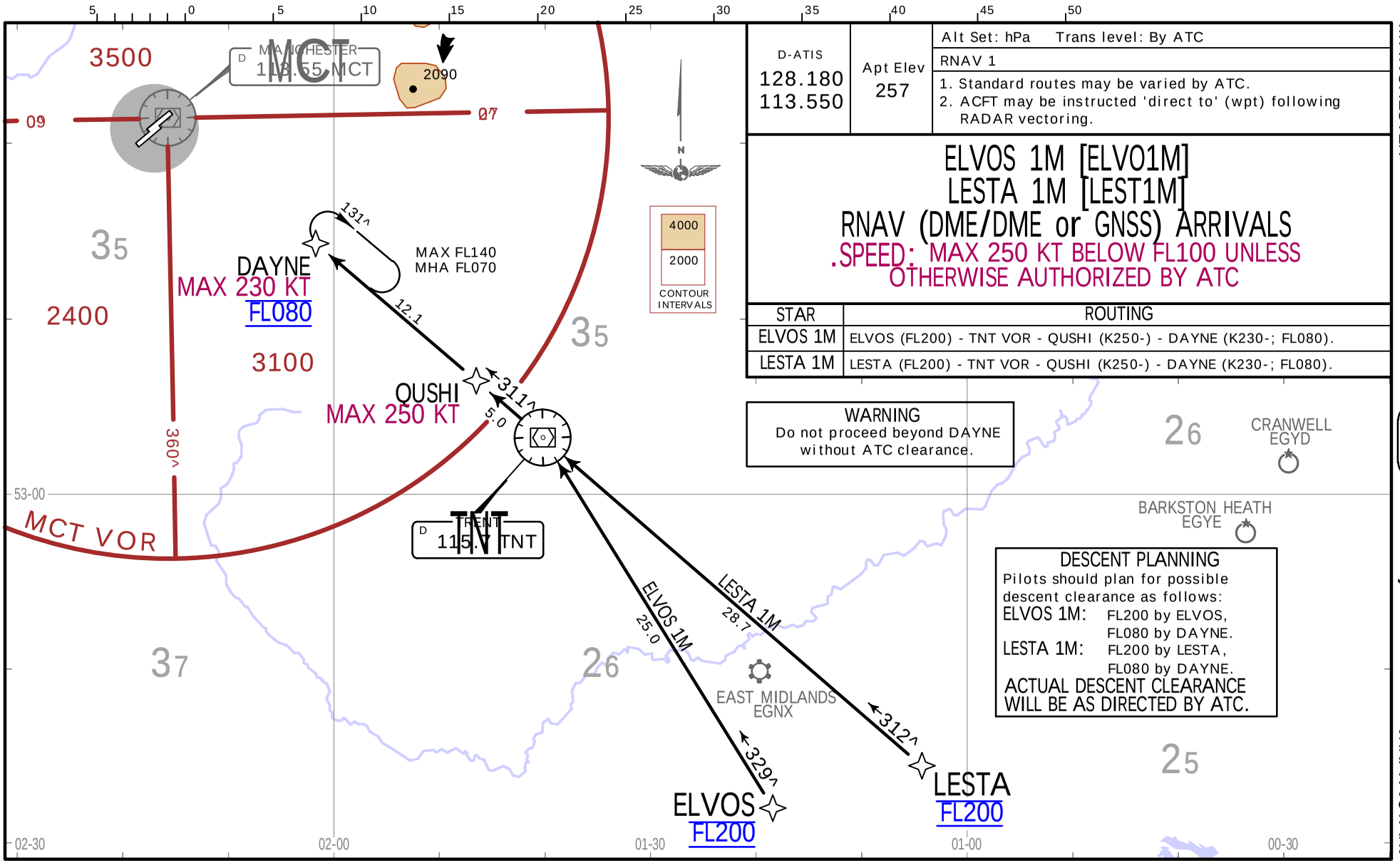
The minimum altitude to be allocated by the radar controller will be either the Minimum Sector Altitude or 1000 above any fixed obstacles:

- within 5 NM 1 of the aircraft and
- within the sector 15 NM 2 ahead of and within 20^ either side of the aircraft's track.

3 NM 1 or 10 NM 2 when the aircraft is within 15 NM of the radar antennae.

PROCEDURE	LOSS OF COMMUNICATION PROCEDURE
INITIAL APPROACH	Continue visually or by means of an appropriate approved final approach aid. If not possible proceed to DAYNE holding via AMLET or ROSUN holding via BURNI at FL60 or last assigned level if higher, as appropriate to the final approach chart.
INTERMEDIATE AND FINAL APPROACH	Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to DAYNE holding via AMLET or ROSUN holding via BURNI, as appropriate to the final approach chart.

CHANGES: Communication.



D-ATIS	Apt Elev	
128.180 113.550	257	Alt Set: hPa Trans level: By ATC RNAV 1 1. Standard routes may be varied by ATC. 2. ACFT may be instructed 'direct to' (wpt) following RADAR vectoring.

ELVOS 1M [ELVO1M]
LESTA 1M [LEST1M]
RNAV (DME/DME or GNSS) ARRIVALS

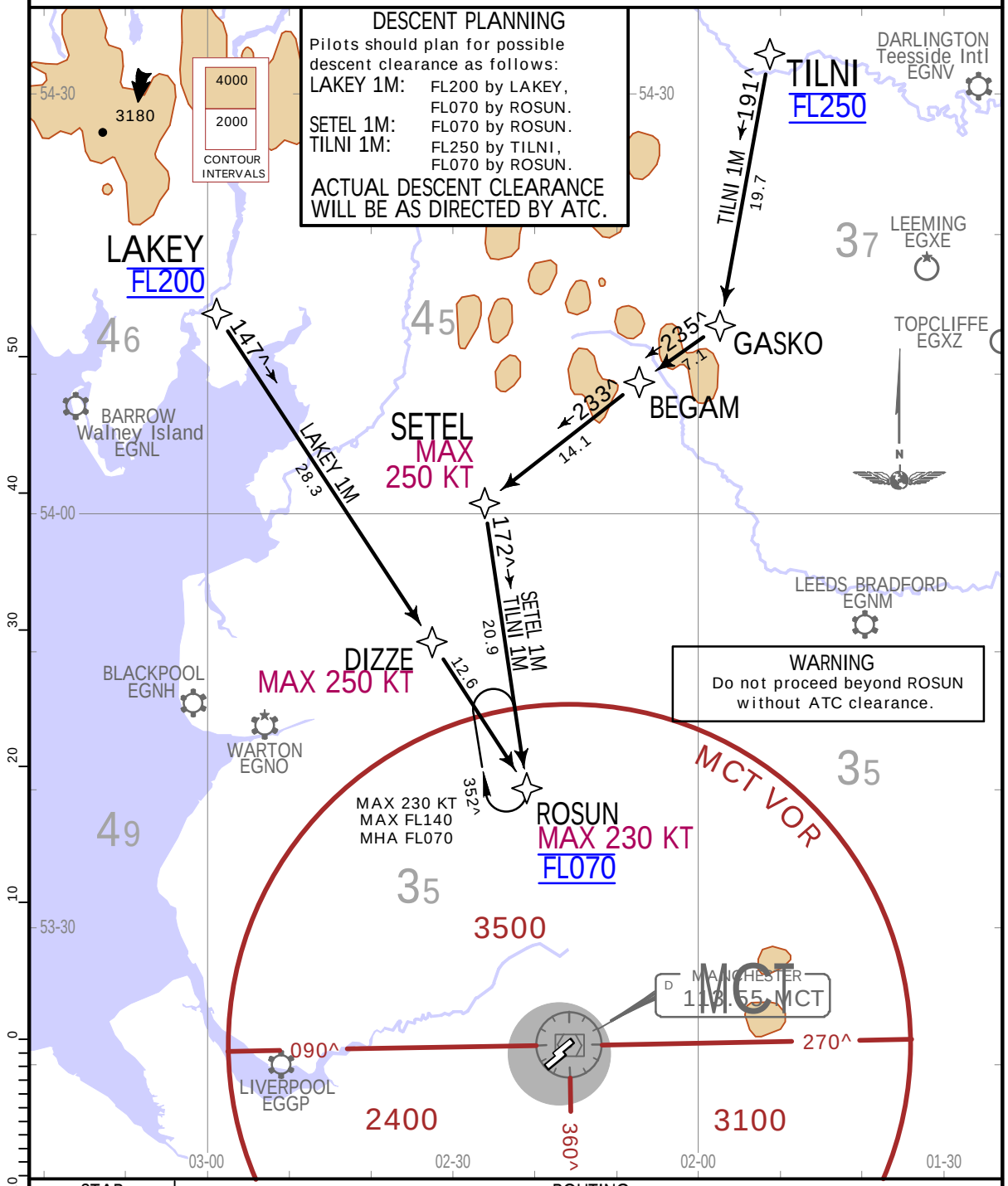
.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED BY ATC

STAR	ROUTING
ELVOS 1M	ELVOS (FL200) - TNT VOR - QUSHI (K250-) - DAYNE (K230-; FL080).
LESTA 1M	LESTA (FL200) - TNT VOR - QUSHI (K250-) - DAYNE (K230-; FL080).

D-ATIS	Apt Elev	
128.180 113.550	257	Alt Set: hPa Trans level: By ATC RNAV 1 1. Standard routes may be varied by ATC. 2. ACFT may be instructed 'direct to' (wpt) following RADAR vectoring.

LAKEY 1M [LAKE1M]
SETEL 1M [SETE1M]
TILNI 1M [TILN1M]
RNAV (DME/DME or GNSS) ARRIVALS

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED BY ATC



STAR	ROUTING
LAKEY 1M	LAKEY (FL200) - DIZZE (K250-) - ROSUN (K230-; FL070).
SETEL 1M	SETEL (K250-) - ROSUN (K230-; FL070).
TILNI 1M	TILNI (FL250) - GASKO - BEGAM - SETEL (K250-) - ROSUN (K230-; FL070).

CHANGES: New procedures at this airport.

CHANGES: None.

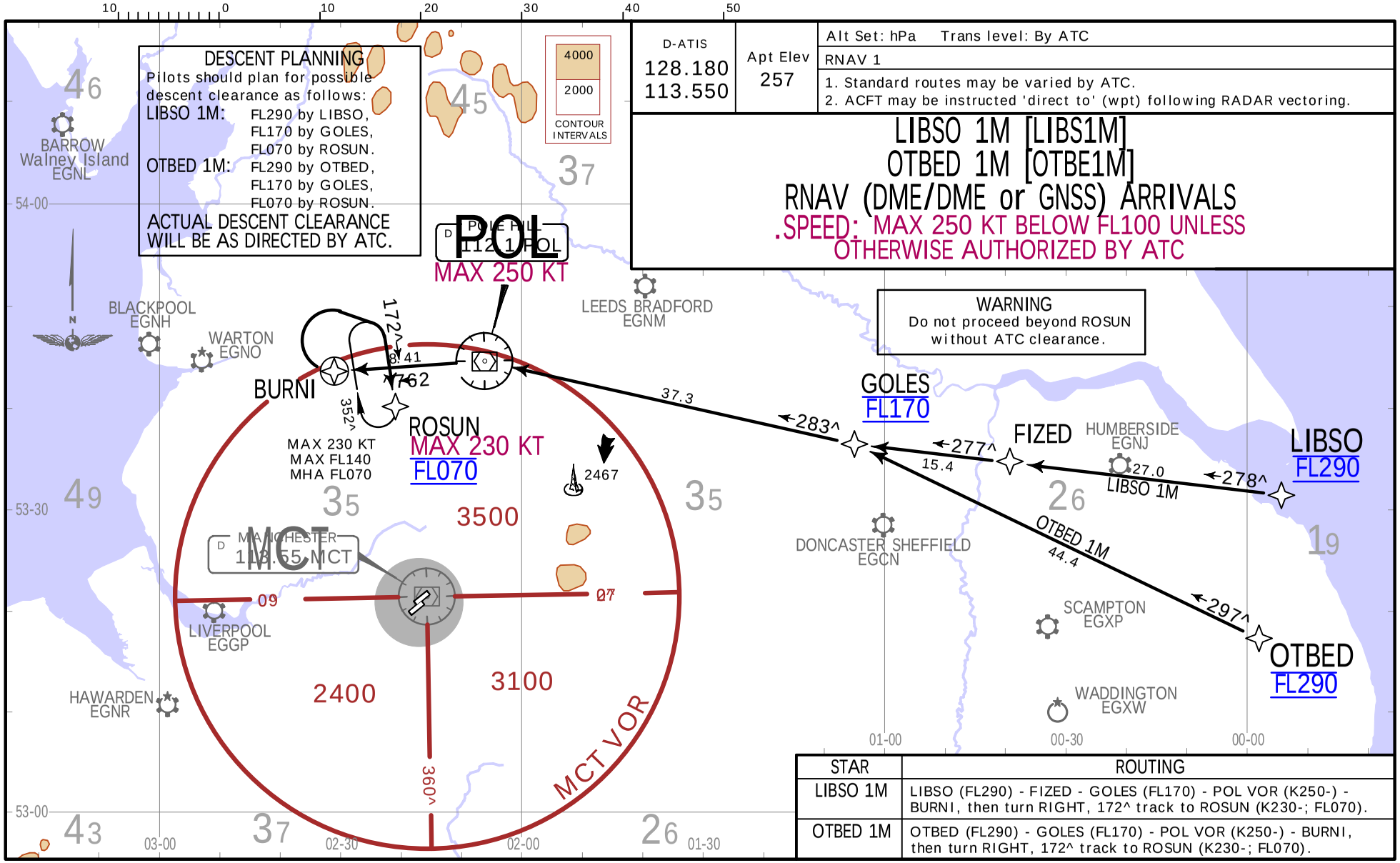
D-ATIS	Apt Elev	
128.180 113.550	257	Alt Set: hPa Trans level: By ATC RNAV 1 1. Standard routes may be varied by ATC. 2. ACFT may be instructed 'direct to' (wpt) following RADAR vectoring.

LIBSO 1M [LIBS1M]
OTBED 1M [OTBE1M]
RNAV (DME/DME or GNSS) ARRIVALS

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED BY ATC

DESCENT PLANNING
Pilots should plan for possible descent clearance as follows:
LIBSO 1M: FL290 by LIBSO, FL170 by GOLES, FL070 by ROSUN.
OTBED 1M: FL290 by OTBED, FL170 by GOLES, FL070 by ROSUN.
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

WARNING
Do not proceed beyond ROSUN without ATC clearance.



STAR	ROUTING
LIBSO 1M	LIBSO (FL290) - FIZED - GOLES (FL170) - POL VOR (K250-) - BURNI, then turn RIGHT, 172^ track to ROSUN (K230-; FL070).
OTBED 1M	OTBED (FL290) - GOLES (FL170) - POL VOR (K250-) - BURNI, then turn RIGHT, 172^ track to ROSUN (K230-; FL070).

EGCC/MAN
MANCHESTER

JEPPESEN
10 MAR 23
(10-2C)
.Eff.23.Mar.

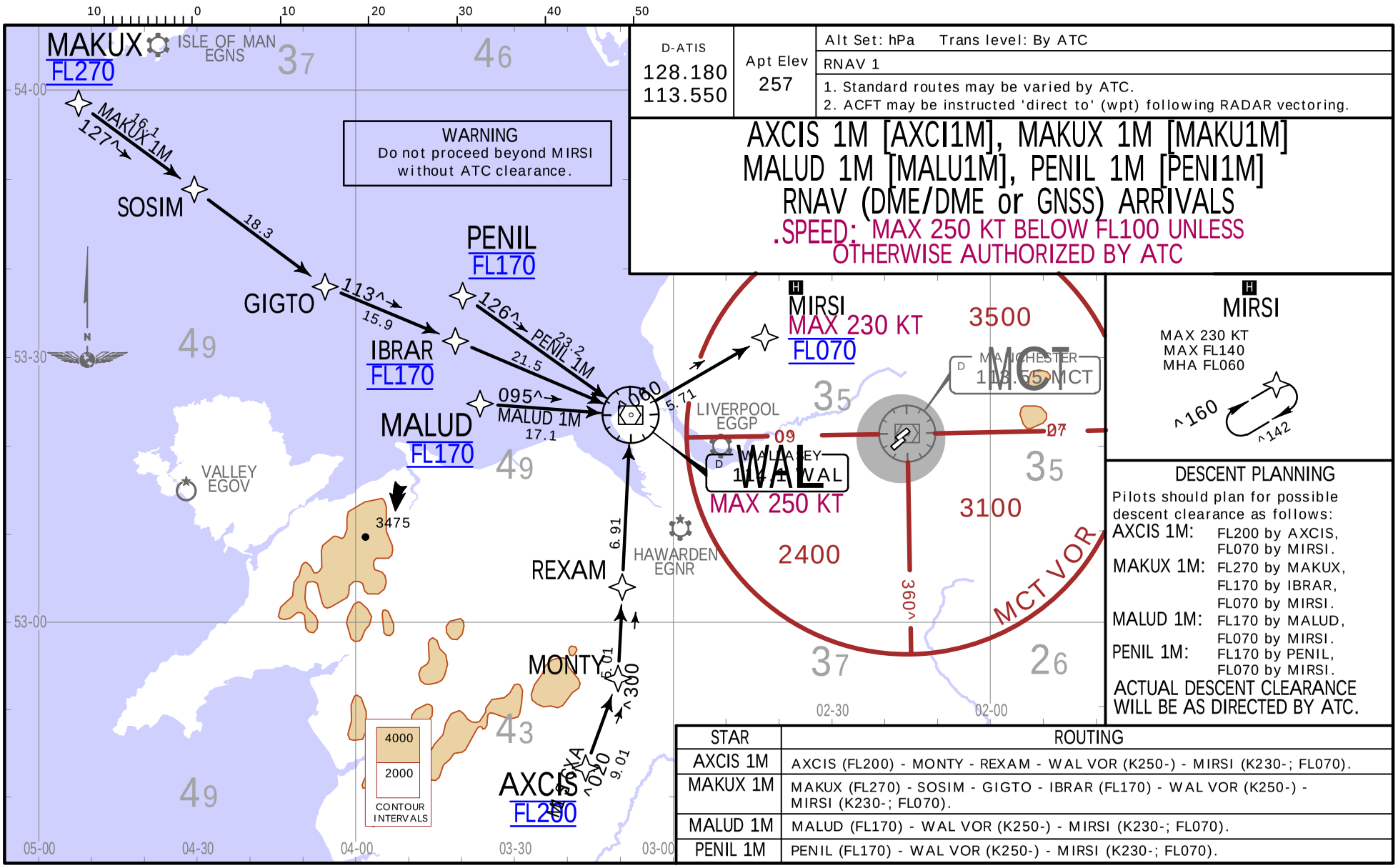
MANCHESTER, UK
.RNAV.STAR.

CHANGES: OKTEM 1M withdrawn, AXCIS 1M established.

D-ATIS	Apt Elev	Alt Set: hPa Trans level: By ATC
128.180 113.550	257	RNAV 1
		1. Standard routes may be varied by ATC. 2. ACFT may be instructed 'direct to' (wpt) following RADAR vectoring.

AXCIS 1M [AXCI1M], MAKUX 1M [MAKU1M]
MALUD 1M [MALU1M], PENIL 1M [PENI1M]
RNAV (DME/DME or GNSS) ARRIVALS

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED BY ATC



DESCENT PLANNING

Pilots should plan for possible descent clearance as follows:

AXCIS 1M:	FL200 by AXCIS, FL070 by MIRSI.
MAKUX 1M:	FL270 by MAKUX, FL170 by IBRAR, FL070 by MIRSI.
MALUD 1M:	FL170 by MALUD, FL070 by MIRSI.
PENIL 1M:	FL170 by PENIL, FL070 by MIRSI.

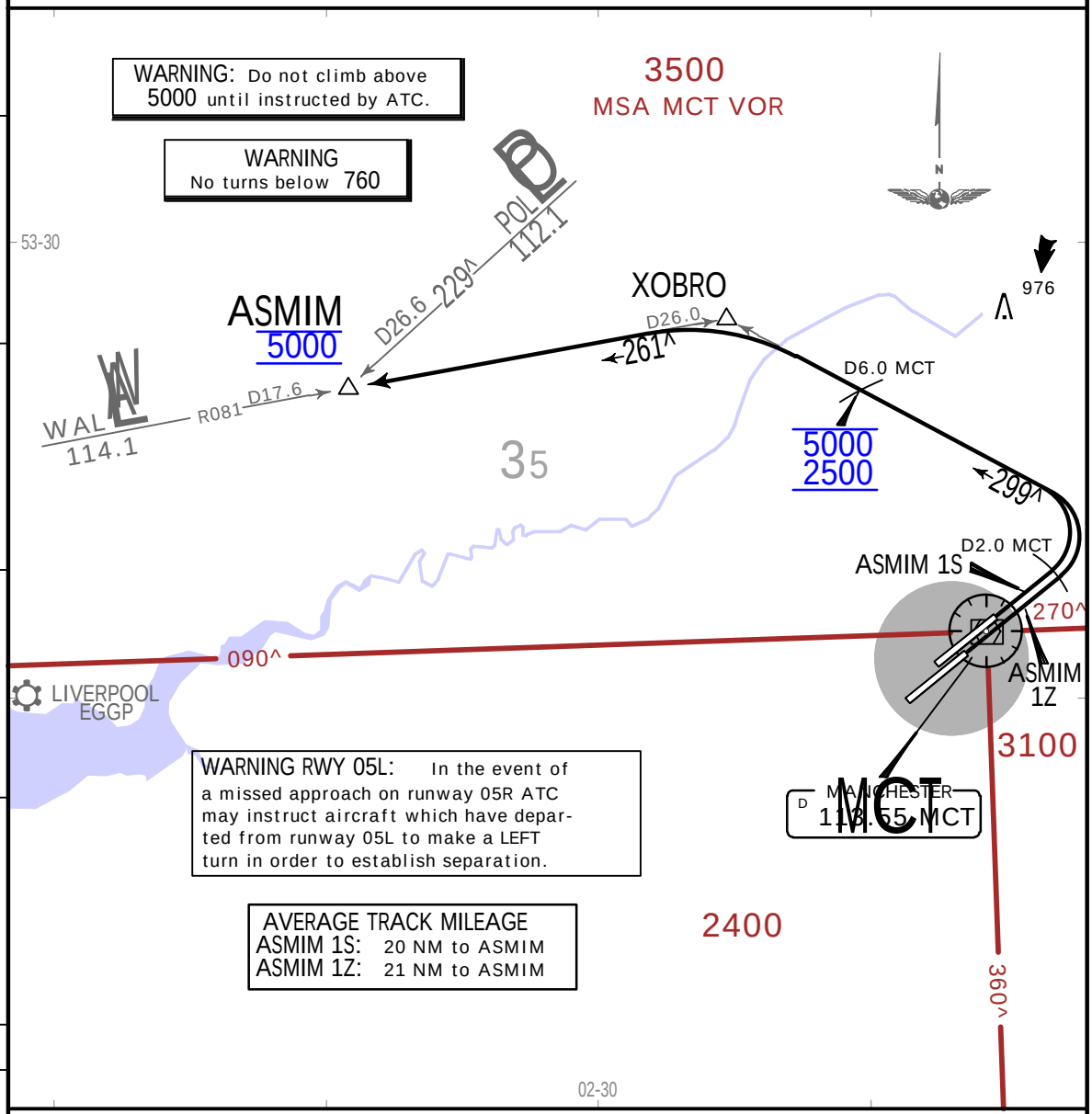
ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

STAR	ROUTING
AXCIS 1M	AXCIS (FL200) - MONTY - REXAM - WAL VOR (K250-) - MIRSI (K230-; FL070).
MAKUX 1M	MAKUX (FL270) - SOSIM - GIGTO - IBRAR (FL170) - WAL VOR (K250-) - MIRSI (K230-; FL070).
MALUD 1M	MALUD (FL170) - WAL VOR (K250-) - MIRSI (K230-; FL070).
PENIL 1M	PENIL (FL170) - WAL VOR (K250-) - MIRSI (K230-; FL070).

SCOTTISH Control	Apt Elev	
128.055	257	Trans alt: 5000 1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude. 2. SIDs include noise preferential routes (refer to 10-4). 3. EXPECT first CPDLC Data Link Authority to be airway L-10 EGPX, airway L-70 EISN. 4. Cruising levels will be allocated enroute by SCOTTISH Control. 5. Do not climb above SID level until cleared by ATC. 6. Rwy 05L: EXPECT close-in obstacles.

ASMIM 1S [ASMI1S]
ASMIM 1Z [ASMI1Z]
DEPARTURES

.SPEED: MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORIZED



These SIDs require minimum climb gradients of
5.24% until D2.0 MCT, then
4.0% up to 2500, then
3.55% to ASMIM for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
3.55% V/V (fpm)	270	360	539	719	899	1079
4.0% V/V (fpm)	304	405	608	810	1013	1215
5.24% V/V (fpm)	398	531	796	1061	1327	1592

SID	RWY	ROUTING/ALTITUDE
ASMIM 1S	05L	Climb straight ahead, at D2.0 MCT turn LEFT, 299^ track towards XOBRO, cross D6.0 MCT at or above 2500 (MAX 5000), intercept WAL R081 inbound, to ASMIM, cross at 5000.
ASMIM 1Z	05R	

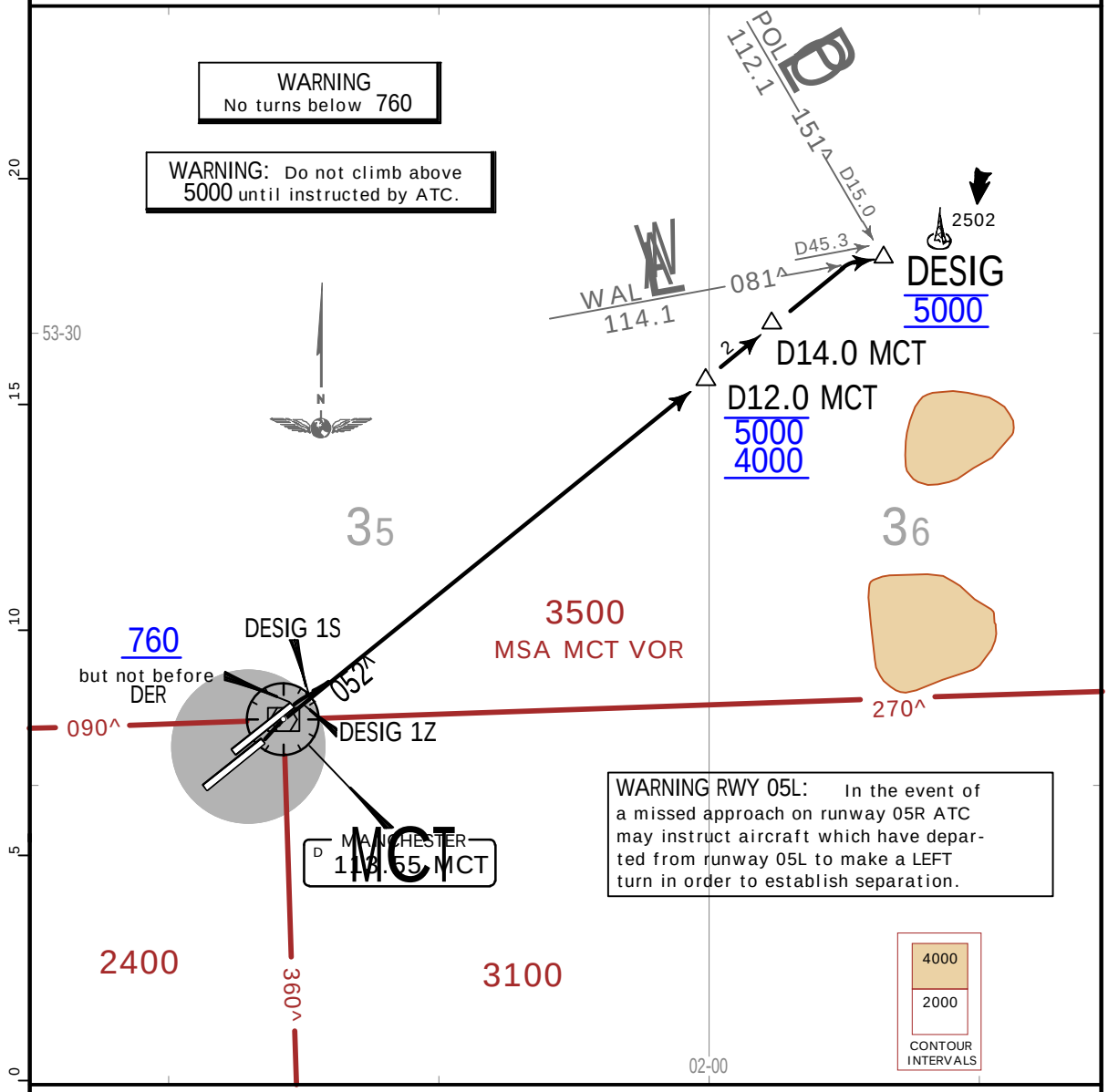
CHANGES: None.

SCOTTISH Control	Apt Elev
135.715	257

Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGTT.
4. Cruising levels will be allocated enroute by SCOTTISH Control.
5. Rwy 05L: EXPECT close-in obstacles.
6. Do not climb above SID level until cleared by ATC.

DESIG 1S [DESI1S], DESIG 1Z [DESI1Z] DEPARTURES

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



These SIDs require a minimum climb gradient of 5.7% up to 4000 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
5.7% V/V (fpm)	433	577	866	1154	1443	1732

AVERAGE TRACK MILEAGE
DESIG 1S: 17 NM to DESIG
DESIG 1Z: 16 NM to DESIG

SID	RWY	ROUTING/ALTITUDE
DESIG 1S	05L	**Climb straight ahead, at or above** 760, but not before DER intercept MCT R052, cross D12.0 MCT at or above 4000 (MAX 5000), at D14.0 MCT turn RIGHT, intercept WAL R081, to DESIG at 5000.
DESIG 1Z	05R	Climb straight ahead on MCT R052, cross D12.0 MCT at or above 4000 (MAX 5000), at D14.0 MCT turn RIGHT, intercept WAL R081, to DESIG at 5000.

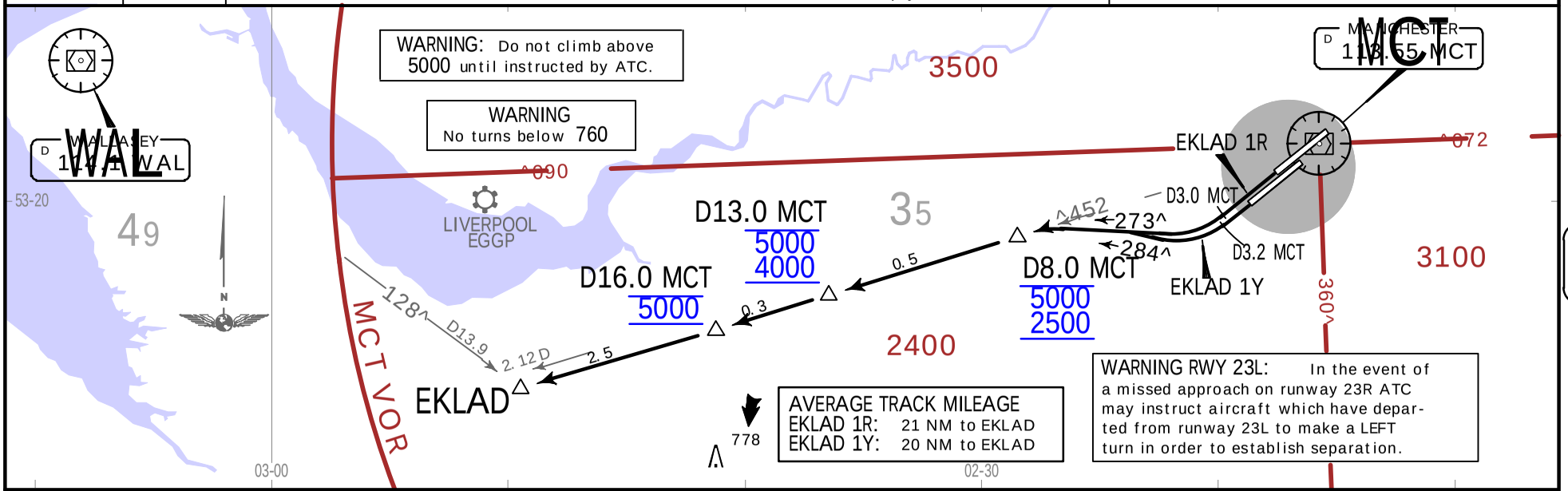
CHANGES: Communication.

SCOTTISH Control	Apt Elev
128.055	257

Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be airway L10 EGPX, airway L70 EISN.
4. Cruising levels will be allocated after departure by SCOTTISH Control.
5. Do not climb above SID level until cleared by ATC.
6. RWY 23R: EXPECT close-in obstacles.
7. ACFT routing via P17 requesting a crusing level of FL270 or above can EXPECT a clearance from LONDON Control to cross OSSEP at or above FL270. Traffic unable to comply must inform ATC.

EKLAD 1R [EKLA1R]
EKLAD 1Y [EKLA1Y]
DEPARTURES
(RWYS 23L, 23R)

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



SID	RWY	ROUTING/ALTITUDE
EKLAD 1R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 273^ track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), D13.0 MCT at or above 4000 (MAX 5000), D16.0 MCT at 5000, to EKLAD.
EKLAD 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 284^ track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), D13.0 MCT at or above 4000 (MAX 5000), D16.0 MCT at 5000, to EKLAD.

These SIDs require minimum climb gradients of
EKLAD 1R: 5.55% until D3.0 MCT, then 5.21% up to 2500, then 3.43% up to 5000 for ATC or airspace purposes.

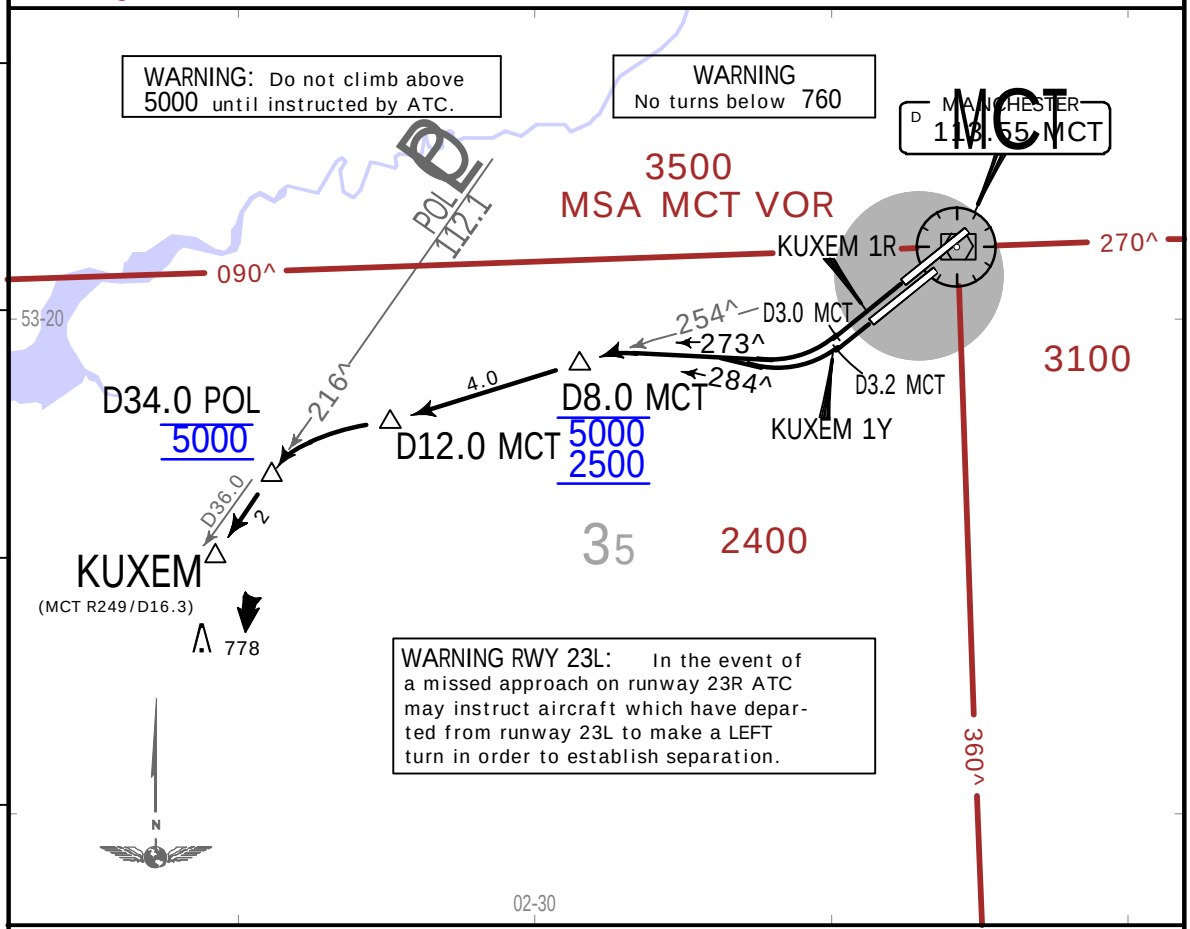
EKLAD 1Y: 12.33% until D3.2 MCT, then 5.21% up to 2500, then 3.43% up to 5000 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
3.43% V/V (fpm)	261	347	521	695	868	1042
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SCOTTISH Control	Apt Elev	
128.055	257	Trans alt: 5000 1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude. 2. SIDs include noise preferential routes (refer to 10-4). 3. EXPECT first CPDLC Data Link Authotity to be airway L10 EGPX, airway L70 EISN. 4. Cruising levels will be allocated after departure by SCOTTISH Control. 5. RWY 23R: EXPECT close-in obstacles. 6. Do not climb above SID level until cleared by ATC. 7. ACFT routing via P17 requesting a crusing level of FL270 or above can EXPECT a clearance from LONDON Control to cross OSSEP at or above FL270. Traffic unable to comply must inform ATC.

KUXEM 1R [KUXE1R], KUXEM 1Y [KUXE1Y] DEPARTURES (RWYS 23L, 23R)

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



These SIDs require minimum climb gradients of

KUXEM 1R: 5.55% until D3.0 MCT, then 5.21% up to 2500, then 4.51% up to 5000 for ATC or airspace purposes.

KUXEM 1Y: 12.33% until D3.2 MCT, then 5.21% up to 2500, then 4.51% up to 5000 for ATC or airspace purposes.

AVERAGE TRACK MILEAGE
KUXEM 1R: 15 NM to KUXEM
KUXEM 1Y: 16 NM to KUXEM

Gnd speed-KT	75	100	150	200	250	300
4.51% V/V (fpm)	343	457	685	913	1142	1370
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
KUXEM 1R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 273^ track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), at D12.0 MCT turn LEFT, intercept POL R216, cross D34.0 POL at 5000 to KUXEM.
KUXEM 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 284^ track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), at D12.0 MCT turn LEFT, intercept POL R216, cross D34.0 POL at 5000 to KUXEM.

CHANGES: Gen note 7 established, tracks updated.

SCOTTISH Control	Apt Elev
134.430	257

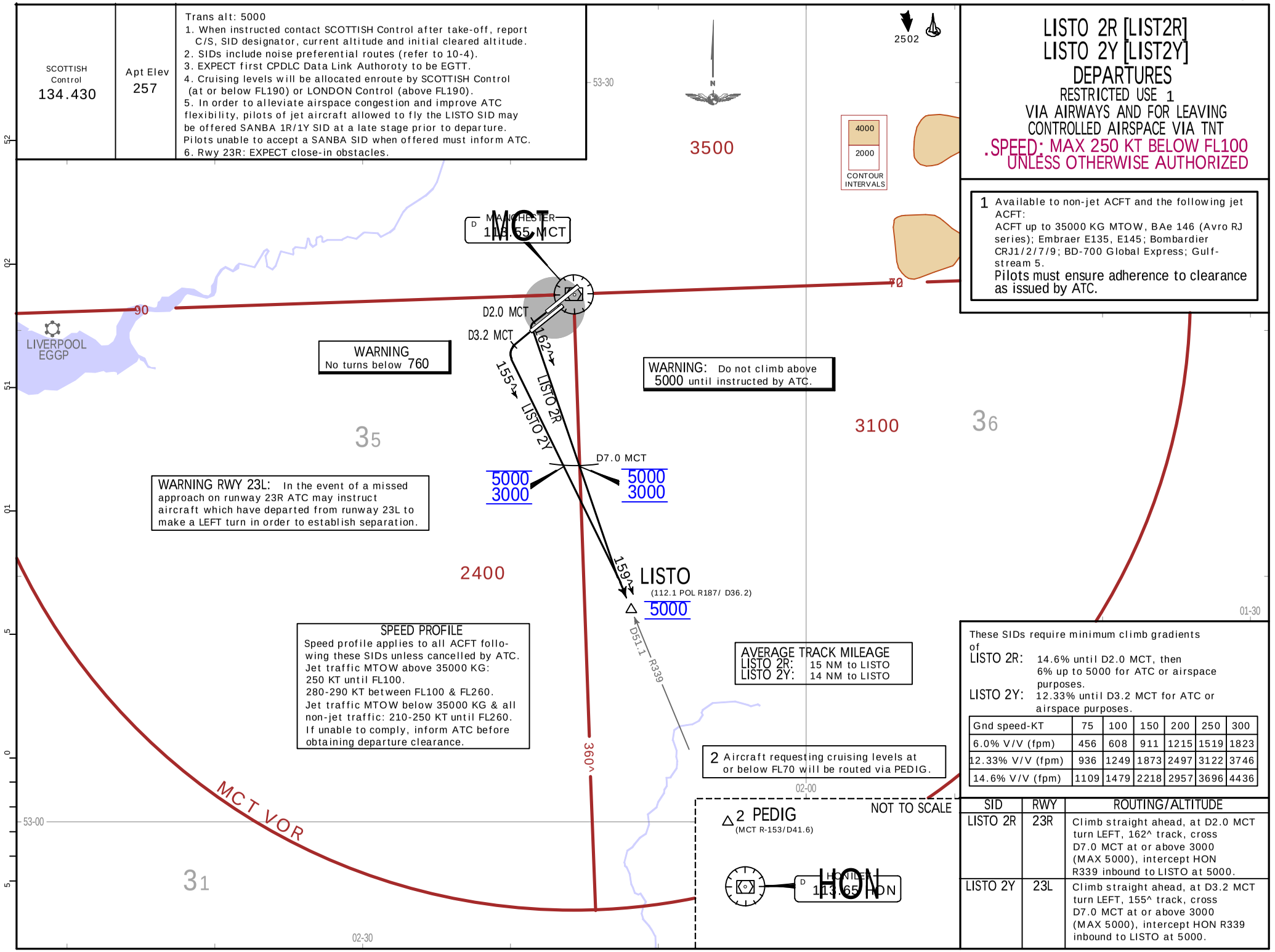
Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authoroty to be EGTT.
4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
5. In order to alleviate airspace congestion and improve ATC flexibility, pilots of jet aircraft allowed to fly the LISTO SID may be offered SANBA 1R/1Y SID at a late stage prior to departure. Pilots unable to accept a SANBA SID when offered must inform ATC.
6. Rwy 23R: EXPECT close-in obstacles.

LISTO 2R [LIST2R]
LISTO 2Y [LIST2Y]
DEPARTURES

RESTRICTED USE 1
VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE VIA TNT

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED

1 Available to non-jet ACFT and the following jet ACFT:
ACFT up to 35000 KG MTOW, BAe 146 (Avro RJ series); Embraer E135, E145; Bombardier CRJ1/2/7/9; BD-700 Global Express; Gulf-stream 5.
Pilots must ensure adherence to clearance as issued by ATC.



These SIDs require minimum climb gradients of
LISTO 2R: 14.6% until D2.0 MCT, then 6% up to 5000 for ATC or airspace purposes.
LISTO 2Y: 12.33% until D3.2 MCT for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
6.0% V/V (fpm)	456	608	911	1215	1519	1823
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746
14.6% V/V (fpm)	1109	1479	2218	2957	3696	4436

SID	RWY	ROUTING/ALTITUDE
LISTO 2R	23R	Climb straight ahead, at D2.0 MCT turn LEFT, 162^ track, cross D7.0 MCT at or above 3000 (MAX 5000), intercept HON R339 inbound to LISTO at 5000.
LISTO 2Y	23L	Climb straight ahead, at D3.2 MCT turn LEFT, 155^ track, cross D7.0 MCT at or above 3000 (MAX 5000), intercept HON R339 inbound to LISTO at 5000.

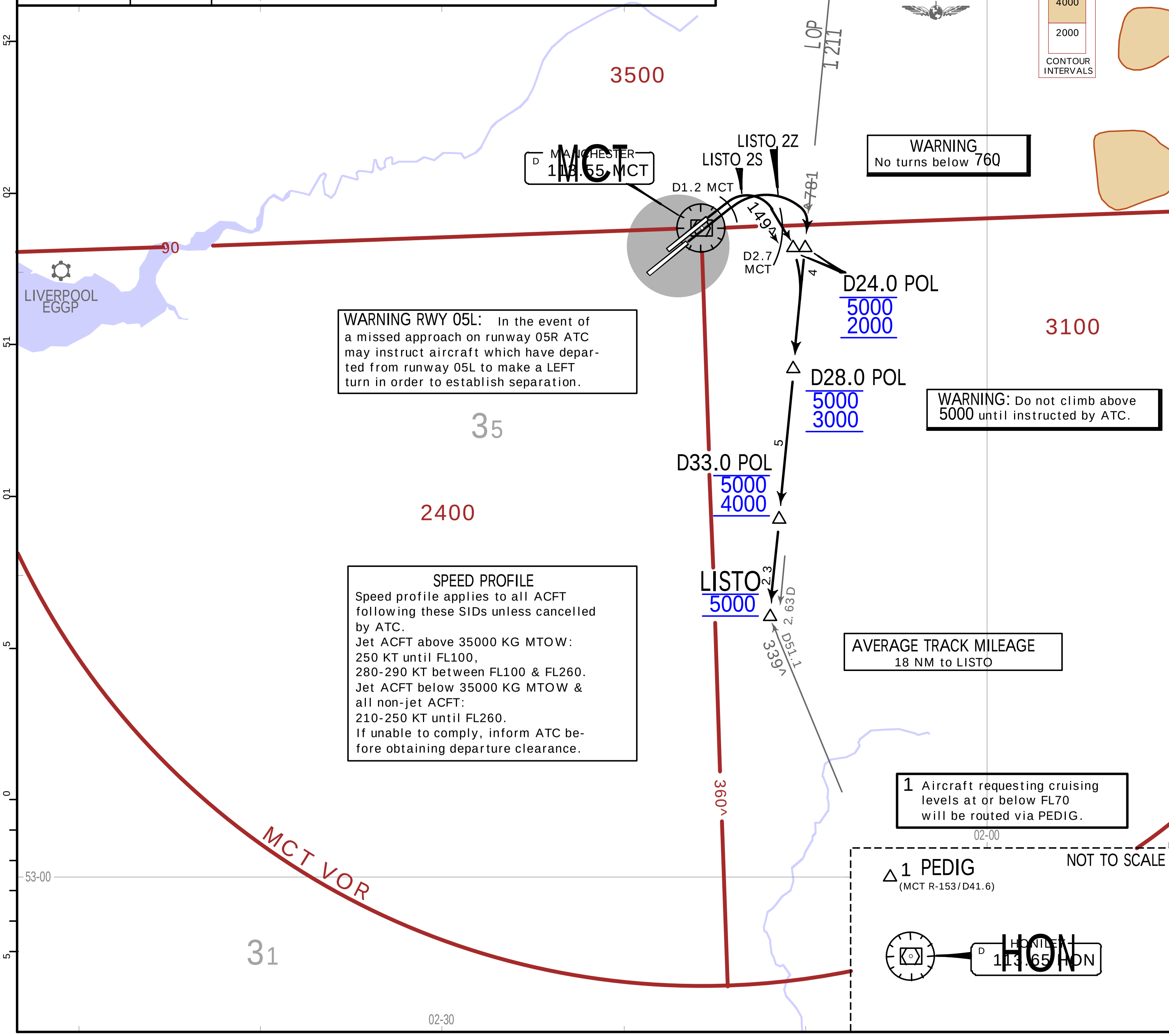
CHANGES: Track update.

SCOTTISH Control	Apt Elev
134.430	257

Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGTT.
4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190).
5. Rwy 05L: EXPECT close-in obstacles.

LISTO 2S [LIST2S]
LISTO 2Z [LIST2Z]
DEPARTURES
VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE VIA TNT

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



WARNING No turns below 760

WARNING: Do not climb above 5000 until instructed by ATC.

WARNING RWY 05L: In the event of a missed approach on runway 05R ATC may instruct aircraft which have departed from runway 05L to make a LEFT turn in order to establish separation.

AVERAGE TRACK MILEAGE 18 NM to LISTO

SPEED PROFILE
Speed profile applies to all ACFT following these SIDs unless cancelled by ATC.
Jet ACFT above 35000 KG MTOW:
250 KT until FL100,
280-290 KT between FL100 & FL260.
Jet ACFT below 35000 KG MTOW & all non-jet ACFT:
210-250 KT until FL260.
If unable to comply, inform ATC before obtaining departure clearance.

1 Aircraft requesting cruising levels at or below FL70 will be routed via PEDIG.

These SIDs require minimum climb gradients of
LISTO 2S: 10.86% until D1.2 MCT, then 6.86% up to 2000, then 5% up to 5000 for ATC or airspace purposes.
LISTO 2Z: 4.88% until D1.2 MCT, then 6.86% up to 2000, then 5% up to 5000 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.88% V/V (fpm)	371	494	741	988	1235	1483
5.0% V/V (fpm)	380	506	760	1013	1266	1519
6.86% V/V (fpm)	521	695	1042	1389	1737	2084
10.86% V/V (fpm)	825	1100	1650	2200	2749	3299

SID	RWY	ROUTING/ALTITUDE
LISTO 2S	05L	Climb straight ahead, at D1.2 MCT turn RIGHT, 149^ track, at D2.7 MCT turn RIGHT, intercept POL R187, cross D24.0 POL at or above 2000 (MAX 5000), D28.0 POL at or above 3000 (MAX 5000), D33.0 POL at or above 4000 (MAX 5000), to LISTO at 5000.
LISTO 2Z	05R	Climb straight ahead, at D1.2 MCT turn RIGHT, intercept POL R187, cross D24.0 POL at or above 2000 (MAX 5000), D28.0 POL at or above 3000 (MAX 5000), D33.0 POL at or above 4000 (MAX 5000), to LISTO at 5000.

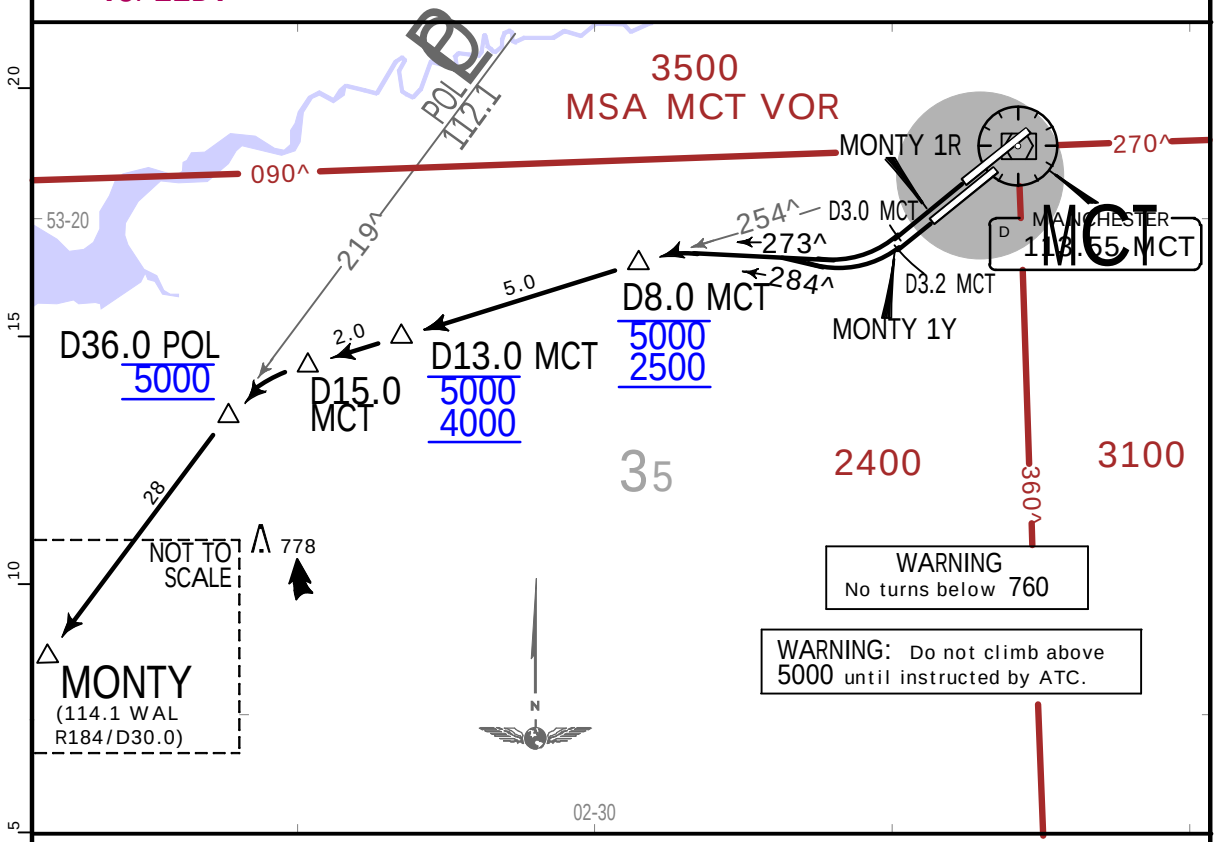
CHANGES: Radial update.

SCOTTISH Control	Apt Elev	
128.055	257	Trans alt: 5000 1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude. 2. SIDs include noise preferential routes (refer to 10-4). 3. EXPECT first CPDLC Data Link Authority to be EGTT. 4. RWY 23R: EXPECT close-in obstacles. 5. Do not climb above SID upper limit (5000) until cleared by ATC. Actual cleared levels will be allocated by ATC.

MONTY 1R [MONT1R]
MONTY 1Y [MONT1Y]
DEPARTURES
(RWYS 23L, 23R)

FOR AIRCRAFT LEAVING CONTROLLED AIRSPACE AT MONTY

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



These SIDs require minimum climb gradients of

MONTY 1R: 5.55% until D3.0 MCT, then 5.21% up to 2500 for ATC or airspace purposes.

MONTY 1Y: 12.33% until D3.2 MCT, then 5.21% up to 2500 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
5.21% V/V (fpm)	396	528	791	1055	1319	1583
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

AVERAGE TRACK MILEAGE
MONTY 1R: 44 NM to MONTY
MONTY 1Y: 45 NM to MONTY

WARNING RWY 23L: In the event of a missed approach on runway 23R ATC may instruct aircraft which have departed from runway 23L to make a LEFT turn in order to establish separation.

SID	RWY	ROUTING/ALTITUDE
MONTY 1R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 273^ track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), D13.0 MCT at or above 4000 (MAX 5000), at D15.0 MCT turn LEFT, intercept POL R219, cross D36.0 POL at 5000, to MONTY.
MONTY 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 284^ track, intercept MCT R254, cross D8.0 MCT at or above 2500 (MAX 5000), D13.0 MCT at or above 4000 (MAX 5000), at D15.0 MCT turn LEFT, intercept POL R219, cross D36.0 POL at 5000, to MONTY.

MONTY 1S [MONT1S], MONTY 1Z [MONT1Z] DEPARTURES (RWYS 05L, 05R)

FOR AIRCRAFT LEAVING CONTROLLED AIRSPACE AT MONTY

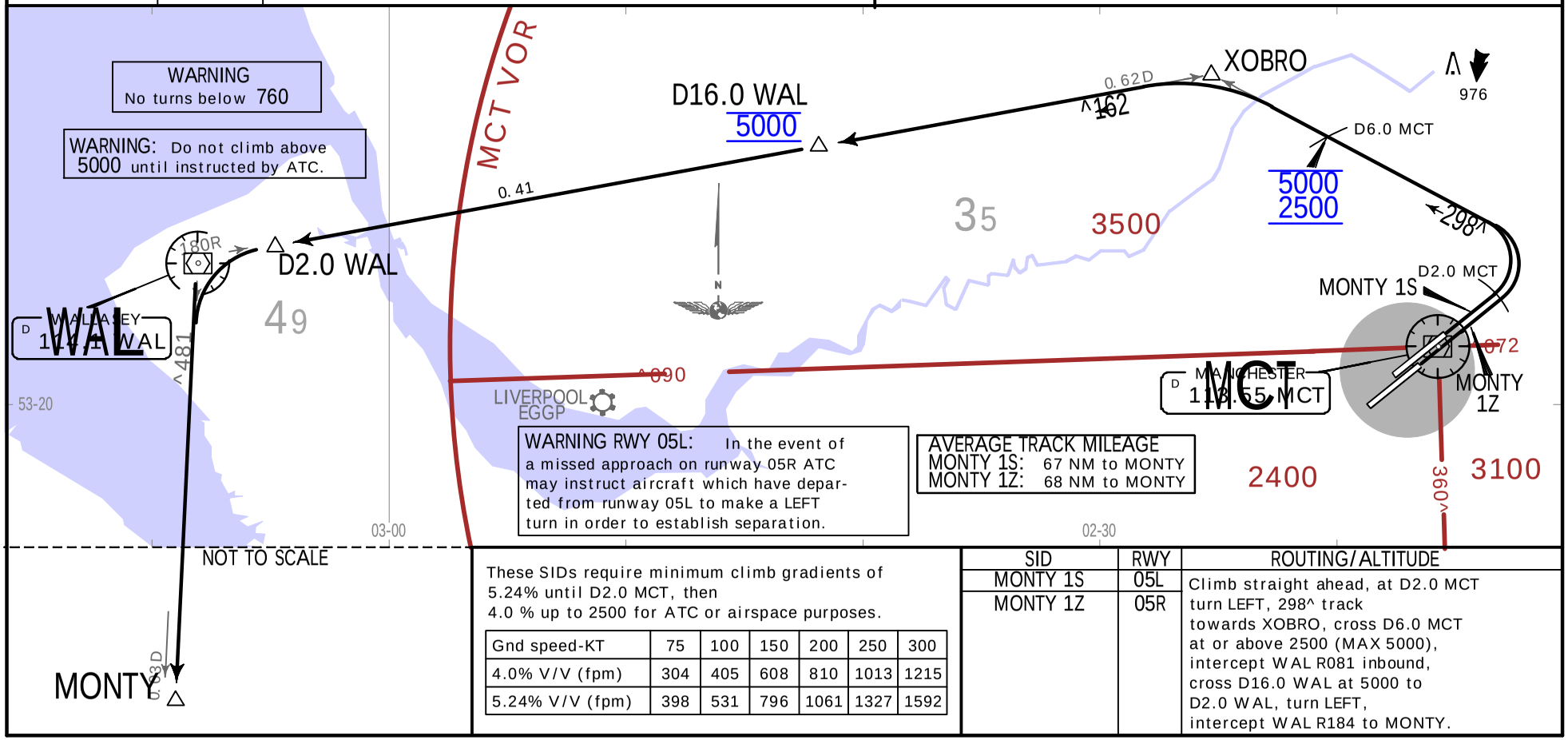
.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED

SCOTTISH Control 128.055

Apt Elev 257

Trans alt: 5000

1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGTT.
4. RWY 05L: EXPECT close-in obstacles.
5. Do not climb above SID upper limit (5000) until cleared by ATC. Actual cleared levels will be allocated by ATC.



These SIDs require minimum climb gradients of 5.24% until D2.0 MCT, then 4.0 % up to 2500 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.0% V/V (fpm)	304	405	608	810	1013	1215
5.24% V/V (fpm)	398	531	796	1061	1327	1592

SID	RWY	ROUTING/ALTITUDE
MONTY 1S	05L	Climb straight ahead, at D2.0 MCT turn LEFT, 298^ track towards XOBRO, cross D6.0 MCT at or above 2500 (MAX 5000), intercept WAL R081 inbound, cross D16.0 WAL at 5000 to D2.0 WAL, turn LEFT, intercept WAL R184 to MONTY.
MONTY 1Z	05R	

CHANGES: Gen notes revised, tracks updated.

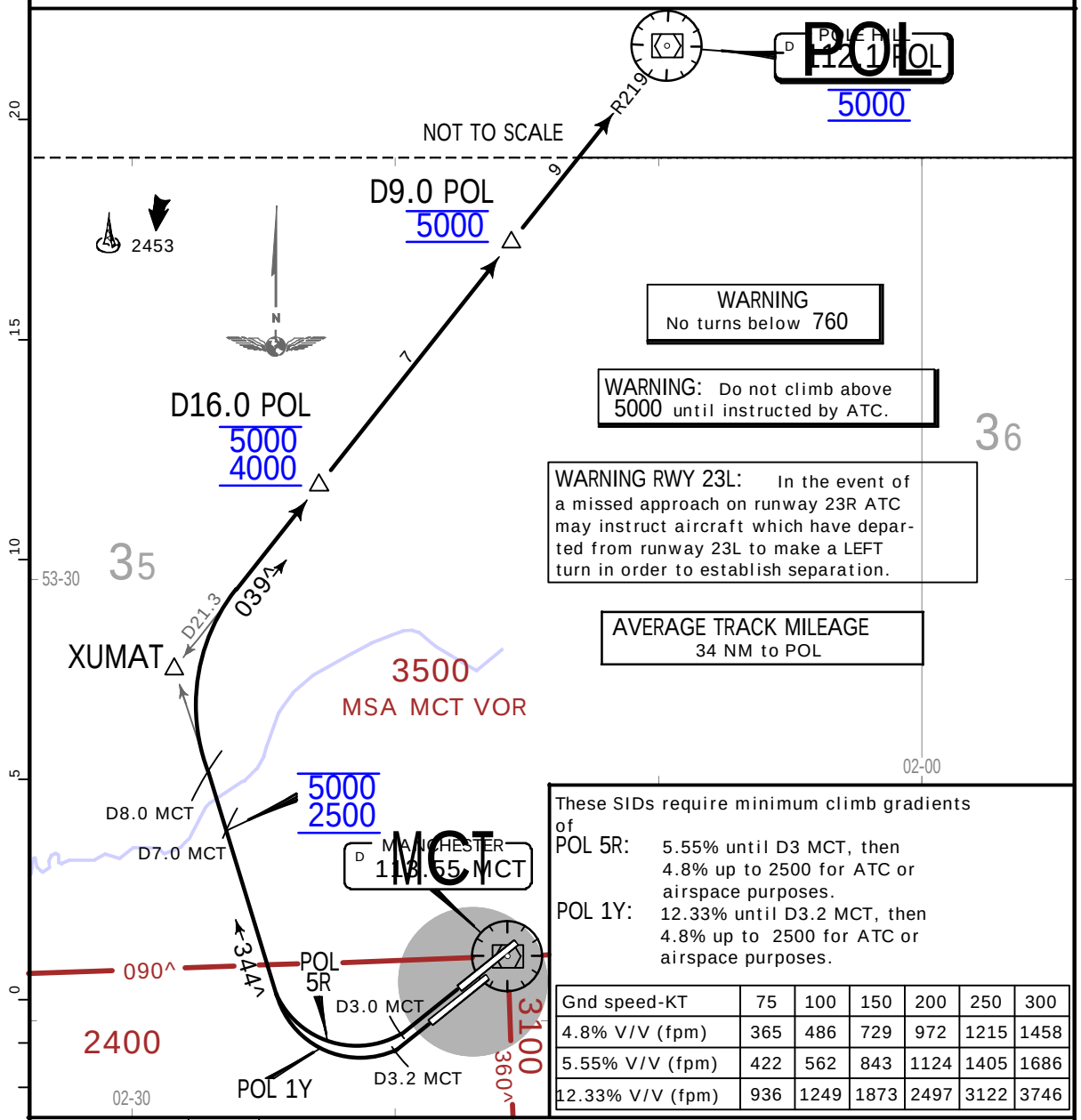
SCOTTISH Control	Apt Elev
135.715	257

Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGPX.
4. Cruising levels will be allocated enroute by SCOTTISH Control.
5. Rwy 23R: EXPECT close-in obstacles.
6. Do not climb above SID level until cleared by ATC.

POL 5R, POL 1Y DEPARTURES

VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



Gnd speed-KT	75	100	150	200	250	300
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
POL 5R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 344^ track towards XUMAT, cross D7.0 MCT at or above 2500 (MAX 5000), at D8.0 MCT turn RIGHT, intercept POL R219 inbound, cross D16.0 POL at or above 4000 (MAX 5000), D9.0 POL at 5000, to POL at 5000.
POL 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 344^ track towards XUMAT, cross D7.0 MCT at or above 2500 (MAX 5000), at D8.0 MCT turn RIGHT, intercept POL R219 inbound, cross D16.0 POL at or above 4000 (MAX 5000), D9.0 POL at 5000, to POL at 5000.

CHANGES: None.

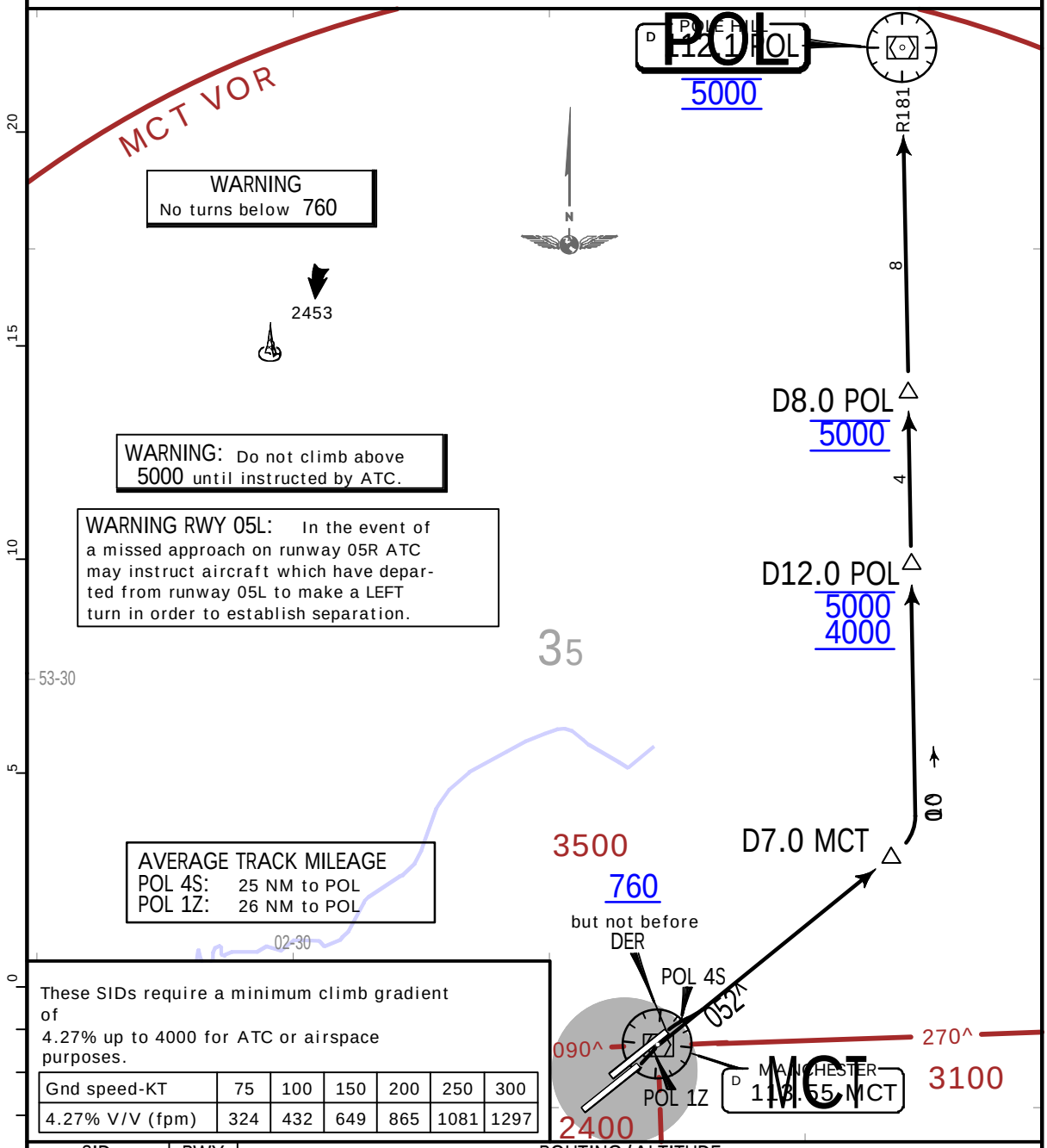
SCOTTISH Control	Apt Elev
135.715	257

Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGPX.
4. Cruising levels will be allocated enroute by SCHOTTISH Control.
5. Do not climb above SID level until cleared by ATC.
6. Rwy 05L: EXPECT close-in obstacles.

POL 4S, POL 1Z DEPARTURES

VIA AIRWAYS AND FOR LEAVING CONTROLLED AIRSPACE

SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



These SIDs require a minimum climb gradient of 4.27% up to 4000 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.27% V/V (fpm)	324	432	649	865	1081	1297

SID	RWY	ROUTING/ALTITUDE
POL 4S	05L	Climb straight ahead, at or above 760, but not before DER, intercept MCT R052, at D7.0 MCT turn LEFT, intercept POL R181 inbound, cross D12.0 POL at or above 4000 (MAX 5000), D8.0 POL at 5000, to POL at 5000.
POL 1Z	05R	Climb straight ahead, intercept MCT R052, at D7.0 MCT turn LEFT, intercept POL R181 inbound, cross D12.0 POL at or above 4000 (MAX 5000), D8.0 POL at 5000, to POL at 5000.

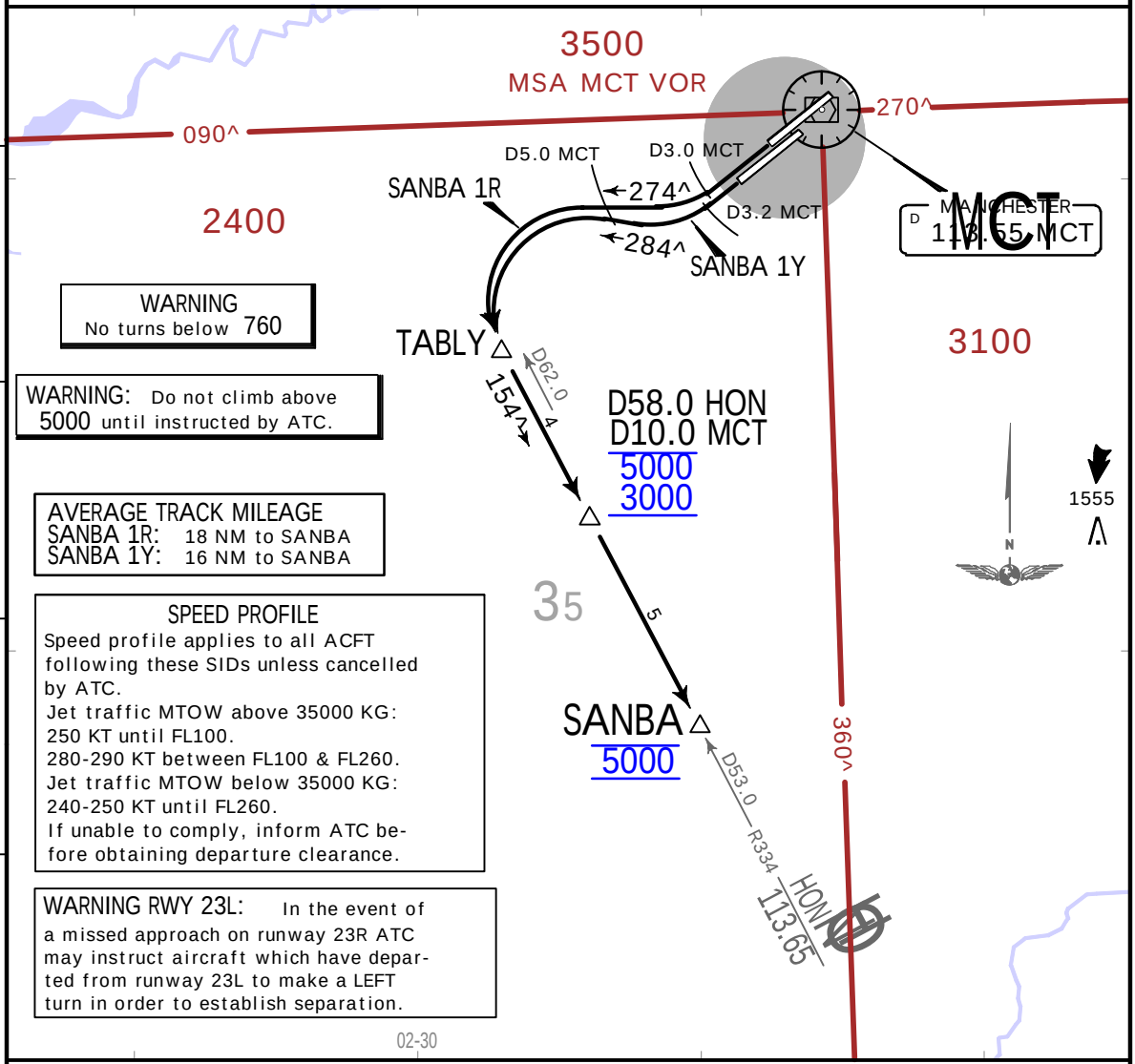
CHANGES: Communication.

SCOTTISH Control	Apt Elev	
134.430	257	Trans alt: 5000 1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude. 2. SIDs include noise preferential routes (refer to 10-4). 3. EXPECT first CPDLC Data Link Authority to be EGTT. 4. Cruising levels will be allocated enroute by SCOTTISH Control (at or below FL190) or LONDON Control (above FL190). 5. Rwy 23R: EXPECT close-in obstacles.

SANBA 1R [SANB1R], SANBA 1Y [SANB1Y] DEPARTURES

JET-AIRCRAFT ONLY

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



These SIDs require minimum climb gradients of

SANBA 1R: 5.55% until D3.0 MCT, then 4.6% up to 5000 for ATC or airspace purposes.

SANBA 1Y: 12.33% until D3.2 MCT, then 4.9% up to 5000 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.6% V/V (fpm)	349	466	699	932	1165	1397
4.9% V/V (fpm)	372	496	744	992	1241	1489
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

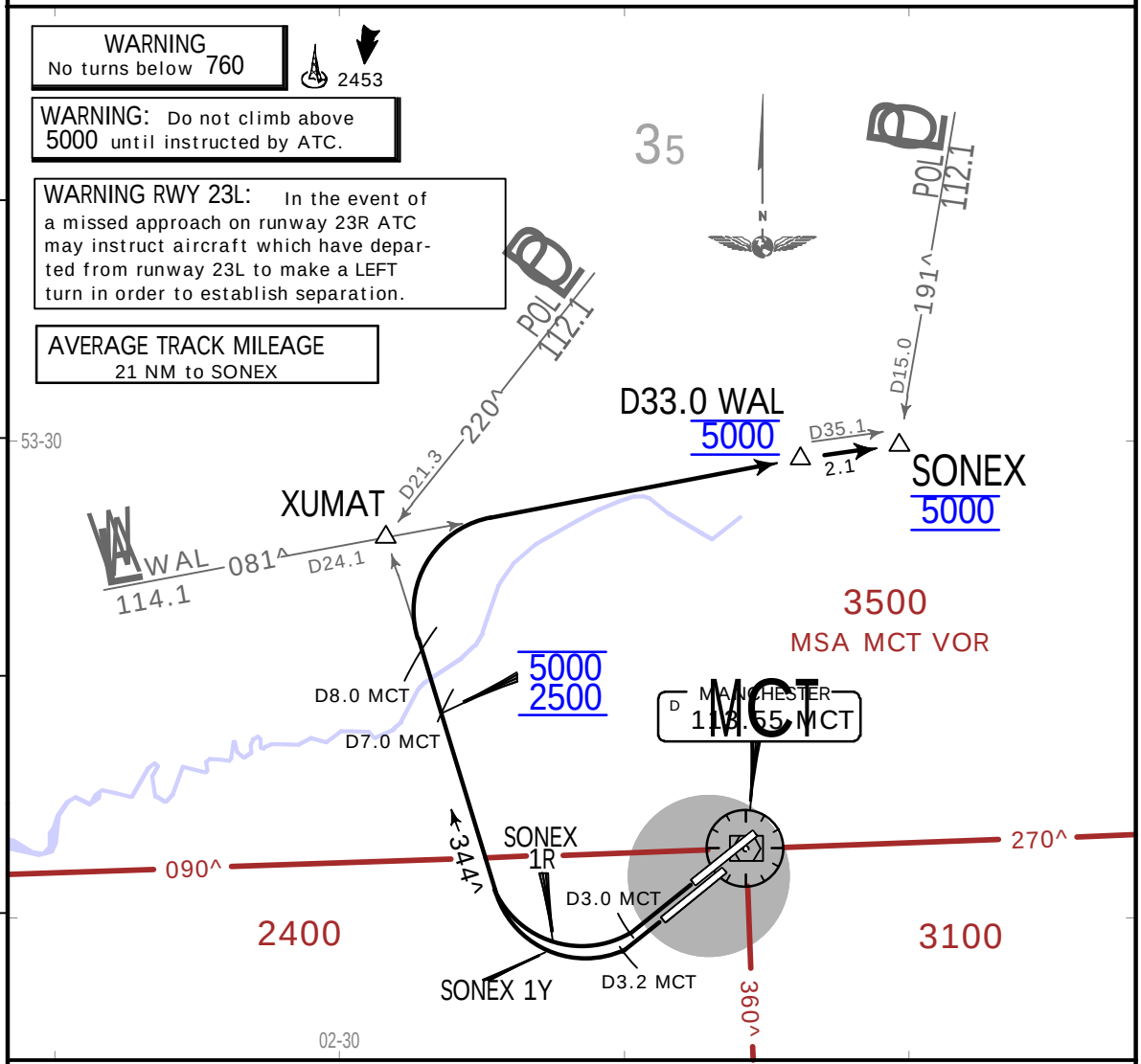
SID	RWY	ROUTING/ALTITUDE
SANBA 1R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 274^ track, at D5.0 MCT turn LEFT to TABLY, intercept HON R334 inbound, cross D58.0 HON/D10.0 MCT at or above 3000 (MAX 5000), to SANBA at 5000.
SANBA 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 284^ track, at D5.0 MCT turn LEFT to TABLY, intercept HON R334 inbound, cross D58.0 HON/D10.0 MCT at or above 3000 (MAX 5000), to SANBA at 5000.

SCOTTISH Control	Apt Elev
135.715	257

Trans alt: 5000
1. When instructed contact SCOTTISH Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
2. SIDs include noise preferential routes (refer to 10-4).
3. EXPECT first CPDLC Data Link Authority to be EGTT.
4. Cruising levels will be allocated enroute by SCOTTISH Control.
5. Rwy 23R: EXPECT close-in obstacles.
6. Do not climb above SID level until cleared by ATC.

SONEX 1R [SONE1R], SONEX 1Y [SONE1Y] DEPARTURES

.SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE AUTHORIZED



These SIDs require minimum climb gradients of
SONEX 1R: 5.55% until D3.0 MCT, then 4.8% up to 2500 for ATC or airspace purposes.
SONEX 1Y: 12.33% until D3.2 MCT, then 4.8% up to 2500 for ATC or airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.55% V/V (fpm)	422	562	843	1124	1405	1686
12.33% V/V (fpm)	936	1249	1873	2497	3122	3746

SID	RWY	ROUTING/ALTITUDE
SONEX 1R	23R	Climb straight ahead, at D3.0 MCT turn RIGHT, 344^ track towards XUMAT, cross D7.0 MCT at or above 2500 (MAX 5000), at D8.0 MCT turn RIGHT, intercept WAL R081, cross D33.0 WAL at 5000, to SONEX at 5000.
SONEX 1Y	23L	Climb straight ahead, at D3.2 MCT turn RIGHT, 344^ track towards XUMAT, cross D7.0 MCT at or above 2500 (MAX 5000), at D8.0 MCT turn RIGHT, intercept WAL R081, cross D33.0 WAL at 5000, to SONEX at 5000.

CHANGES: None.

Apt Elev
257'

NOISE ABATEMENT

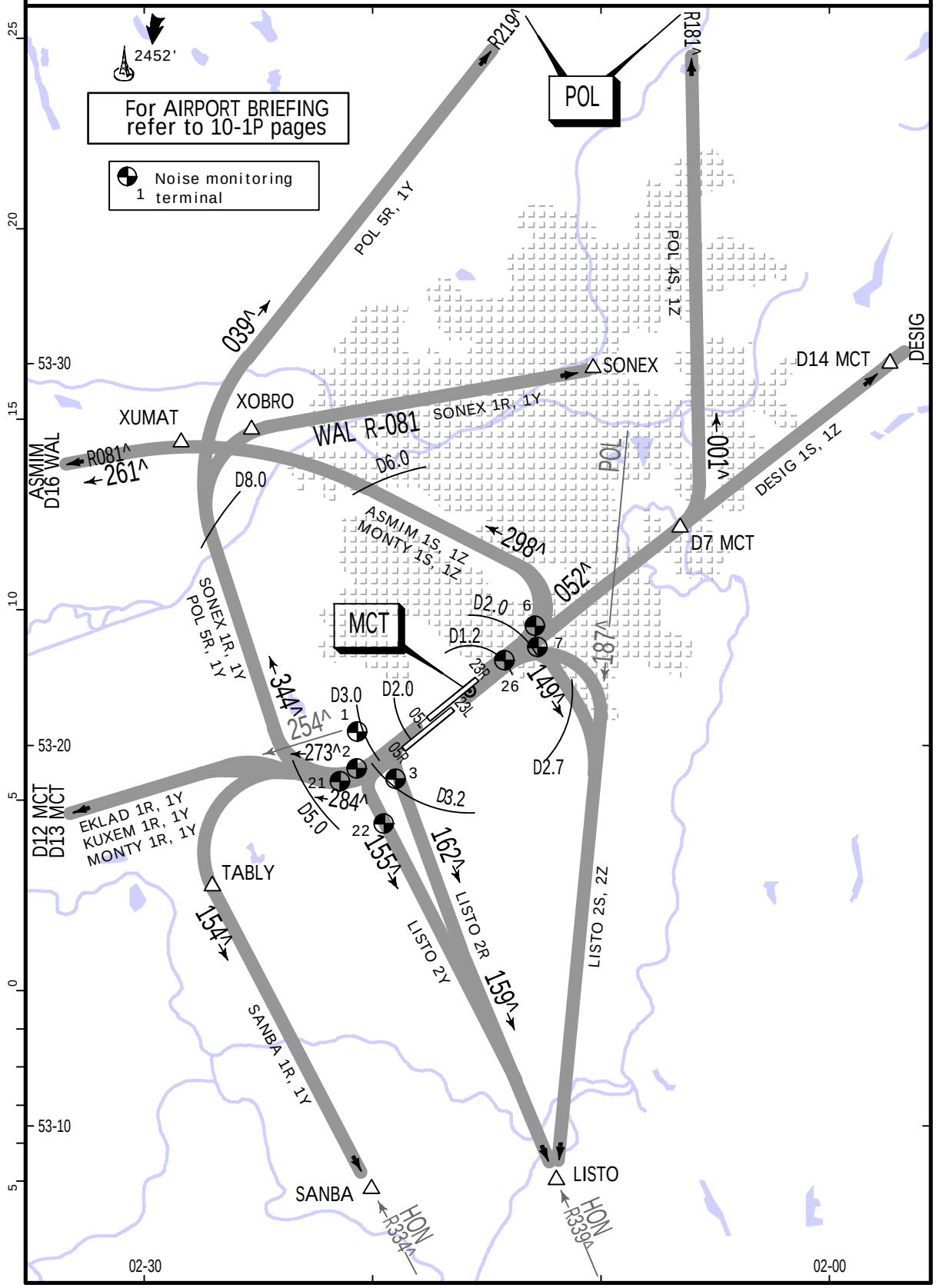
Distance to run to the appropriate Noise Monitoring Terminal (NMT) is in NM from take-off position which gives max TORA.

Rwy	NMT	NM
23R	1	3.4
	3	3.4
	2	3.8

Rwy	NMT	NM
23L	21	3.5
	22	3.5

Rwy	NMT	NM
05L	7	3.4
	6	3.7

Rwy	NMT	NM
05R	26	3.5



EGCC/MAN

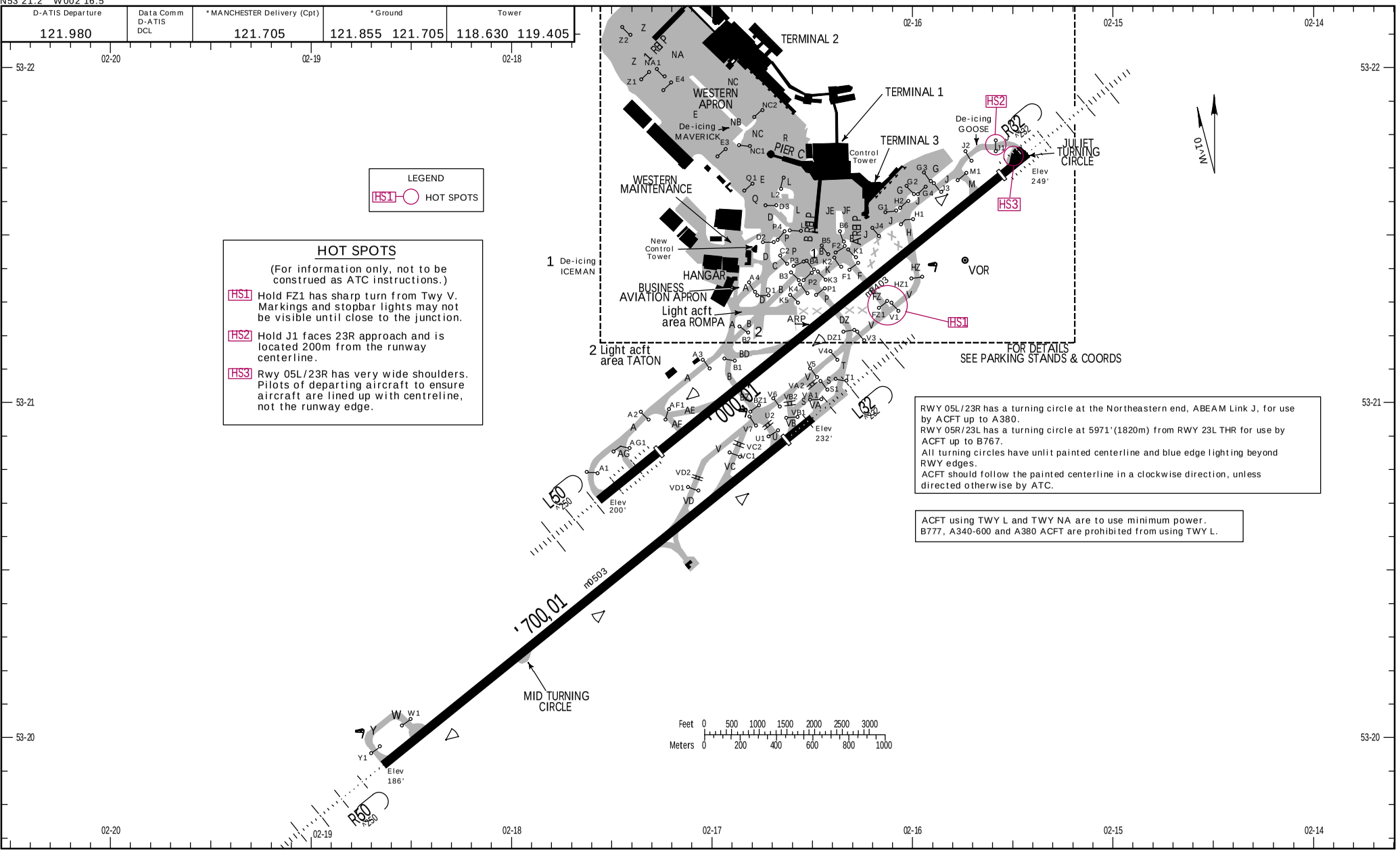
Apt Elev 257
N53 21.2 W002 16.5

JEPPESEN
10 FEB 23
.Eff.23.Feb. 10-9

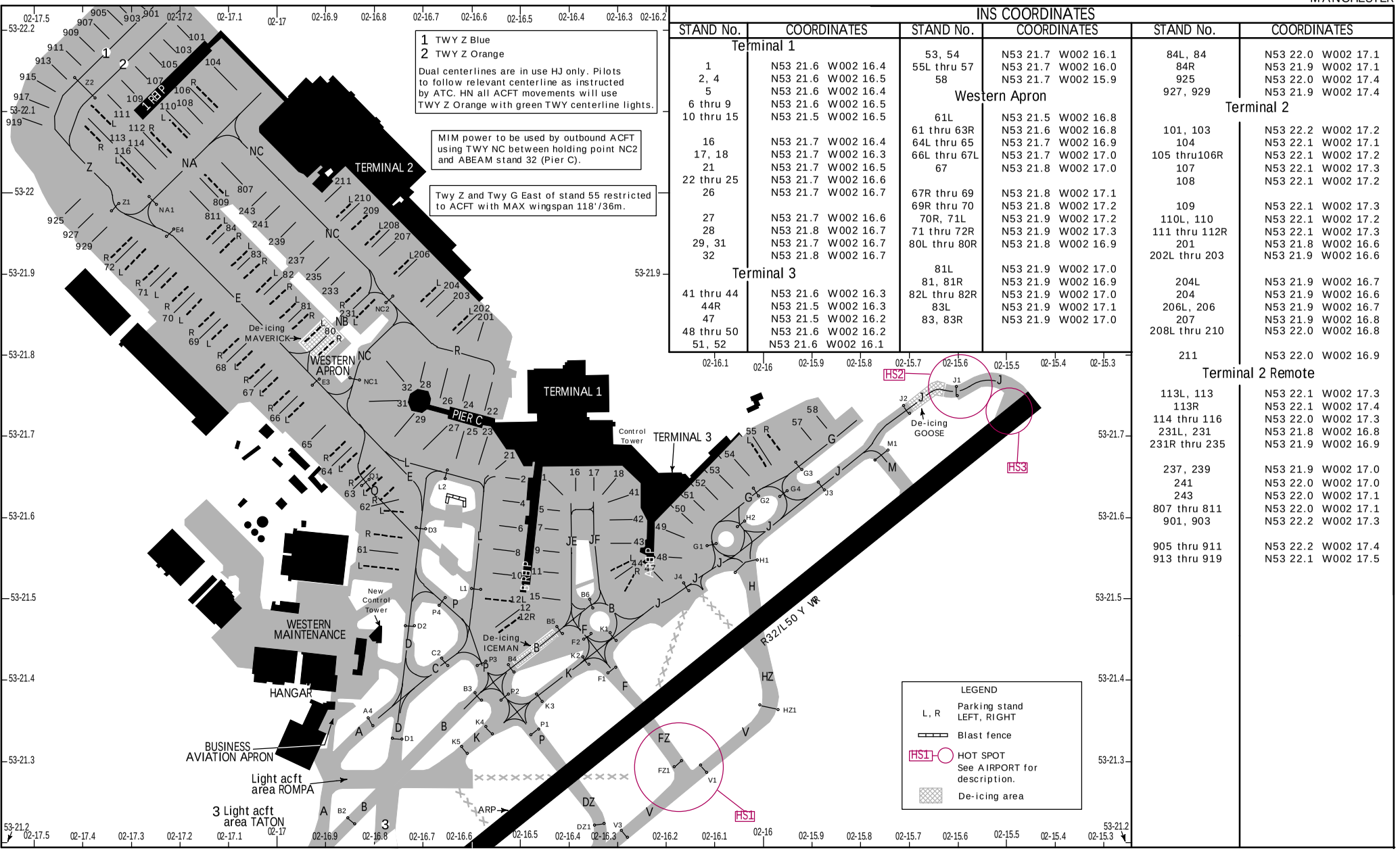
MANCHESTER, UK

MANCHESTER

D-ATIS Departure	Data Comm D-ATIS DCL	*MANCHESTER Delivery (Cpt)	*Ground	Tower
121.980		121.705	121.855 121.705	118.630 119.405



CHANGES: Twy L and Twy NA note.



INS COORDINATES

STAND No.	COORDINATES
Terminal 1	
1	N53 21.6 W002 16.4
2, 4	N53 21.6 W002 16.5
5	N53 21.6 W002 16.4
6 thru 9	N53 21.6 W002 16.5
10 thru 15	N53 21.5 W002 16.5
16	N53 21.7 W002 16.4
17, 18	N53 21.7 W002 16.3
21	N53 21.7 W002 16.5
22 thru 25	N53 21.7 W002 16.6
26	N53 21.7 W002 16.7
27	N53 21.7 W002 16.6
28	N53 21.8 W002 16.7
29, 31	N53 21.7 W002 16.7
32	N53 21.8 W002 16.7
Terminal 3	
41 thru 44	N53 21.6 W002 16.3
44R	N53 21.5 W002 16.3
47	N53 21.5 W002 16.2
48 thru 50	N53 21.6 W002 16.2
51, 52	N53 21.6 W002 16.1
53, 54	N53 21.7 W002 16.1
55L thru 57	N53 21.7 W002 16.0
58	N53 21.7 W002 15.9
Western Apron	
61L	N53 21.5 W002 16.8
61 thru 63R	N53 21.6 W002 16.8
64L thru 65	N53 21.7 W002 16.9
66L thru 67L	N53 21.7 W002 17.0
67	N53 21.8 W002 17.0
67R thru 69	N53 21.8 W002 17.1
69R thru 70	N53 21.8 W002 17.2
70R, 71L	N53 21.9 W002 17.2
71 thru 72R	N53 21.9 W002 17.3
80L thru 80R	N53 21.8 W002 16.9
81L	N53 21.9 W002 17.0
81, 81R	N53 21.9 W002 16.9
82L thru 82R	N53 21.9 W002 17.0
83L	N53 21.9 W002 17.1
83, 83R	N53 21.9 W002 17.0
84L, 84	N53 22.0 W002 17.1
84R	N53 21.9 W002 17.1
925	N53 22.0 W002 17.4
927, 929	N53 21.9 W002 17.4
Terminal 2	
101, 103	N53 22.2 W002 17.2
104	N53 22.1 W002 17.1
105 thru106R	N53 22.1 W002 17.2
107	N53 22.1 W002 17.3
108	N53 22.1 W002 17.2
109	N53 22.1 W002 17.3
110L, 110	N53 22.1 W002 17.2
111 thru 112R	N53 22.1 W002 17.3
201	N53 21.8 W002 16.6
202L thru 203	N53 21.9 W002 16.6
204L	N53 21.9 W002 16.7
204	N53 21.9 W002 16.6
206L, 206	N53 21.9 W002 16.7
207	N53 21.9 W002 16.8
208L thru 210	N53 22.0 W002 16.8
211	N53 22.0 W002 16.9
Terminal 2 Remote	
113L, 113	N53 22.1 W002 17.3
113R	N53 22.1 W002 17.4
114 thru 116	N53 22.0 W002 17.3
231L, 231	N53 21.8 W002 16.8
231R thru 235	N53 21.9 W002 16.9
237, 239	N53 21.9 W002 17.0
241	N53 22.0 W002 17.0
243	N53 22.0 W002 17.1
807 thru 811	N53 22.0 W002 17.1
901, 903	N53 22.2 W002 17.3
905 thru 911	N53 22.2 W002 17.4
913 thru 919	N53 22.1 W002 17.5

CHANGES: None.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
05L	HIRL (60m) CL (15m) HIALS-II TDZ 1 RVR	8488' 2587m	7577' 2309m	4	148' 45m
23R	HIRL (60m) CL (15m) HIALS-II TDZ 2 3 RVR	8904' 2714m	7871' 2399m		

1 PAPI-R (3.0^)

2 PAPI-L (3.0^)

3 HST-BD & AE

4 TAKE-OFF RUN AVAILABLE

RWY 05L:
From rwy head 9888' (3014m)
twy AG int 9091' (2771m)
twy AF int 7979' (2432m)
twy B int 6680' (2036m)

RWY 23R:
From rwy head 9505' (2897m)
twy M int 8422' (2567m)
twy H int 6959' (2121m)

RWY						
05R 5 23L	HIRL (61m) CL (30m) HIALS PAPI-L (3.0^) RVR	9396' 2864m	8363' 2549m	9997' 3047m 6	148' 45m

5 Rwy grooved.

6 TAKE-OFF RUN AVAILABLE

RWY 23L:
From twy T int 10,499' (3200m), includes starter extension of 492'/150m
twy VA int 10,240' (3121m)
rwy head 10,007' (3050m)
twy VB int 9695' (2955m)
twy U int 9347' (2849m)
twy VC int 8215' (2504m)

.Standard. TAKE-OFF 1

	LVP must be in Force: Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A	125m	150m	200m	250m	400m	500m
B						
C						
D	150m	200m	250m	300m		

1 Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

CHANGES: Reindexed.

STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
05L	CAT 2 ILS DME	312' (100')	RA 107' - 300m
	ILS DME	412' (200')	500m / 1000m
	LOC	670' (458')	1000m / 1000m
	VOR DME	690' (478')	1000m / 1000m
05R	ILS DME	386' (200')	500m / 1000m
	LOC	530' (344')	800m / 1000m
	VOR DME	630' (444')	800m / 1000m
23L	RNP (LNAV/VNAV)	680' (453')	750m / 1000m
	RNP (LNAV)	680' (453')	1000m / 1000m
	VOR DME	690' (463')	1000m / 1000m
23R	CAT 2 ILS DME	349' (100')	RA 103' - 300m
	ILS DME	449' (200')	500m / 1000m
	LOC	640' (391')	800m / 1000m
	VOR DME	690' (441')	800m / 1000m

CIRCLE-TO-LAND	MDA(H)	VIS
	790' (533')	1000m

TAKE-OFF RWY 05L/R, 23L/R

Low Visibility Take-off [1]				
RL/FATO LTS, RCLM & RVR info	RL/FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m [2]	800m

1 Without Low Visibility Take-off approval 400m are stipulated.

2 Or rejected take-off distance whichever is the greater.

EGCC/MAN
MANCHESTER

JEPPESEN

24 FEB 23 (11-1)

MANCHESTER, UK
ILS DME or LOC DME Rwy 05L

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

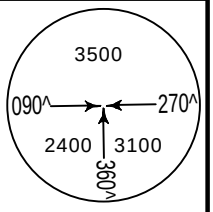
BRIEFING STRIP™

LOC IMM	Final Apch Crs	D8.6 IMM	ILS DA(H)	Apt Elev 257'
*109.5	052^	3000' (2788')	412' (200')	Rwy 212'

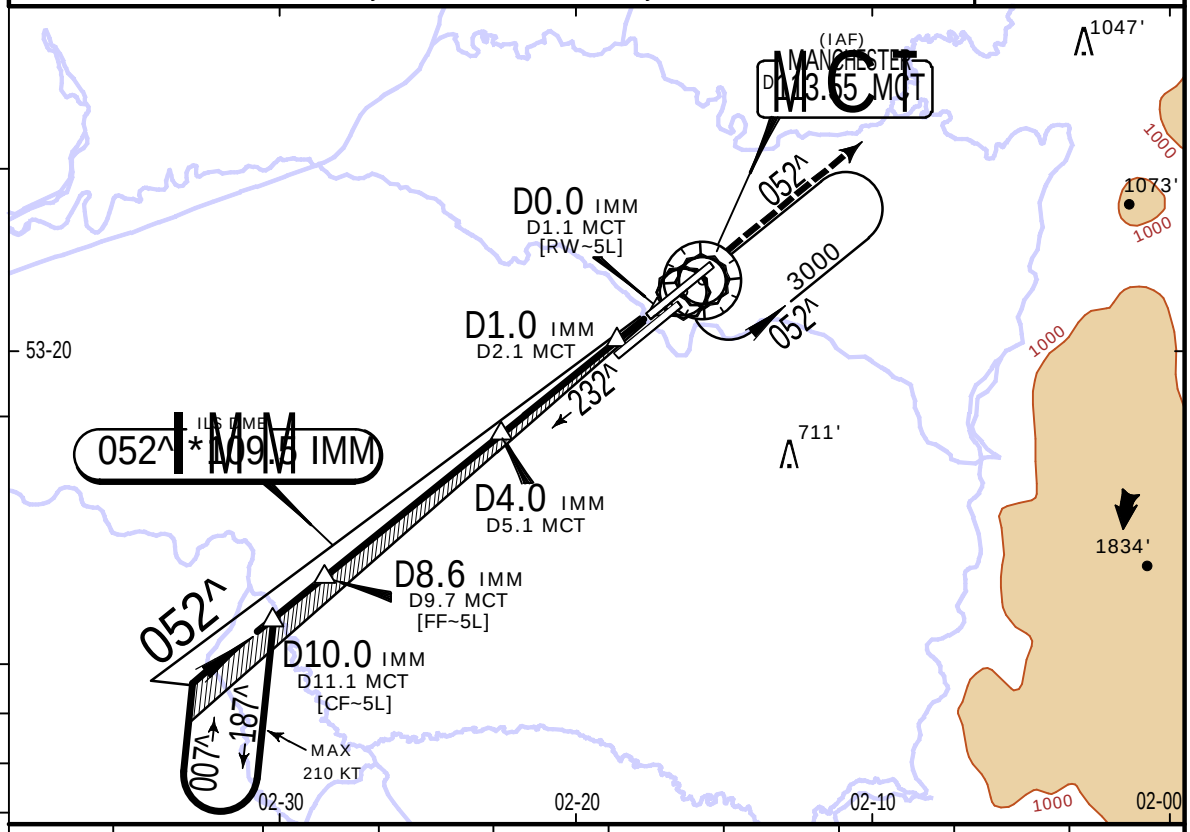
MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed.
In case of complete radio failure see 11-01.

Alt Set: hPa | Rwy Elev: 8 hPa | Trans level: By ATC | Trans alt: 5000'

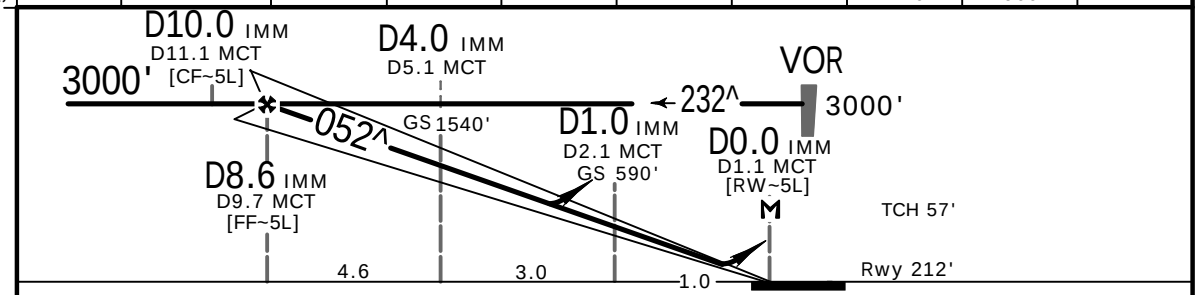
1. ILS DME reads zero at rwy 05L threshold.
2. WARNING: RA fluctuations may occur due to Bollin Valley.



MSA MCT VOR



LOC (GS out)	IMM DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	MCT DME	9.1	8.1	7.1	6.1	5.1	4.1	3.1	2.1
	ALTITUDE	2810'	2490'	2170'	1860'	1540'	1220'	900'	590'



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00^	372	478	531	637	743	849
MAP at D0.0 IMM/D1.1 MCT							

HIALS-II PAPI

3500'

PANS OPS

.Standard.

STRAIGHT-IN LANDING RWY 05L

	ILS DA(H) 412' (200')			LOC (GS out) CDFA DA/MDA(H) 670' (458')	
	FULL	TDZ or CL out	ALS out		ALS out
A	RVR 550m	RVR 550m 1	RVR 1200m	RVR 1400m	RVR 1500m
B					
C					RVR 2100m
D					

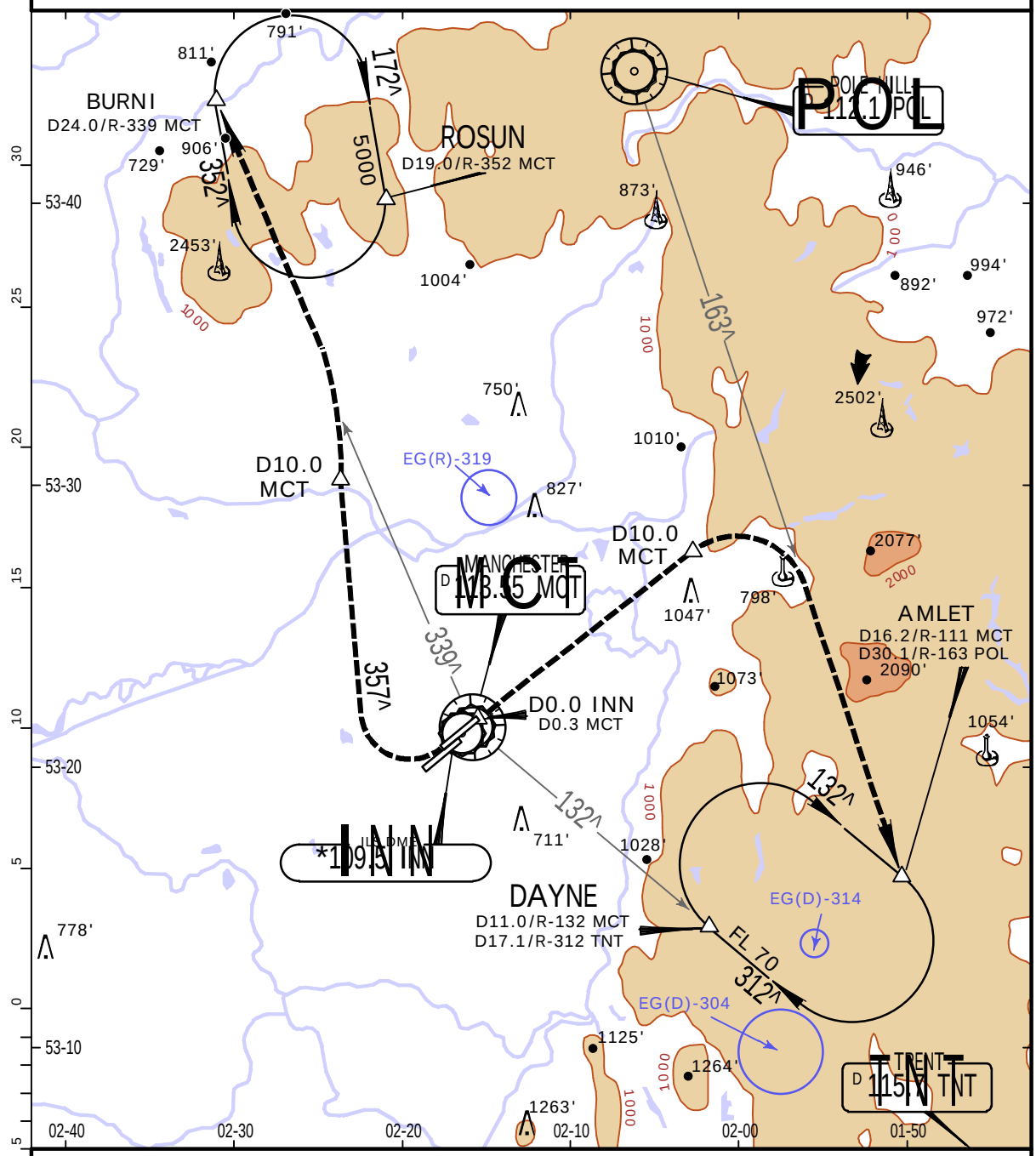
CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: None.

PROCEDURES TO BE USED IN THE EVENT OF RADIO FAILURE FOLLOWING A MISSED APPROACH



MISSED APCH:

Rwy 05L: Climb STRAIGHT AHEAD to 3500'. At D10.0 MCT turn RIGHT climbing to FL 70 to intercept and follow R-163 POL to AMLET to enter DAYNE holding.

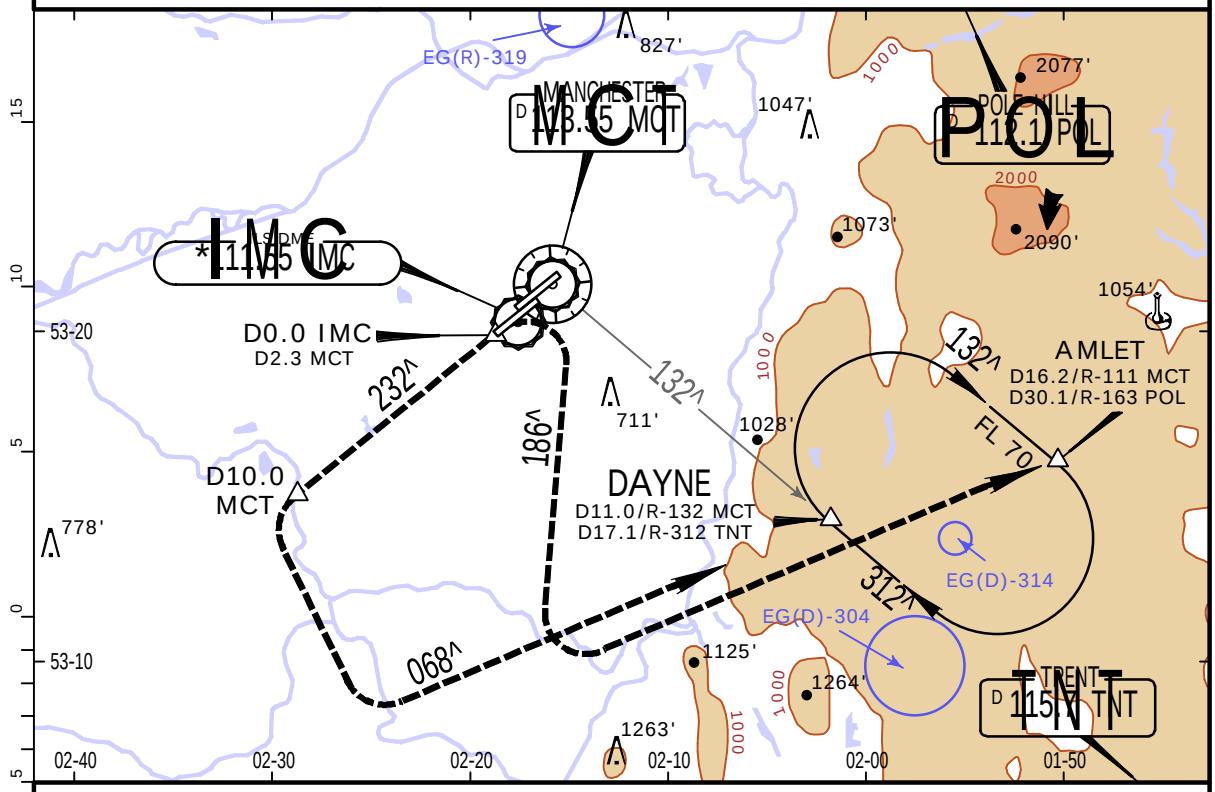
Acft unable to reach 3500' at D10.0 MCT, climbing turn LEFT at D10.0 MCT until reaching 3500', before proceeding to DAYNE holding as detailed above.

Rwy 23R: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 357^. At D10.0 MCT turn direct to BURNI (D24.0/R-339 MCT) climbing to 5000' to enter ROSUN holding.

Acft unable to reach 3500' before D10.0 MCT, commence climbing turn LEFT at D10.0 MCT to 3500'. At or above 3500' continue LEFT turn and proceed direct to BURNI.

PANS OPS

PROCEDURES TO BE USED IN THE EVENT OF RADIO FAILURE FOLLOWING A MISSED APPROACH



MISSED APCH:

Rwy 05R: Climb to 3500'. ILS & LOC: STRAIGHT AHEAD to 700' or D0.0 IMC (D2.3 MCT) inbound, whichever is the later, (VOR DME: STRAIGHT AHEAD to 700'), then turn RIGHT onto track 186^ climbing to FL 70. When established on track 186^ and above 3500' turn LEFT direct to AMLET to join DAYNE holding.

Rwy 23L: Climb STRAIGHT AHEAD to 3500'. At D10.0 MCT turn LEFT onto track 068^ continue climbing to FL 70 to enter DAYNE holding.

Acft unable to reach 3500' before D10.0 MCT, climbing turn LEFT at D10.0 MCT until reaching 3500', before proceeding to DAYNE holding as detailed above.

PANS OPS

CHANGES: Missed approach Rwy 05R.

EGCC/MAN
MANCHESTER

JEPPESEN

24 FEB 23 (11-1A)

1 MANCHESTER, UK
CAT II/III ILS DME Rwy 05L

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

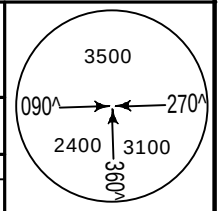
BRIEFING STRIP ™

LOC IMM	Final Apch Crs	D8.6 IMM	CAT IIIB, IIIA & II ILS	Apt Elev 257'
*109.5	052^	3000' (2788')	Refer to Minimums	Rwy 212'

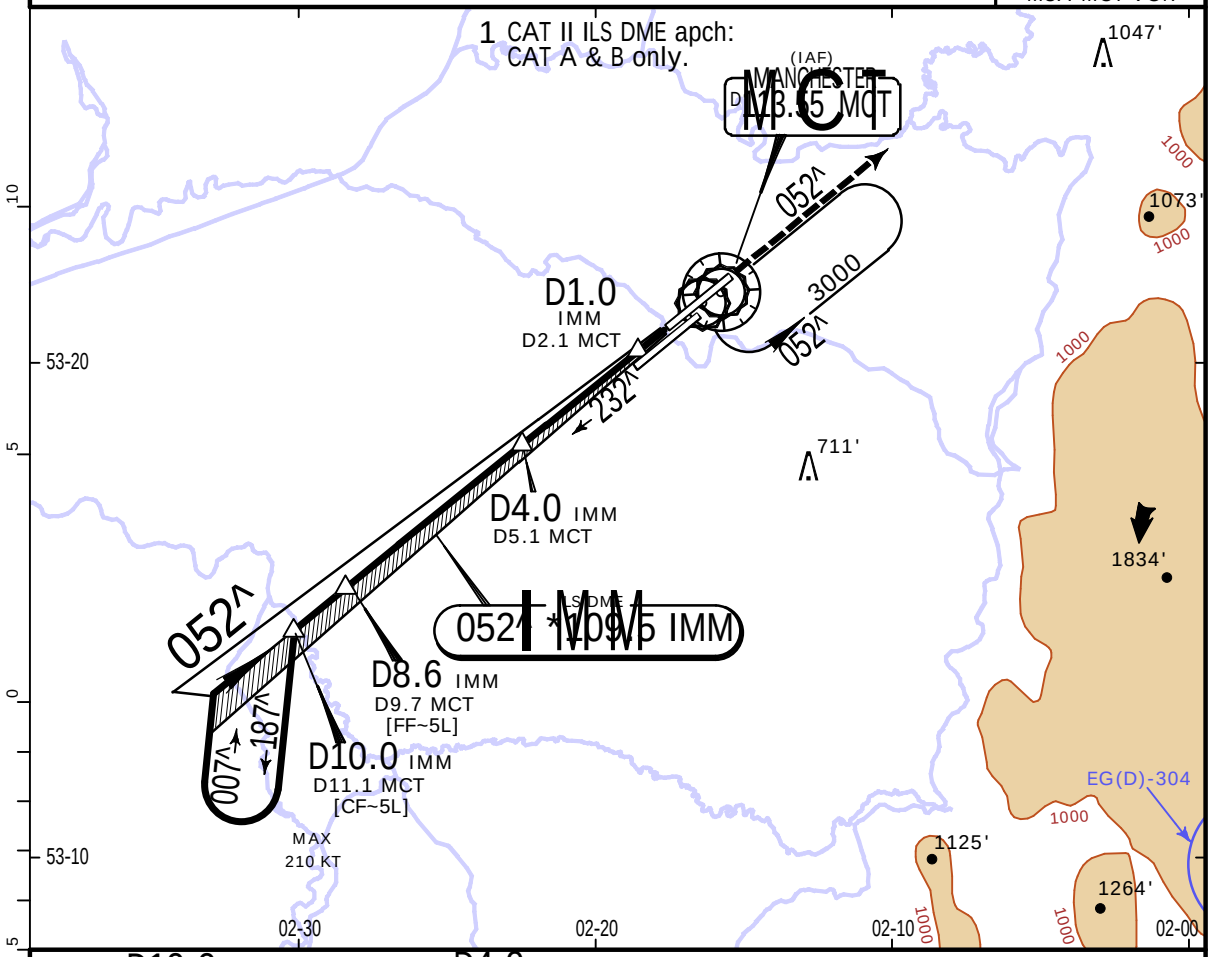
MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed.
In case of complete radio failure see 11-01.

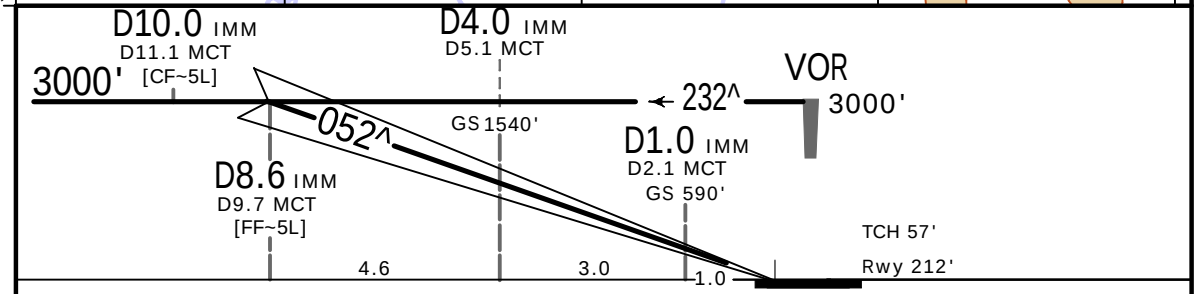
Alt Set: hPa | Rwy Elev: 8 hPa | Trans level: By ATC | Trans alt: 5000'

1. Special Aircrew & Acft Certification Required. 2. ILS DME reads zero at rwy 05L threshold. 3. WARNING: RA fluctuations may occur due Bollin Valley.



MSA MCT VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00^	372	478	531	637	743	849

HIALS-II PAPI 3500'

PANS OPS

.Standard.

STRAIGHT-IN LANDING RWY 05L

CAT IIIB ILS	CAT IIIA ILS	CAT II ILS AB	CAT II ILS CD
	DH 50'	RA 107' DA(H) 312' (100')	
RVR 75m	RVR 200m	RVR 300m	NOT AUTHORIZED

CHANGES: Minimums format.

EGCC/MAN MANCHESTER

JEPPESEN

25 JAN 19 .Eff.31.Jan. (11-2)

MANCHESTER, UK ILS DME or LOC DME Rwy 05R

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

BRIEFING STRIP™

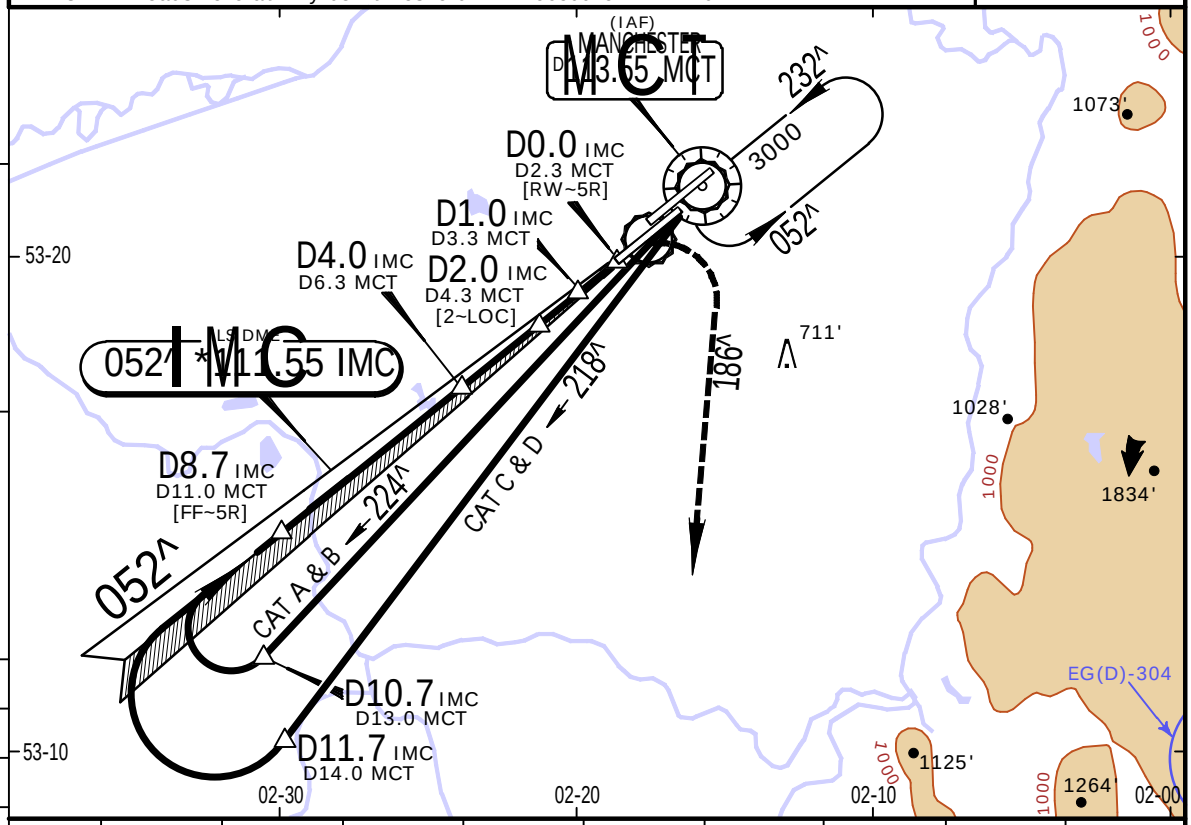
LOC IMC	Final Apch Crs	GS D4.0 IMC	ILS DA(H)	Apt Elev 257'
*111.55	052^	1510' (1324')	386' (200')	Rwy 186'

MISSED APCH: Climb to 3500'. STRAIGHT AHEAD to 700' or D0.0 IMC (D2.3 MCT) inbound whichever is the later, then turn RIGHT onto track 186^, then as directed. In case of complete radio failure see 11-01A.

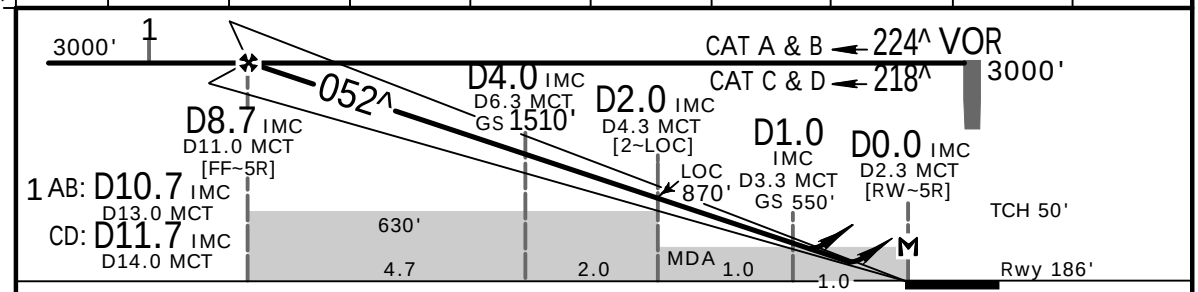
MSA MCT VOR: 3500; 090^–270^; 2400; 3100; 360^

Alt Set: hPa Rwy Elev: 7 hPa Trans level: By ATC Trans alt: 5000'

1. ILS DME reads zero at rwy 05R threshold. 2. Procedure MAX 210 KT.



LOC (GS out)	IMC DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
	MCT DME	10.3	9.3	8.3	7.3	6.3	5.3	4.3	3.3
	ALTITUDE	2780'	2460'	2140'	1820'	1510'	1190'	870'	550'



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00^	372	478	531	637	743	849
MAP at D0.0 IMC/D2.3 MCT							

HIALS PAPI

700' D0.0 IMC whichever later

PANS OPS

.Standard. STRAIGHT-IN LANDING RWY 05R

	ILS DA(H) 386' (200') FULL	ILS DA(H) 386' (200') ALS out	LOC (GS out) CDFA DA/MDA(H) 530' (344')	LOC (GS out) CDFA DA/MDA(H) 530' (344') ALS out
A	RVR 550m 1	RVR 1200m	RVR 900m	RVR 1500m
B				
C				RVR 1600m
D				

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

1 W/o HUD/AP/FD: RVR 750m

CHANGES: Communications.

EGCC/MAN MANCHESTER

JEPPESEN

10 MAR 23
.Eff.23.Mar.

11-3

MANCHESTER, UK
ILS DME or LOC DME Rwy 23R

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.3551	118.630 119.405	121.855 121.705

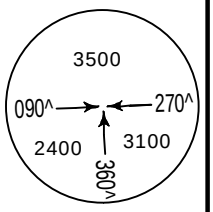
BRIEFING STRIP ™

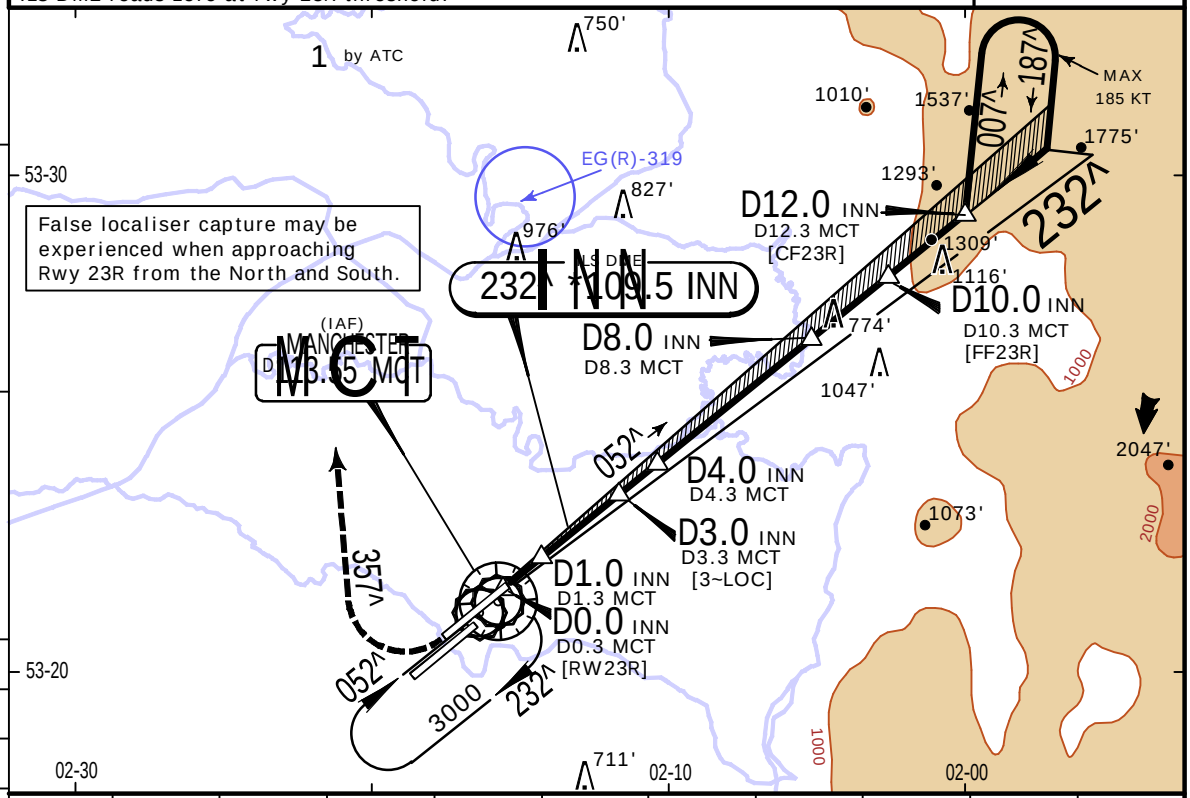
LOC INN	Final Apch Crs	D10.0 INN	ILS DA(H)	Apt Elev 257'
*109.5	232^	3500' (3251')	449' (200')	Rwy 249'

MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 357^, then as directed. For separation from departing traffic expedite climb through 750' before commencing RIGHT turn onto 357^. In case of complete radio failure see 11-01.

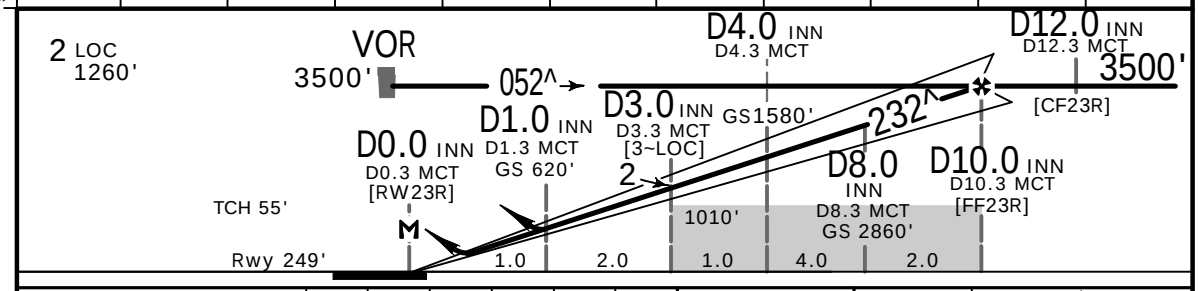
Alt Set: hPa | Rwy Elev: 9 hPa | Trans level: By ATC | Trans alt: 5000'

ILS DME reads zero at rwy 23R threshold.





LOC (GS out)									
INN DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
MCT DME	1.3	2.3	3.3	4.3	5.3	6.3	7.3	8.3	9.3
ALTITUDE	620'	940'	1260'	1580'	1900'	2220'	2540'	2860'	3180'



Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00^	372	478	531	637	743	849
LOC Descent Angle	3.01^	373	479	532	639	745	852
MAP at D0.0 INN/D0.3 MCT							

HIALS-II
PAPI

750' whichever later | D0.0 INN

.Standard. STRAIGHT-IN LANDING RWY 23R

	ILS DA(H) 449' (200')			LOC (GS out) CDFA DA/MDA(H) 640' (391')	
	FULL	TDZ or CL out	ALS out		ALS out
A	RVR 550m	RVR 550m 1	RVR 1200m	RVR 1100m	RVR 1500m
B					
C					RVR 1800m
D					

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

PANS OPS

1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Note added.

EGCC/MAN MANCHESTER

JEPPESEN

10 MAR 23
.Eff.23.Mar.

11-3A

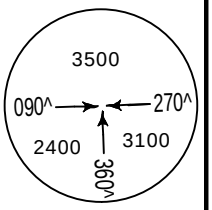
MANCHESTER, UK
CAT II/III ILS DME Rwy 23R

D-ATIS Arrival	MANCHESTER Radar	MANCHESTER Director	MANCHESTER Tower	*Ground
128.180 113.550	(APP) 118.580	(APP) 121.3551	118.630 119.405	121.855 121.705

BRIEFING STRIP ™

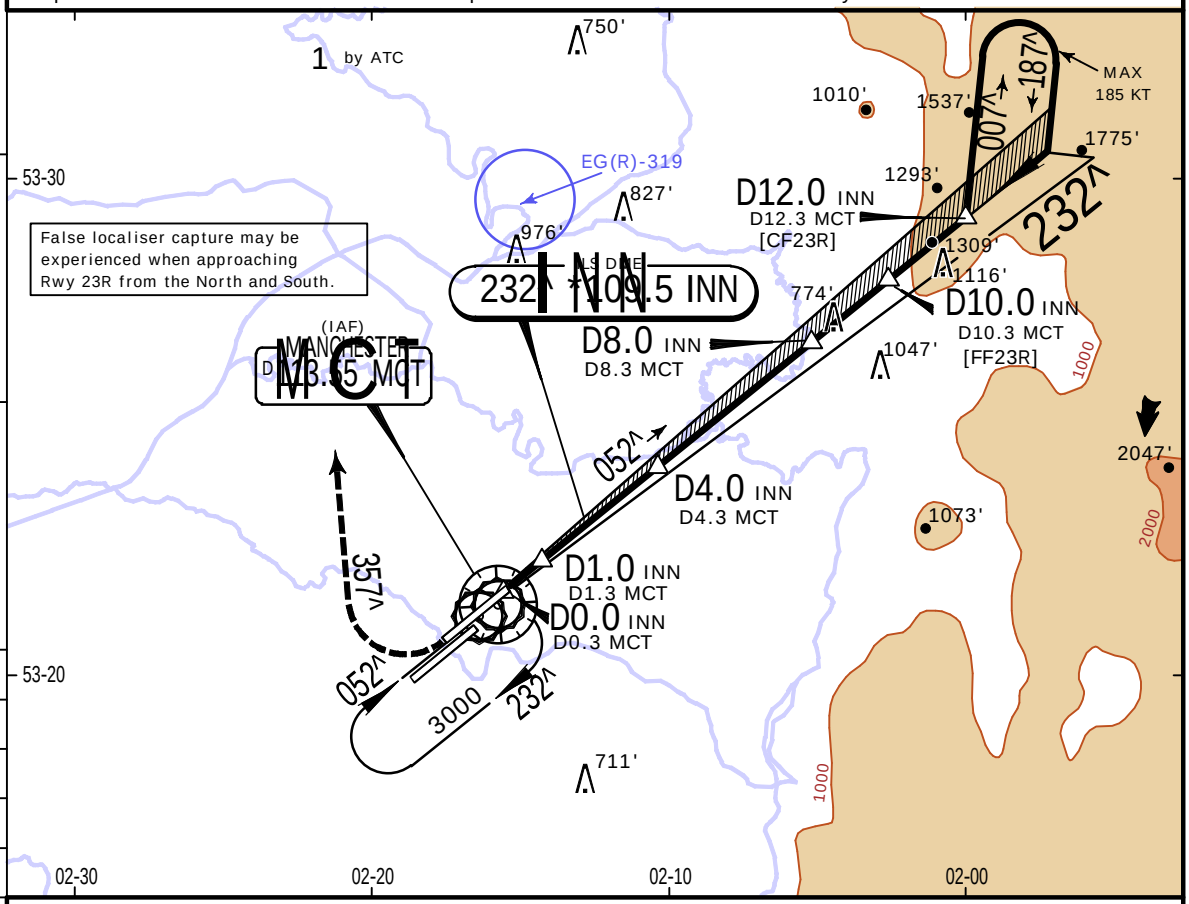
LOC	Final	D10.0 INN	CAT IIIB, IIIA & II ILS	Apt Elev 257'
INN *109.5	Apch Crs 232^	3500' (3251')	Refer to Minimums	Rwy 249'

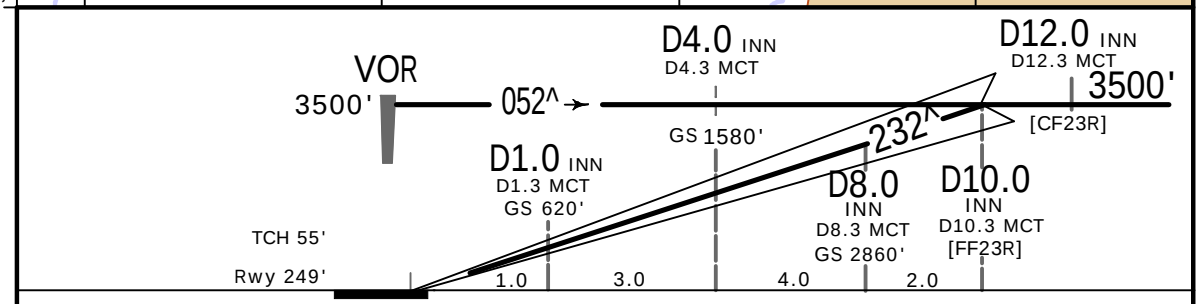
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.0 INN (D0.3 MCT) inbound, whichever is the later, then turn RIGHT onto track 357^, then as directed. For separation from departing traffic RWY 23L expedite climb through 750' before commencing RIGHT turn onto 357^. In case of complete radio failure see 11-01.



Alt Set: hPa | Rwy Elev: 9 hPa | Trans level: By ATC | Trans alt: 5000'

1. Special Aircrew & Acft Certification Required. 2. ILS DME reads zero at rwy 23R threshold.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00^	372	478	531	637	743	849

HIALS-II
PAPI

750' whichever later | D0.0 INN

.Standard.

STRAIGHT-IN LANDING RWY 23R

CAT IIIB ILS	CAT IIIA ILS	CAT II ILS	
	DH 50'	ABC RA 103' DA(H) 349' (100')	D RA 105' DA(H) 351' (102')
RVR 75m	RVR 200m	RVR 300m	

PANS OPS

CHANGES: Note added.

EGCC/MAN MANCHESTER

JEPPESEN

23 OCT 20 .Eff.5.Nov. 12-1

MANCHESTER, UK RNP Rwy 23L

BRIEFING STRIP™

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

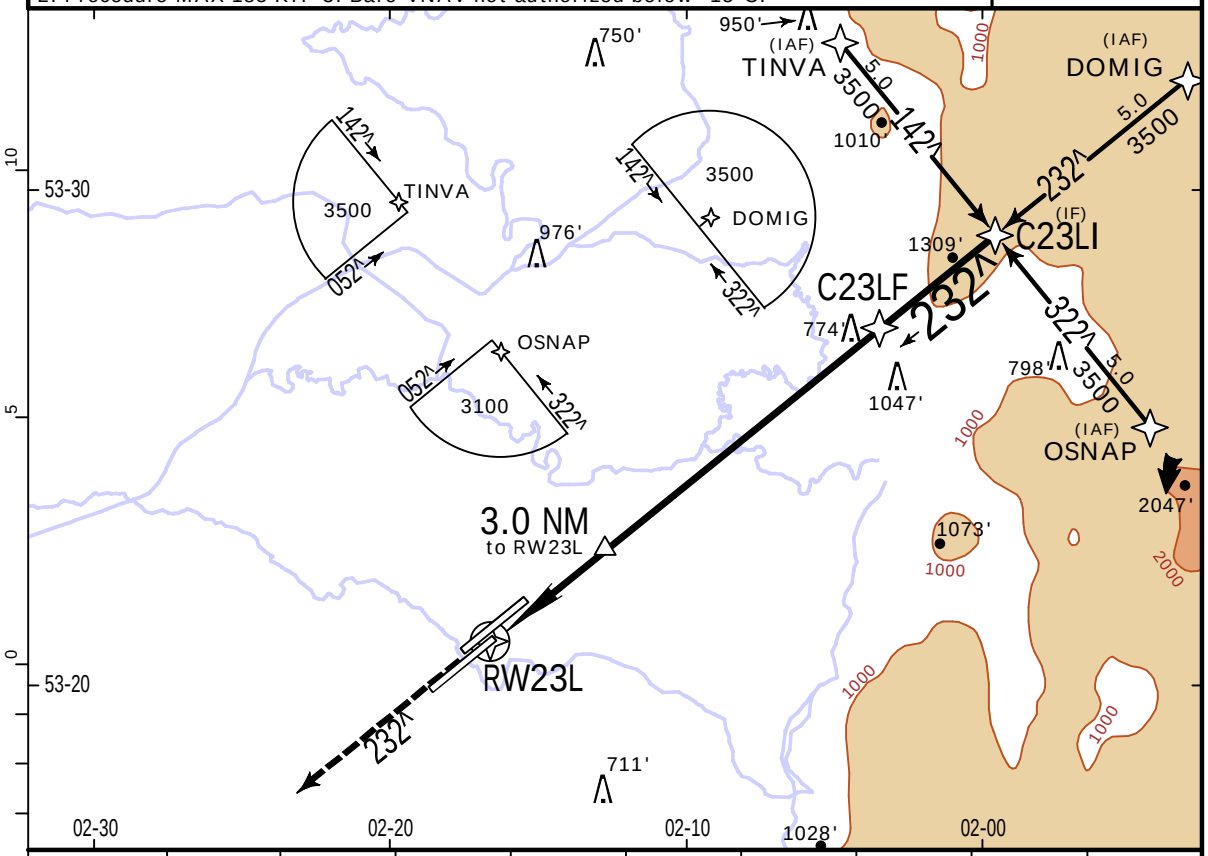
RNAV	Final Apch Crs 232^	C23LF MANDATORY 3500' (3273')	LNAV/VNAV DA(H) 680' (453')	Apt Elev 257' Rwy 227'

MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01A.

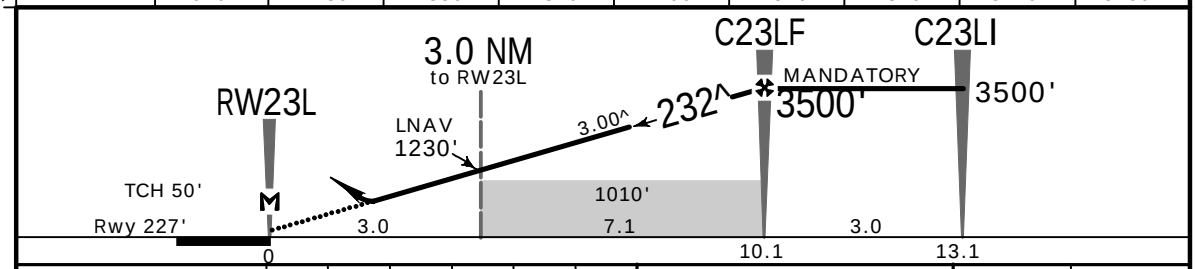
TAA 25 NM IAF

RNP Apch	Alt Set: hPa	Rwy Elev: 8 hPa	Trans level: By ATC	Trans alt: 5000'

1. Pilots should request RNP approach on first contact with Radar.
2. Procedure MAX 185 KT. 3. Baro-VNAV not authorized below -15^C.



DIST to RW23L	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	910'	1230'	1550'	1870'	2190'	2510'	2820'	3140'	3460'



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00^	372	478	531	637	743	849
LNAV/VNAV: MAP at DA						
LNAV: MAP at RW23L						

HIALS PAPI 3500'

PANS OPS

.Standard. STRAIGHT-IN LANDING RWY 23L

	LNAV/VNAV DA(H) 680' (453')		LNAV CDFA DA/MDA(H) 680' (453')	
		ALS out		ALS out
A	RVR 1400m	RVR 1500m	RVR 1400m	RVR 1500m
B				
C		RVR 2100m		RVR 2100m
D				

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

CHANGES: Procedure designator. RNP note added. FAF altitude.

EGCC/MAN
MANCHESTER

JEPPESEN

25 JAN 19
.Eff.31.Jan.

13-1

MANCHESTER, UK
VOR DME Rwy 05L

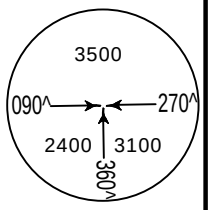
D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

BRIEFING STRIP ™

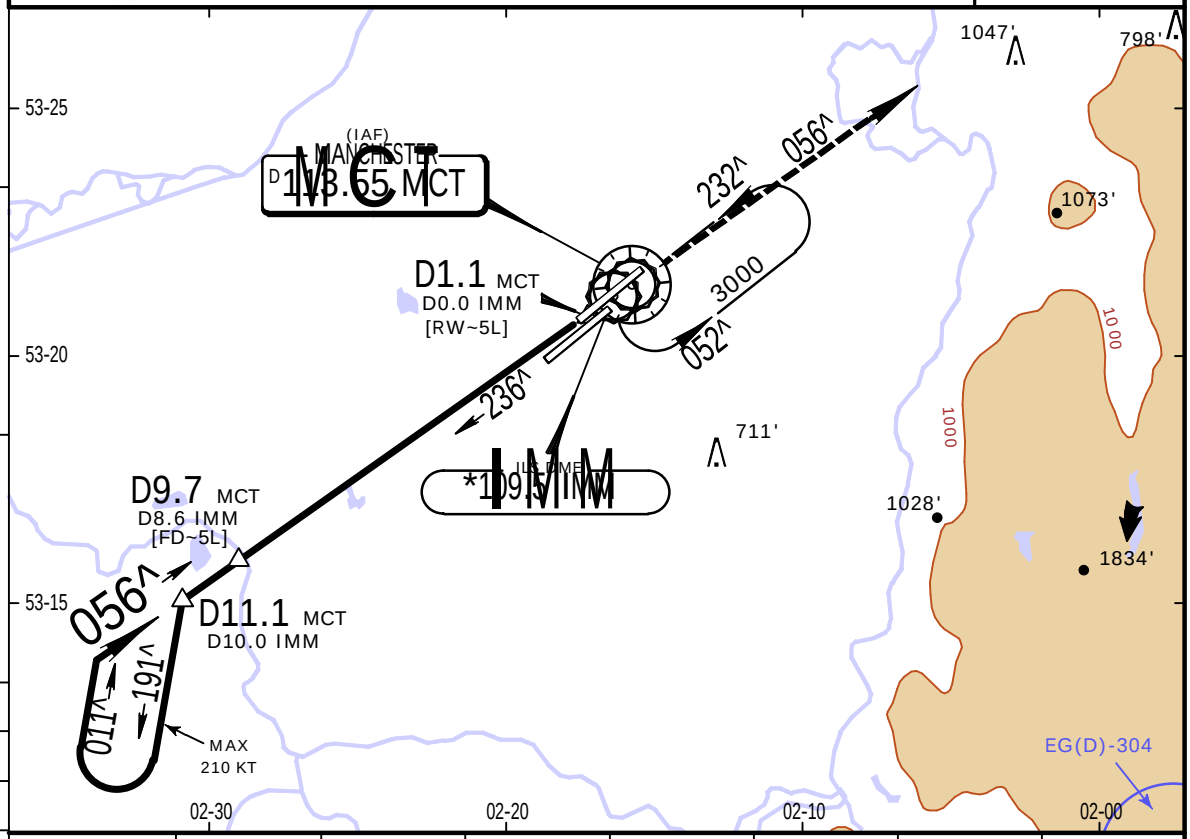
VOR MCT	Final Apch Crs	Minimum Alt	DA/MDA(H)	Apt Elev 257'
113.55	056^	D9.7 MCT 3000' (2788')	690' (478')	Rwy 212'

MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed.
In case of complete radio failure see 11-01.

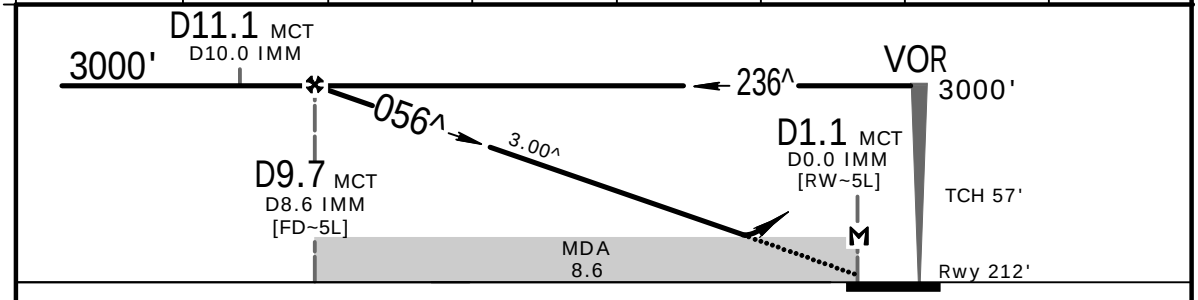
Alt Set: hPa Rwy Elev: 8 hPa Trans level: By ATC Trans alt: 5000'
1. ILS DME reads zero at rwy 05L threshold.
2. Final approach track offset 4^ from runway centerline.



MSA MCT VOR



MCT DME	9.1	8.1	7.1	6.1	5.1	4.1	3.1
IMM DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2810'	2490'	2170'	1860'	1540'	1220'	900'



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00^	372	478	531	637	743	849
MAP at D1.1 MCT/D0.0 IMM							

HIALS-II PAPI

3500'

PANS OPS

.Standard. STRAIGHT-IN LANDING RWY 05L

CDFA
DA/MDA(H) 690' (478')
ALS out

	RVR 1500m	RVR 2200m
A	RVR 1500m	
B		
C	RVR 1500m	RVR 2200m
D		

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

CHANGES: Communications.

EGCC/MAN
MANCHESTER

JEPPESEN

25 JAN 19
.Eff.31.Jan.

13-2

MANCHESTER, UK
VOR DME Rwy 05R

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

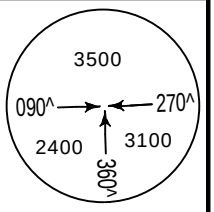
BRIEFING STRIP™

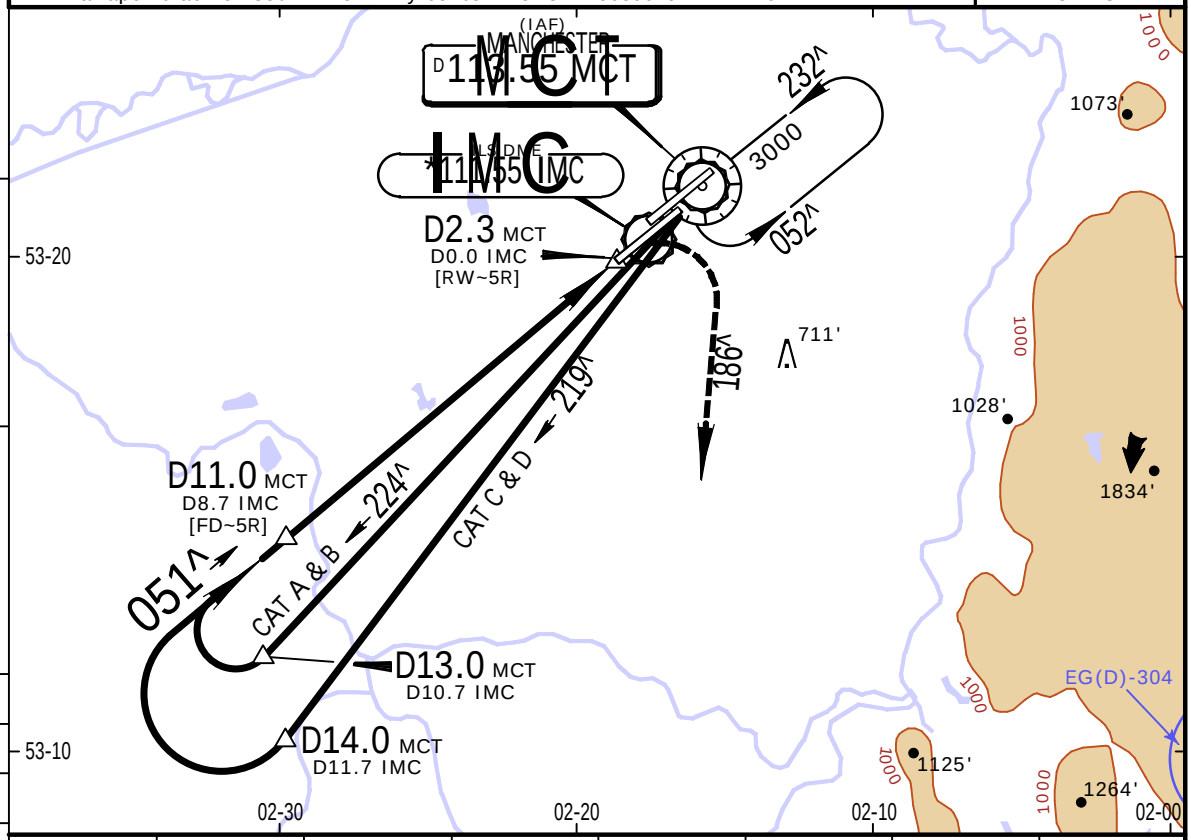
VOR MCT	Final Apch Crs	Minimum Alt	DA/MDA(H)	Apt Elev 257'
113.55	051^	D11.0 MCT 3000' (2814')	630' (444')	Rwy 186'

MISSED APCH: Climb to 3500'. STRAIGHT AHEAD to 700', then turn RIGHT onto track 186^, then as directed.
In case of complete radio failure see 11-01A.

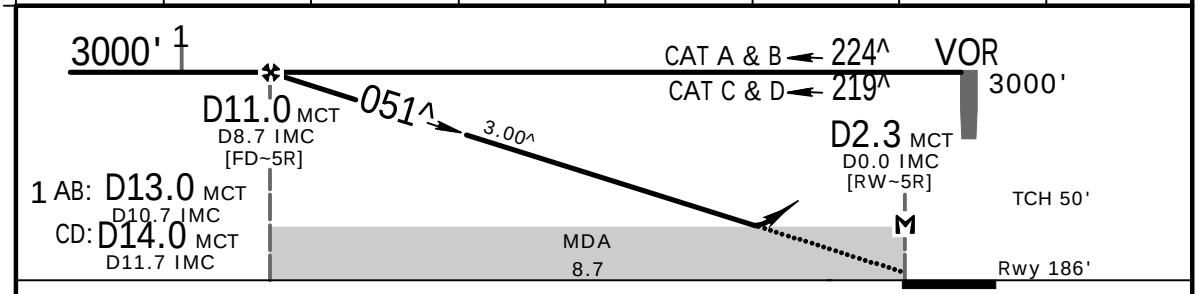
Alt Set: hPa | Rwy Elev: 7 hPa | Trans level: By ATC | Trans alt: 5000'

1. ILS DME reads zero at rwy 05R threshold.
2. Final apch track offset 1^ from rwy centerline. 3. Procedure MAX 210 KT.





MCT DME	10.0	9.0	8.0	7.0	6.0	5.0	4.0
IMC DME	7.7	6.7	5.7	4.7	3.7	2.7	1.7
ALTITUDE	2680'	2360'	2050'	1730'	1410'	1090'	780'



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00^	372	478	531	637	743	849
MAP at D2.3 MCT/D0.0 IMC							

HIALS
PAPI

700' | 186^ RT | 3500'

PANS OPS

.Standard. STRAIGHT-IN LANDING RWY 05R

CDFA

DA/MDA(H) 630' (444')

ALS out

A	RVR 1400m	RVR 1500m
B		
C		RVR 2100m
D		

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

CHANGES: Communications.

EGCC/MAN MANCHESTER

JEPPESEN

25 JAN 19 .Eff.31.Jan. 13-3

MANCHESTER, UK VOR DME Rwy 23L

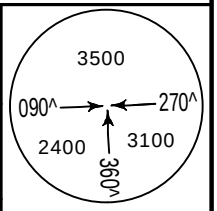
BRIEFING STRIP ™

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.355 (by ATC)	118.630 119.405	121.855 121.705

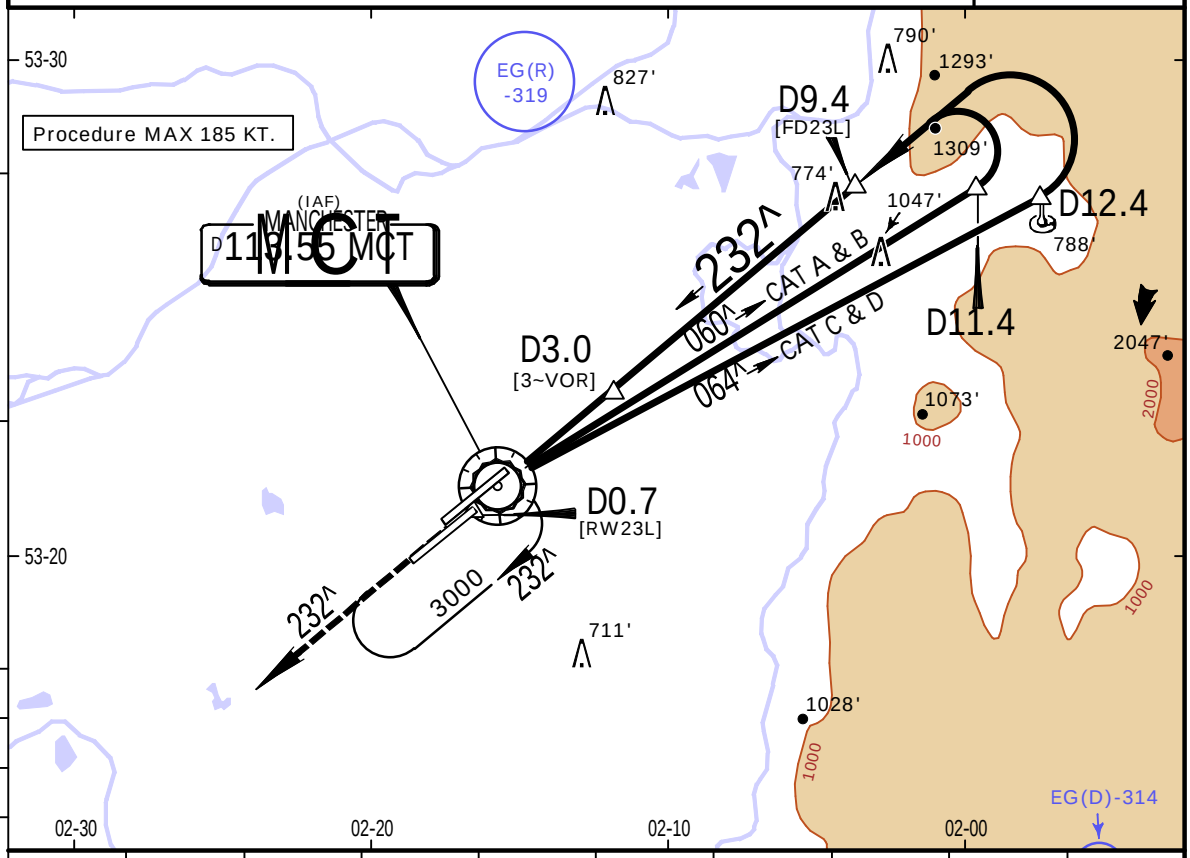
VOR MCT	Final Apch Crs	Procedure Alt	DA/MDA(H)	Apt Elev / Rwy
113.55	232^	D9.4 3500' (3273')	690' (463')	Apt Elev 257' Rwy 227'

MISSED APCH: Climb STRAIGHT AHEAD to 3500', then as directed. In case of complete radio failure see 11-01A.

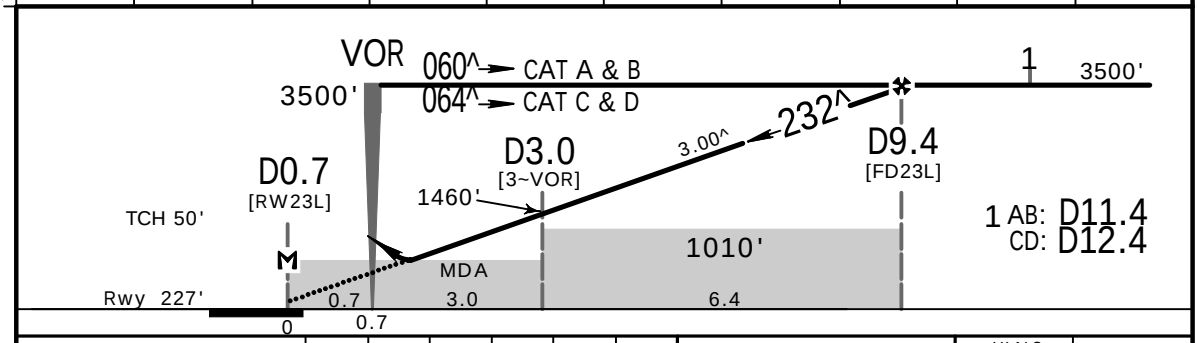
Alt Set: hPa | Rwy Elev: 8 hPa | Trans level: By ATC | Trans alt: 5000'



MSA MCT VOR



MCT DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
ALTITUDE	820'	1140'	1460'	1780'	2100'	2420'	2730'	3050'	3370'



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00^	372	478	531	637	743	849
MAP at D0.7							

HIALS PAPI

3500'

PANS OPS

.Standard. STRAIGHT-IN LANDING RWY 23L

CDFA

DA/MDA(H) 690' (463')

ALS out

A	RVR 1500m	
B		
C	RVR 1500m	RVR 2200m
D		

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

CHANGES: Communications.

EGCC/MAN MANCHESTER

JEPPESEN

25 JAN 19 (13-4) .Eff.31.Jan.

MANCHESTER, UK VOR DME Rwy 23R

D-ATIS Arrival	MANCHESTER Radar (APP)	MANCHESTER Director (APP)	MANCHESTER Tower	*Ground
128.180 113.550	118.580	121.3551	118.630 119.405	121.855 121.705

BRIEFING STRIP ™

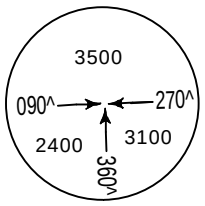
VOR MCT	Final Apch Crs	Procedure Alt	DA/MDA(H)	Apt Elev / RWY
113.55	227^	D10.3 MCT 3500' (3251')	690' (441')	257' / 249'

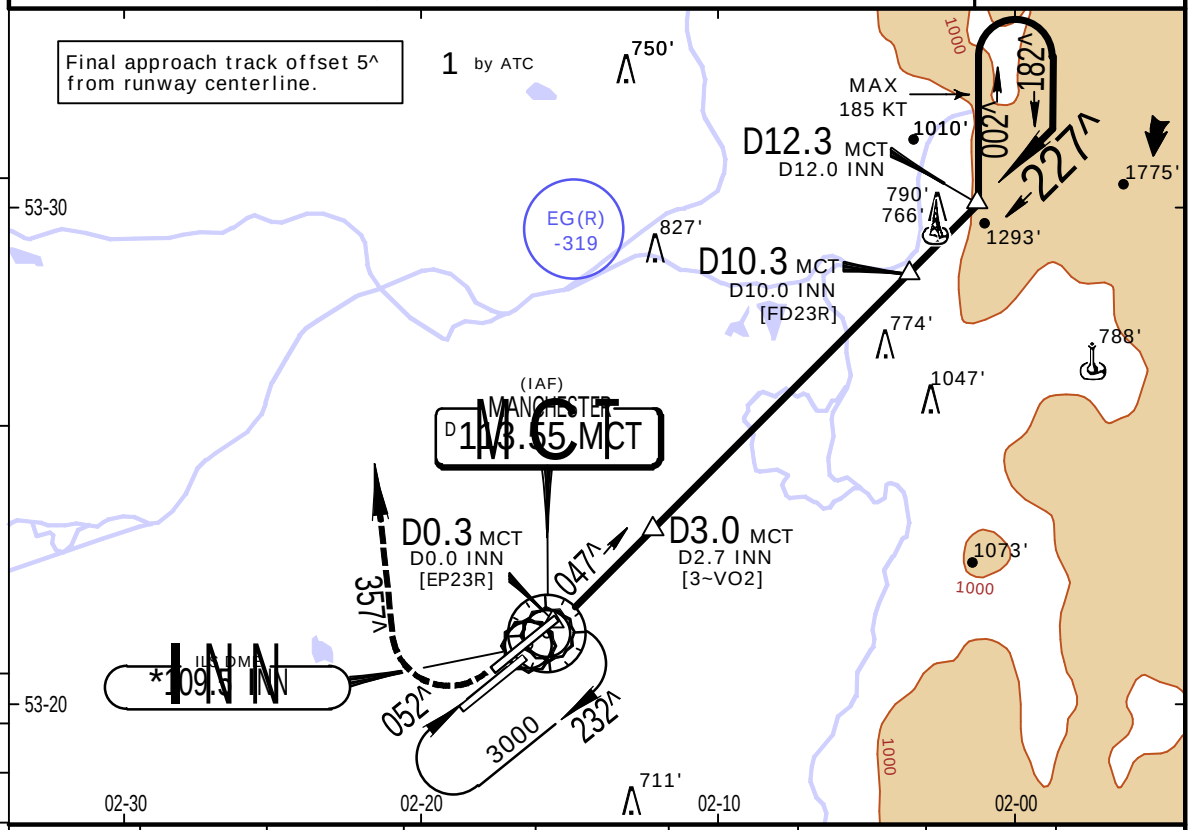
MISSED APCH: Climb to 3500'. STRAIGHT AHEAD until passing 750' or D0.3 MCT (D0.0 INN) inbound, whichever is the later, then turn RIGHT onto track 357^, then as directed. In case of complete radio failure see 11-01.

Alt Set: hPa Rwy Elev: 9 hPa Trans level: By ATC Trans alt: 5000'

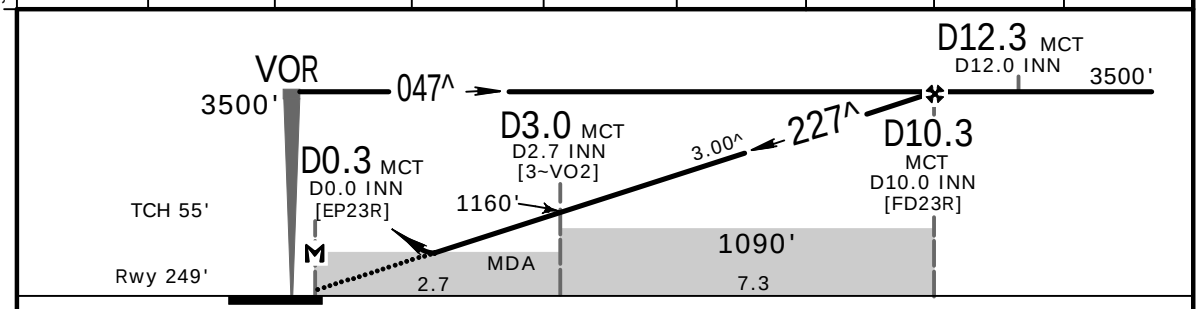
ILS DME reads zero at rwy 23R displaced threshold.

MSA MCT VOR





MCT DME	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
INN DME	1.7	2.7	3.7	4.7	5.7	6.7	7.7	8.7
ALTITUDE	840'	1160'	1480'	1800'	2120'	2440'	2760'	3080'



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00^	372	478	531	637	743	849
MAP at D0.3 MCT/D0.0 INN							

HIALS-II PAPI

750' whichever later D0.3 MCT

PANS OPS

.Standard. STRAIGHT-IN LANDING RWY 23R

CDFA

DA/MDA(H) 690' (441')

ALS out

A	RVR 1400m
B	RVR 1500m
C	RVR 2100m
D	

CIRCLE-TO-LAND

Max Kts	MDA(H)	VIS
100	790' (533')	1500m
135	820' (563')	1600m
180	1110' (853')	2400m
205	1110' (853')	3600m

CHANGES: Communications.

Chart changes since cycle 06-2023

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE

MANCHESTER, (MANCHESTER - EGCC)

TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport EGCC

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

CAT II ILS DME Rwy 05L (11-1A) CAT B DA(H) changed to 327' (115') and CAT B RA changed to 125'.

Chart Change Notices for Country GBR

Type: Gen Tmnl
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

The following Take-off minima according to Commission Regulation No. 965/2012 (EASA Air Operations Regulation) are applicable for Low Visibility Take-off Operations within the UK FIR for CAT ABCD aircraft: 1. With RL and RCLM during day or with RL or CL during night: RVR 300m 2. With RL and CL: RVR 200m 3. With RL and CL and TDZ, MID and RO RVR: RVR 150m 4. With HIRL and CL and TDZ, MID and RO RVR: RVR 125m 5. On CAT III RWYs with approved guidance system or HUD/HUDLS: RVR 75m

Type: Gen Tmnl
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

(STARs) Do not commence descent without ATC clearance. STAR level restrictions are for descent planning purposes only. Based on SUP 045-22.