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Revision Letter For Cycle 01-2015

Change Notices

Notebook

General Information

Location: London Gbr
IATA Code: LHR
Lat/Long: N51° 28.6' W000° 27.7'
Elevation: 83 ft

Airport Use: Public
Magnetic Variation: 1.1°W

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

Sunrise: 0807 Z
Sunset: 1607 Z,

Runway Information

Runway: 09L
Length x Width: 12802 ft x 164 ft
Surface Type: asphalt
TDZ-Elev: 81 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1007 ft

Runway: 09R
Length x Width: 12008 ft x 164 ft
Surface Type: asphalt
TDZ-Elev: 76 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1007 ft

Runway: 27L
Length x Width: 12008 ft x 164 ft
Surface Type: asphalt
TDZ-Elev: 78 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 27R
Length x Width: 12802 ft x 164 ft
Surface Type: asphalt
TDZ-Elev: 79 ft
Lighting: Edge, ALS, Centerline, TDZ

Communication Information

- ATIS 128.075 Arrival Service
- ATIS 121.935 Departure Service
- ATIS 115.1 Arrival Service
- ATIS 113.75 Arrival Service
- Heathrow Ground Tower 121.9
- Heathrow Ground Tower 121.85
- Heathrow Ground Tower 121.7
- Heathrow Delivery Tower 121.975
- Heathrow Tower 118.7
- Heathrow Tower 124.475
- Heathrow Tower 118.5
- Heathrow Director Approach Control 134.975
- Heathrow Director Approach Control 127.525
- Heathrow Director Approach Control 120.4
- Heathrow Director Approach Control 119.725
- Heathrow Radar 127.525
- Heathrow Radar 125.625

1. GENERAL

1.1. ATIS

- * D-ATIS Arrival 113.75 115.1 128.07
* D-ATIS Departure 121.935 (Non-8.33kHz-equipped ACFT should contact
Heathrow Delivery.)

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 or for complying with ATC instructions. 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 RUNWAY SYSTEM

When tailwind component is not greater than 5 KT on RWYs 27R/L, these RWYs will be used in preference to RWYs 09R/L, provided the RWY surface is dry. Pilots asking for permission to use the RWY into the wind when RWYs 27R or 27L are in use, should understand that their arrival or departure may be delayed.

1.2.3. REVERSE THRUST

Avoid use of reverse thrust between 2330-0600LT except for safety reasons.

1.2.4. RUN-UP TESTS

Run-up tests are controlled in accordance with instructions issued by Heathrow APT LTD.

1.2.5. NIGHTTIME RESTRICTIONS

Any ACFT which has a noise classification greater than 95.9 EPNdB may not be scheduled to take off or land between 2330-0600LT.

Any ACFT which has a noise classification greater than 98.9 EPNdB may not be scheduled to take off or land between 2300-0700LT.

Any ACFT which has a noise classification greater than 98.9 EPNdB may not take off between 2300-0700LT, except between 2300-2330LT when

- It was scheduled to take off prior to 2300LT;
- Take-off was delayed for reasons beyond control of the ACFT operator;
- APT authority has not given notice to the ACFT operator precluding take-off.

Any ACFT may not take off or be scheduled to land between 2300-0700LT where the operator of that ACFT has not provided (prior to its take-off or prior to its scheduled landing times as appropriate) sufficient information to enable the APT authority to verify its noise classification.

None of the provisions above shall apply to a take-off or landing which is made in an emergency consisting of an immediate danger to life or health, whether human or animal.

1.3. LOW VISIBILITY PROCEDURES

1.3.1. GENERAL

During CAT II and III operations, special ATC Low Visibility Procedures will be applied. Pilots will be informed when these procedures are in operation via ATIS or RTF.

1.3.2. ARRIVAL

- Surface Movement Guidance and Control System (SMGCS) is normally available and all RWY exits will then be illuminated.
Pilots should select the first convenient exit.
- Pilots are to delay the call "runway vacated" until ACFT has completely passed the end of the green/yellow colour-coded TWY centerline lights.

1.3.3. DEPARTURE

The ILS on the departure RWY will be turned off when the IRVR is greater than 250m. Pilots requiring the ILS for departure when the IRVR is in the range 275m to 550m must inform HEATHROW Delivery.

1. GENERAL

1.4. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

APT is equipped with Mode S movement radar. Pilots must ensure that: ACFT transponder is set to transmit Mode S signals, and associated Mode A code, from the request for push-back or taxi, whichever is earlier and after landing, continuously until ACFT is fully parked on stand.

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

1.5. RWY OPERATIONS**1.5.1. RWY CROSSING PROCEDURE**

After crossing RWY 09R/27L and having reported RWY vacated, the ACFT will be instructed to revert to Ground for further clearance. In absence of further clearance it is essential that ACFT holds position when clear of RWY.

1.6. TAXI PROCEDURES**1.6.1. GENERAL**

Pilots who intend to execute a reduced engine taxi-out must report their intention to Delivery on first contact.

Reduced Engine Taxi can be used, at the discretion of the pilot, EXCEPT in the following circumstances:

- a. By any ACFT that is required to cross an active RWY;
- b. By any ACFT, from Terminal 4 (Z, W, T, V) when the southern RWY is in use for landings;
- c. By any ACFT exiting T and turning West onto S due to jet blast affecting Stand 412;
- d. By B777 variants in G and H due to jet blast;
- e. Where pilots are aware that their taxi routing or entry onto stand is likely to involve tight turns or gradients requiring significant power increases.

Pilots are to use the minimum power necessary when manoeuvring on the TWY system. This is of particular importance when manoeuvring in the apron cul-de-sacs, where jet blast can affect adjacent stands.

Pilots are reminded of the extreme importance of maintaining a careful lookout at all times and are at all times responsible for wingtip clearance, notwithstanding the TWY lighting system.

1.6.2. RESTRICTIONS TO LARGE ACFT

- A380 ACFT: Reduced "TWY centerline to object clearance" of 161'/49m applies on TWY E between TWY B and Link 36 and on TWY W between TWY S and TWY T.
Reduced clearance of 156'/47.5m applies on TWY A at MORRA. Pilots are to ensure that ACFT remain on TWY centerline at all times.
- Pilots of Code E ACFT must exercise caution when using TWY S between reporting point SY6 and TWY Z as wingtip clearances to the South are minimal.
- All B747-400 ACFT on TWY Z must be under tow.
- A340-600 and B777-300 ACFT: It is recommended that flight crews use judgemental steering at all times when manoeuvring on the TWYs. These ACFT are not permitted to use the following routes:
Eastbound on TWY S, at S1N turning RIGHT onto Link 41 to face West.
- Pilots of B747, B777, A340 and Code F ACFT are not permitted to route north on TWY Tango turning left on TWY Sierra facing west under power.

1. GENERAL

1.6.3. TWY ROUTE WEST ON TWY S - RIGHT TO S3/SB3

During DAY and good visibility only and MAX wingspan 91'/27.7m.

1.6.4. CODE E TWY TO TWY SEPARATION

Separation of 262'/80m is not met as follows: TWYs A and B between TWY H and AY5.

1.6.5. CODE E TWY TO STAND OR TWY TO OBJECT SEPARATION

Separation of 156'/47.5m is not met on the following TWYs:

- **Minimum clearance 139'/42.5m**

TWY B from TWY F to TWY J.

All of TWY F.

TWY S from reporting point SY6 East to TWY W.

- **Minimum clearance 121'/37m**

TWY S between reporting point SY6 and TWY Z to the South.

1.6.6. RWY STOP BARS

The RWY stop bars at N4E, N5W, S4 and S5 are not positioned perpendicular to the TWY centerline.

1.7. PARKING INFORMATION

The majority of stands are equipped with the 'Safedock' Visual Docking Guidance System (VDGS). A marshalling service will be provided for the minority of the remaining stands that do not have VDGS fitted. Stands 102, 103, 104 and 105 are equipped with a single, fixed, rail passenger boarding bridge which have no lateral movement.

2. ARRIVAL

2.1. SPEED RESTRICTIONS

Pilots should typically expect the following speed restrictions to be enforced:

- 220 KT from the holding facility during the initial approach phase;
- 180 KT on base leg/closing heading to the final APCH;
- Between 180 KT and 160 KT when established on the final APCH;

and thereafter 160 KT to D4.0.

These speeds are applied for ATC separation purposes and are mandatory.

In the event of a new (non-speed related) ATC clearance being issued (e.g. an instruction to descend on ILS), pilots shall continue to maintain a previously allocated speed. All speed restrictions are to be flown as accurately as possible. ACFT unable to conform to these speeds should inform ATC and state what speeds can be used. In the interests of accurate spacing, pilots are requested to comply with speed adjustments as promptly as feasible within their own operational constraints, advising ATC if circumstances necessitate a change of speed for ACFT performance reasons.

2.2. NOISE ABATEMENT PROCEDURES

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger or for complying with ATC instructions.

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 airport.

An ACFT approaching to land shall according to its ATC clearance minimize noise disturbance by the use of continuous descent and low power, low drag operating procedures (see below).

Where the use is not practicable, ACFT shall maintain an altitude as high as possible.

Propeller-driven ACFT with MTOW above 5700kgs and jet ACFT:

ACFT approaching RWY 27L/R between 0600-2330LT

and using the ILS shall not descend below 2500' (Heathrow QNH) on GS before being established on LOC, nor thereafter fly below GS. ACFT approaching without ILS assistance shall follow a descent path which will not result in its being at any time lower than the approach path that would be followed by an ACFT using the ILS GS, and shall follow a track to intercept the extended RWY centerline at or above 2500'.

ACFT approaching RWY 27L/R between 2330-0600LT

and using the ILS shall not descend below 3000' (Heathrow QNH) on GS before being established on LOC at not less than 10NM from touchdown, nor thereafter fly below GS. ACFT approaching without ILS assistance shall follow a descent path which will not result in its being at any time lower than the approach path that would be followed by an ACFT using the ILS GS, and shall follow a track to intercept the extended RWY centerline at or above 3000'.

ACFT approaching RWY 09L/R between 0700-2300LT

and using the ILS shall not descend below 2500' (Heathrow QNH) on GS before being established on LOC, nor thereafter fly below GS. ACFT approaching without ILS assistance shall follow a descent path which will not result in its being at any time lower than the approach path that would be followed by an ACFT using the ILS GS, and shall follow a track to intercept the extended RWY centerline at or above 2500'.

ACFT approaching RWY 09L/R between 2300-0700LT

and using the ILS shall not descend below 3000' (Heathrow QNH) on GS before being established on LOC at not less than 10NM from touchdown, nor thereafter fly below GS. ACFT approaching without ILS assistance shall follow a descent path which will not result in its being at any time lower than the approach path that would be followed by an ACFT using the ILS GS, and shall follow a track to intercept the extended RWY centerline at or above 3000'.

2. ARRIVAL

CONTINUOUS DESCENT APPROACH

Headings and flight levels/altitudes by ATC. ACFT will be radar-vectored. An estimate of track distance to touchdown will be passed with descent clearance. Further distance information will be given between descent clearance and the intercept heading to the ILS LOC.

On receipt of descent clearance, descend at the rate best suited to a continuous descent so as to join the GS at the appropriate height for the distance without recourse to level flight.

2.3. CAT II/III OPERATIONS

RWYs 09L/27R and 09R/27L approved for CAT II/III operations, special aircrew and ACFT certification required.

2.4. RWY OPERATIONS

2.4.1. MINIMUM RWY OCCUPANCY TIME

Pilots are reminded that rapid exit from the landing RWY enables ATC to apply the minimum spacing on final approach that will achieve maximum RWY utilisation and will minimize the occurrence of go-arounds.

2.4.2. RWY VACATION GUIDELINES

ACFT lands but cannot contact HEATHROW Ground due to RTF congestion:

In this case the pilot should completely vacate the landing RWY and taxi into the first TWY available. The pilot should then hold position until contact with Ground can be established.

RWY 09L: Preferred exit for A380 ACFT is A5.

2. ARRIVAL

2.5. OTHER INFORMATION

2.5.1. GENERAL

Warning: The possibility of building-induced turbulence and large windshear effects may occur when landing on RWY 27R in strong southerly / south westerly winds.

2.5.2 "LAND AFTER" PROCEDURE

Normally, only one ACFT is permitted to land or take-off on the RWY-in-use at any one time. However, when the traffic sequence is two successive landing ACFT, the second one may be allowed to land before the first one has cleared the RWY-in-use, providing:

- The RWY is long enough;
- It is during daylight hours;
- The second ACFT will be able to see the first ACFT clearly and continuously until it is clear of the RWY;
- The second ACFT has been warned.

ATC will provide this warning by issuing the second ACFT with the instruction "**Land after ... (first ACFT type)**" in place of the usual instruction "Cleared to land". Responsibility for ensuring adequate separation between the two ACFT rests with the pilot of the second ACFT.

3. DEPARTURE

3.1. START-UP & PUSH-BACK PROCEDURES

3.1.1. APT-COLLABORATIVE DECISION MAKING (A-CDM)

3.1.1.1. TARGET OFF BLOCK TIME (TOBT)

This is the time, that an ACFT expects to be ready to leave its stand.

TOBTs must be updated to an accuracy of +/-5 min.

TOBTs should be updated through the usual channels if the time that the ACFT will be ready to leave stand changes.

For a delay of 15 min or more, a DLA message must be sent.

3.1.1.2. TARGET START UP APPROVAL TIME (TSAT)

This is the time provided by ATC, that an ACFT can reasonably expect to receive start-up approval, taking into account the TOBT and overall traffic situation.

Pilots will be notified of their TSAT and any subsequent changes to it by their AO/GH or from Delivery when they call ready.

3.1.1.3. REMOTE HOLDING REQUEST

If an airline operator is aware of a CTOT and wishes to take the delay on a TWY rather than on the stand, then they should contact the Tower supervisor via phone to arrange it.

In this instance, TSAT will be adjusted to allow ACFT to be transferred to HEATHROW Ground earlier for remote hold.

3.1.2. DATALINK DEPARTURE CLEARANCE (DCL)

DCL via SITA or ARINC.

DCL available from 25 min prior to EOBT to 15 min after EOBT. Clearance will not be issued if requested later than 15 min after EOBT.

Successful clearance must be accepted within 5 min after receipt or a "Revert to voice" message will be received.

If the attempt to obtain a clearance is unsuccessful the ACFT should revert to RTF.

Regardless of clearance source, departing ACFT must report ACFT type, stand number, QNH and the identification letter of the received ATIS information to HEATHROW Delivery when fully ready for push-back and start.

3.1.3. START-UP

On first contact with HEATHROW Delivery, pilots are to report ACFT type, stand number, QNH and identification letter of received ATIS info.

Between 0630-1400 LT and between 1500-2200 LT pilots of operators who have been briefed with regard to the correct phraseology may call for ATC clearance up to 15min prior to being fully ready to push-back. All other operators must be fully ready before calling on frequency.

Pilots who wish to start engines on stand must request permission from HEATHROW Ground not later than 5 min after being transferred from Delivery.

All jet ACFT are to advise ATC, if for any reason they are unable to accelerate after noise abatement procedures to 250 KT.

If within 30 min of a previously issued Calculated Take-off Time (CTOT) the flight is unable to comply with that CTOT, the pilot should advise ATC as soon as possible.

Pilots are advised that delays in excess of 10 min can be expected at holding position. Sufficient time should be allowed for start, push-back and taxi to take account of such a delay especially if required to comply with a Calculated Take-off Time (CTOT).

3.1.4. PUSH-BACK

Following push-back from cul-de-sac stands, all ACFT must pull forward to a minimum of 328'/100m from the blast screen (indicated by a painted mark on the TWY centerline) before disconnecting the tug. Due to exhaust fume ingestion within the buildings at the end of all cul-de-sacs, engine start-up must be delayed until the ACFT has reached the 328'/100m mark.

Push-back approval must be obtained from HEATHROW Ground not later than 5 min after being transferred from Delivery.

Push-back approval includes permission to start engines during push-back.

3. DEPARTURE**3.2. NOISE ABATEMENT PROCEDURES****3.2.1. GENERAL**

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger or for complying with ATC instructions.

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 airport.

After take-off operate ACFT so that it is at or above 1090' at 6.5 km from start of roll as measured along the departure track and so that it will not cause more than:

- 94 dBA between 0700-2300LT,
- 89 dBA between 2300-2330LT and between 0600-0700LT,
- 87 dBA between 2330-0600LT

at any noise monitoring terminal. Jet ACFT maintain a minimum climb gradient of 243' per NM (4%) to at least 4000' to ensure progressively decreasing noise levels at points on the ground under the flight path beyond the monitoring terminal.

Noise preferential routing procedures applicable for all jet ACFT and other ACFT with MTWA of more than 5700 KGS (between 0600-2330 LT of more than 17000 KGS and except any Dash 7 ACFT) are depicted on London Heathrow SID charts and on page 10-4.

3.2.2. NOISE QUOTA SYSTEM DURING NIGHT (2300-0700LT)

Main restrictions are as follows:

- Night Period (2300-0700LT)
- Night Quota Period (2330-0600LT)

The quota count is to be calculated based on the noise classification for the ACFT as follows:

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

3. DEPARTURE

3.4. RWY OPERATIONS

3.4.1. MINIMUM RWY OCCUPANCY TIME

On receipt of line up clearance pilots should ensure, commensurate with safety and standard operating procedures, that they are able to taxi into the correct position at the hold and line up on the RWY as soon as the preceding ACFT has commenced its take-off roll.

Pilots in receipt of a conditional line up clearance on a preceding departing ACFT (for example; 'ABC123, after the departing Sky Train DC10, line up RWY 27L via N2E') should remain behind the subject ACFT but may cross the RWY holding point (subject to there being no illuminated red stop bar) and enter the RWY upon receipt of the clearance. There is no requirement for the subject ACFT to have commenced its take-off roll before entering the RWY. Pilots must be aware that there may be a blast hazard as the ACFT on the RWY applies power.

Pilots in receipt of a conditional line up clearance on a preceding arriving ACFT (for example; 'ABC123, after the landing Sky Train DC10, line up RWY 27L via N2E') may cross the RWY holding point (subject to there being no illuminated red stop bar) as soon as the landing ACFT has passed the RWY entry point.

Pilots who require to back-track the RWY (including line up from N2W onto RWY 27L) must notify ATC prior to arrival at the holding point.

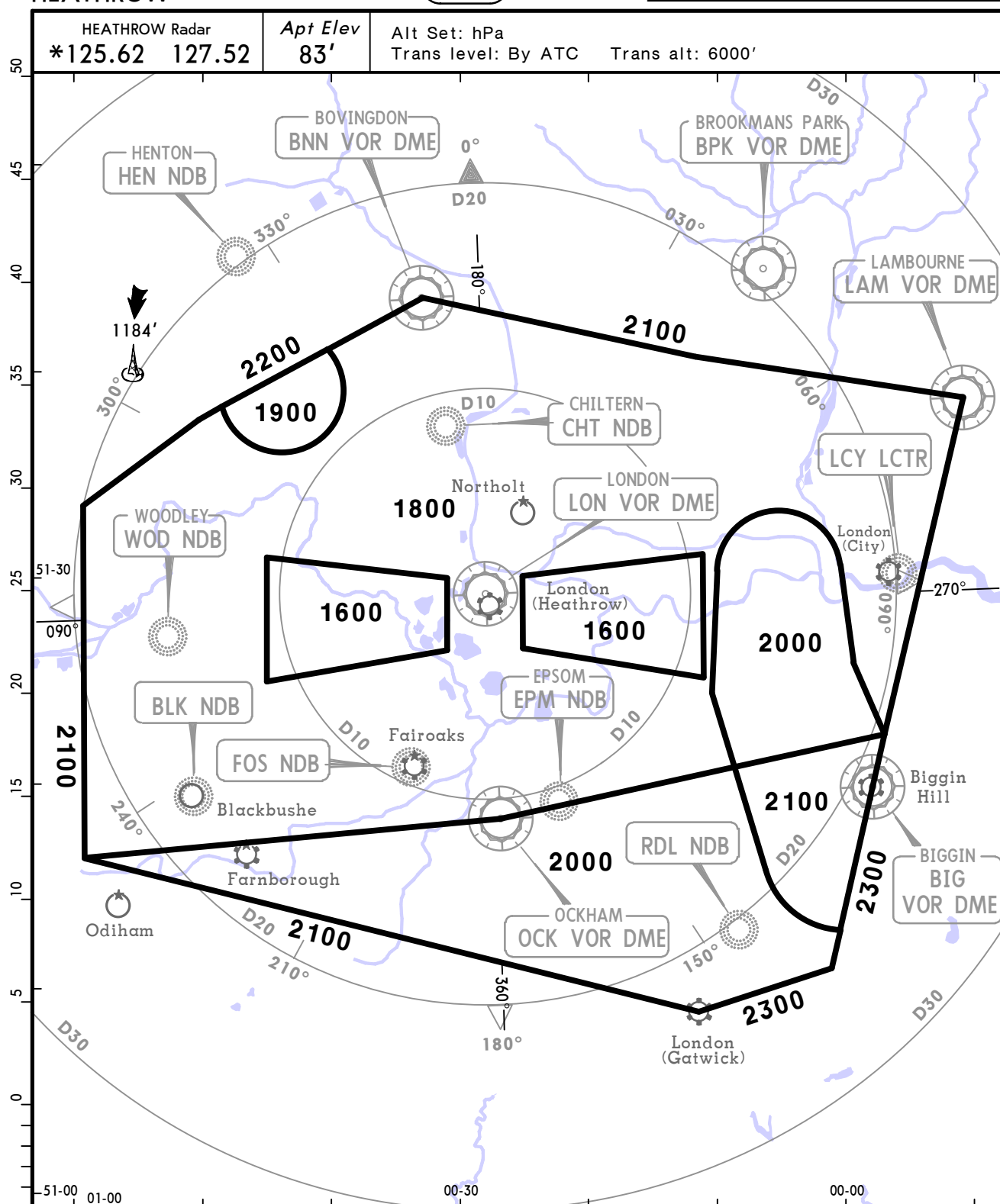
Pilots are advised that there is an increased risk of RWY Incursions when holding at N11 and NB11. Pilots may mistakenly believe that when on reaching the front of the queue, they have been given permission to line up in turn. Pilots are to be extra vigilant as to whether they have received a line-up clearance from ATC and seek confirmation where there is doubt.

Whenever possible, cockpit checks must 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.

Pilots not able to comply with these requirements should notify ATC as soon as possible once transferred to HEATHROW Tower.

3.4.2. RWY HOLDING AREAS

In promulgated holding areas, ATC may require ACFT to pass each other. Avoidance of other ACFT is the responsibility of the flight crew involved. If doubt exists as to whether other ACFT can be safely overtaken, ACFT must stop, advise ATC and request alternative instructions.



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 ❶ of the aircraft and
- within the sector 15 NM ❷ ahead of and within 20° either side of the aircraft's track.

3 NM ❶ or 10 NM ❷ when the aircraft is within 15 NM of the radar antennae.

PROCEDURE	RWY	LOSS OF COMMUNICATION PROCEDURE
INITIAL APPROACH	09L/27R	Continue visually or by means of an appropriate approved final approach aid. If not possible proceed to CHT or last assigned level if higher.
	09R/27L	Continue visually or by means of an appropriate approved final approach aid. If not possible proceed to EPM or last assigned level if higher.
INTERMEDIATE AND FINAL APPROACH	09L/27R	Continue visually or by means of an appropriate approved final approach aid. If not possible follow the Missed Approach Procedure to CHT.
	09R/27L	Continue visually or by means of an appropriate approved final approach aid. If not possible follow the Missed Approach Procedure to EPM.

In all cases where the acft returns to the holding facility the procedures to be adopted are the Approach Radio Failure Procedures on charts 11-5/11-6.

*D-ATIS
113.75 115.1 128.07

Apt Elev
83'

Alt Set: hPa
Trans level: By ATC Trans alt: 6000'

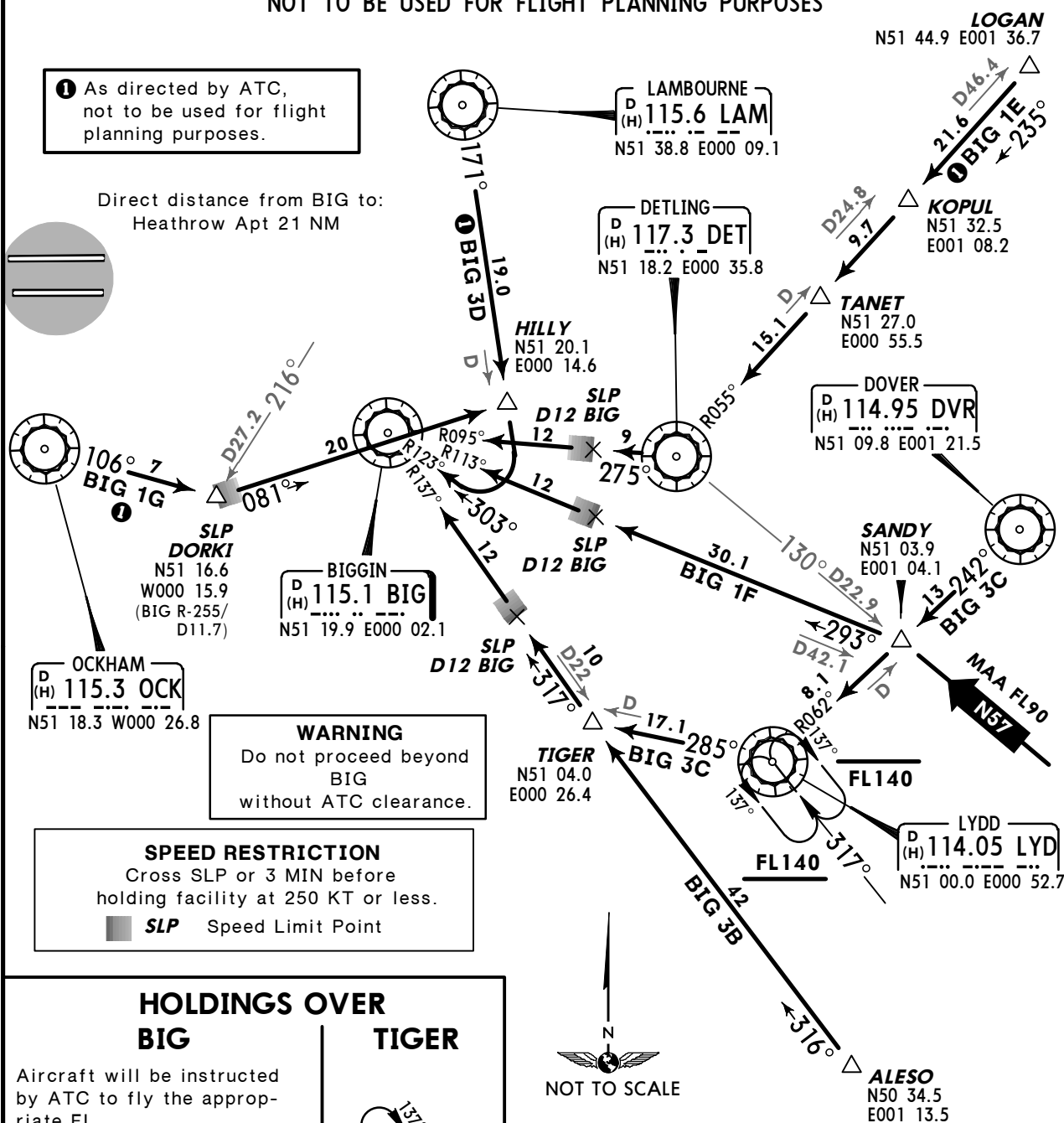
BIGGIN THREE BRAVO (BIG 3B)
BIGGIN THREE CHARLIE (BIG 3C)
BIGGIN THREE DELTA (BIG 3D)①
BIGGIN ONE ECHO (BIG 1E)①
BIGGIN ONE FOXTROT (BIG 1F)
BIGGIN ONE GOLF (BIG 1G)①

ARRIVALS

DURING PERIODS OF CONGESTION TRAFFIC MAY BE ROUTED
VIA OCK 1G AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES

① As directed by ATC,
not to be used for flight
planning purposes.

Direct distance from BIG to:
Heathrow Apt 21 NM



Alt Set: hPa
Trans level: By ATC Trans alt: 6000'

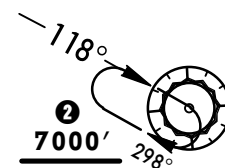
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*D-ATIS
113.75 115.1 128.075Apt Elev
83'Alt Set: hPa
Trans level: By ATC Trans alt: 6000'BNN 4A, BNN 1B, BNN 1C
BNN 1D, BNN 1E
ARRIVALS

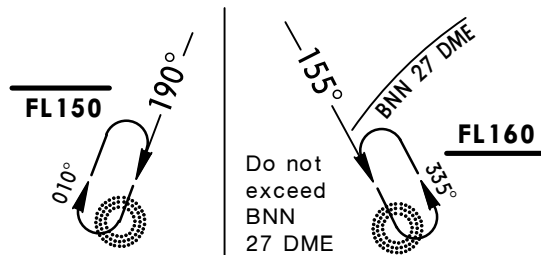
- 1 STARs are to facilitate the transfer of traffic between terminal holding facilities and are for use only as directed by ATC, not to be used for flight planning purposes.
- 2 Aircraft will be instructed by ATC to fly the appropriate FL.
- 3 During periods of congestion in the London TMA, traffic may be required to hold at HON.

DESCENT PLANNING

Pilots should plan for possible descent clearance as follows:

BNN 4A: FL150 by SOPIT.**BNN 1B:** FL200 by TOBID,
FL150 by SOPIT.**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC.**HOLDING
OVER BNN

HOLDINGS OVER WCO

KENET
N51 31.2 W001 27.3D36.0
072°
BNN 1DDirect distance from BNN to:
Heathrow Apt 15NM**SPEED RESTRICTION**
Cross SLP or 3 MIN before
holding facility at 250 KT or less.
■ SLP Speed Limit Point**WARNING**
Do not proceed beyond
BNN
without ATC clearance.

STAR

ROUTING

BNN 4A	At HON, intercept HON R-141 via TOBID and SOPIT to WCO, turn LEFT, intercept BNN R-298 inbound to BNN.
BNN 1B	At NUGRA, 149° track to TOBID, turn LEFT, intercept HON R-141 via SOPIT to WCO, turn LEFT, intercept BNN R-298 inbound to BNN.
BNN 1C	At DTY, intercept DTY R-166 to WCO, turn LEFT, intercept BNN R-298 inbound to BNN.
BNN 1D	At KENET, intercept BNN R-252 inbound to BNN.
BNN 1E	At LAM, intercept LAM R-277 to DONNA, turn RIGHT, 118° track on holding track to BNN.

*D-ATIS
113.75 115.1 128.075Apt Elev
83'Alt Set: hPa
Trans level: By ATC Trans alt: 6000'**BOVVA 4A [BOVA4A], BOVVA 1B [BOVA1B]
BOVVA 1C [BOVA1C], BOVVA 1D [BOVA1D] ①
BOVVA 1E [BOVA1E] ①****ARRIVALS**

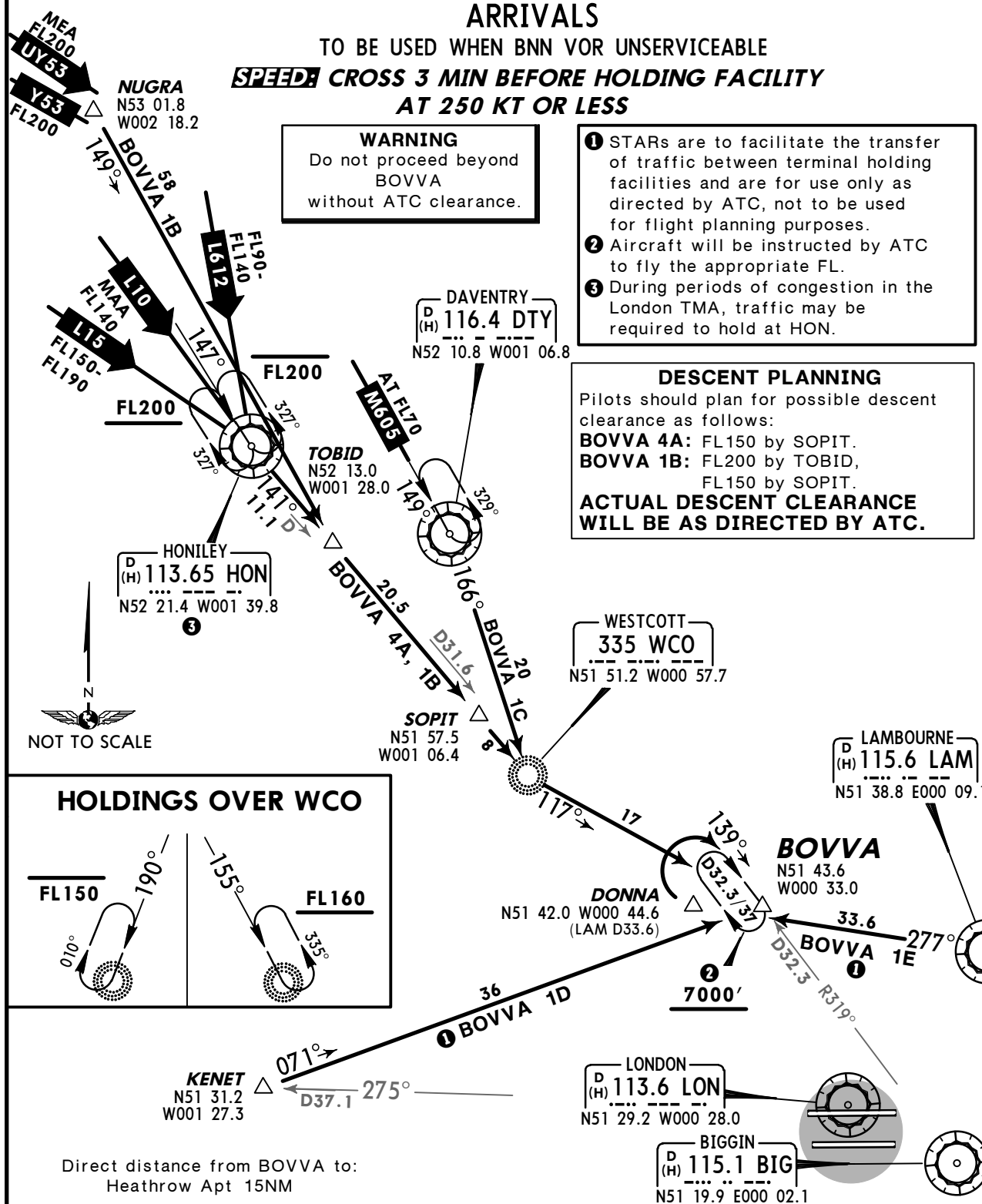
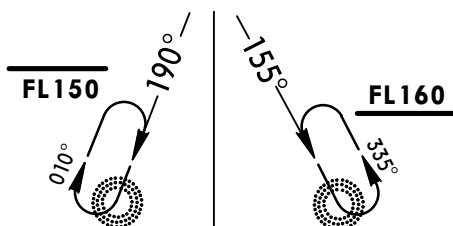
TO BE USED WHEN BNN VOR UNSERVICEABLE

**SPEED: CROSS 3 MIN BEFORE HOLDING FACILITY
AT 250 KT OR LESS****WARNING**Do not proceed beyond
BOVVA
without ATC clearance.

- ① STARs are to facilitate the transfer of traffic between terminal holding facilities and are for use only as directed by ATC, not to be used for flight planning purposes.
- ② Aircraft will be instructed by ATC to fly the appropriate FL.
- ③ During periods of congestion in the London TMA, traffic may be required to hold at HON.

DESCENT PLANNING

Pilots should plan for possible descent clearance as follows:

BOVVA 4A: FL150 by SOPIT.**BOVVA 1B:** FL200 by TOBID,
FL150 by SOPIT.**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC.****HOLDINGS OVER WCO**Direct distance from BOVVA to:
Heathrow Apt 15NM**STAR****ROUTING**

BOVVA 4A	At HON, intercept HON R-141 via TOBID and SOPIT to WCO, turn LEFT, 117° bearing to BOVVA.
BOVVA 1B	At NUGRA, 149° track to TOBID, turn LEFT, intercept HON R-141 via SOPIT to WCO, turn LEFT, 117° bearing to BOVVA.
BOVVA 1C	At DTY, intercept DTY R-166 to WCO, turn LEFT, 117° bearing to BOVVA.
BOVVA 1D	At KENET, 071° track to BOVVA.
BOVVA 1E	At LAM, intercept LAM R-277 to DONNA, turn RIGHT, 139° track on holding track to BOVVA.

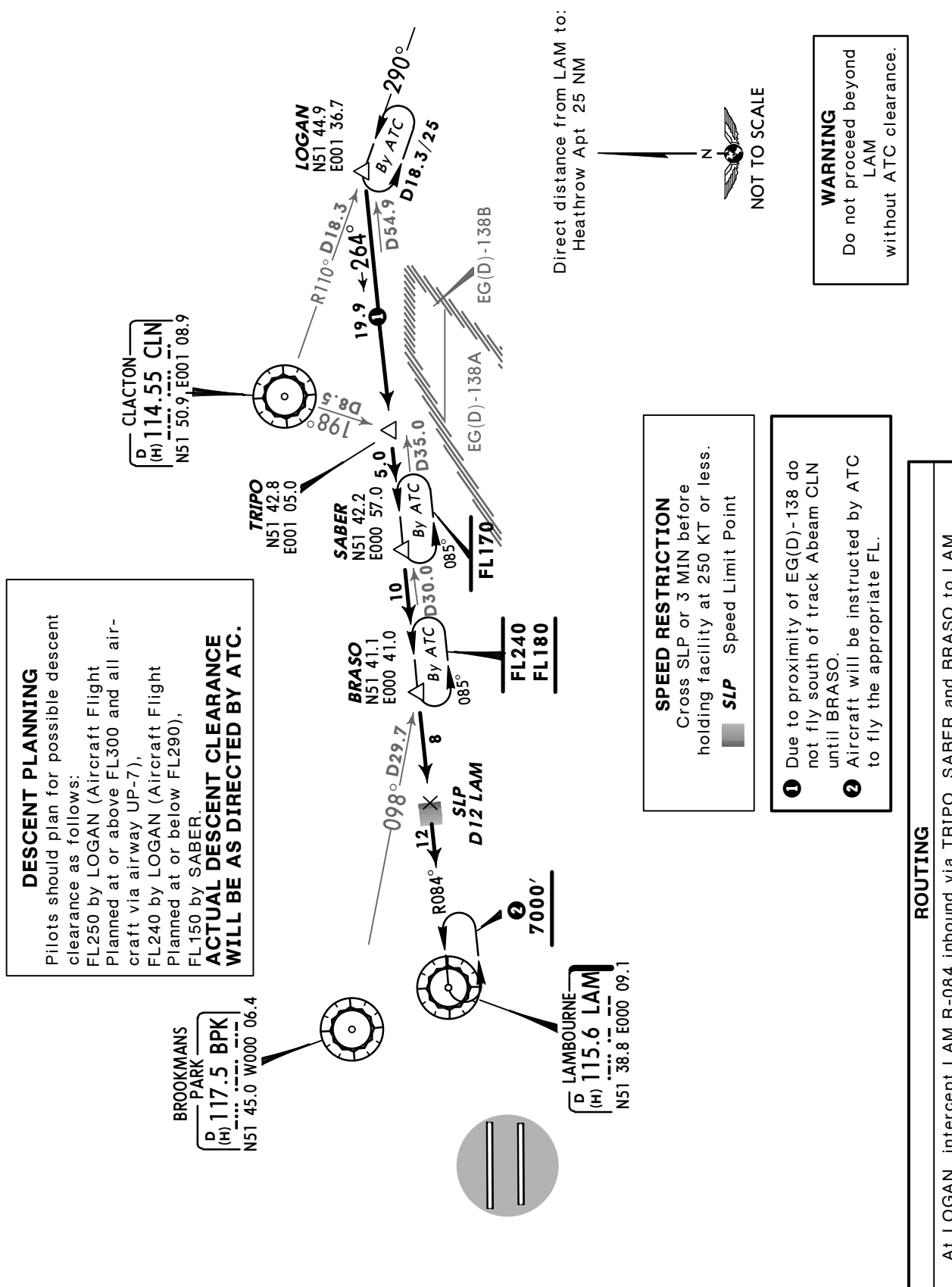
113.75 *D-ATIS
115.1 128.07

Apt Elev
83'

Alt Set: hPa
Trans level: By ATC Trans alt: 6000'

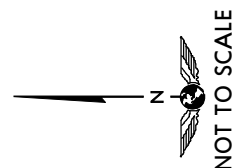
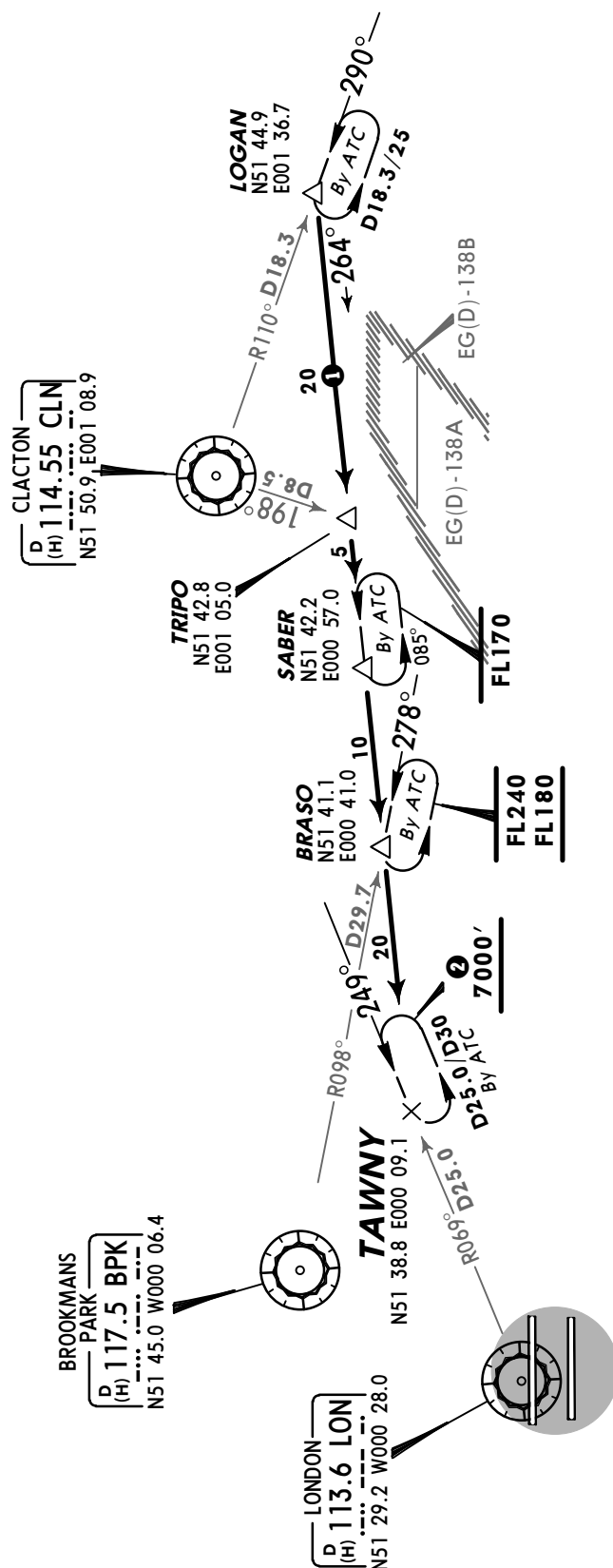
LAM 3A ARRIVAL

DURING PERIODS OF CONGESTION TRAFFIC MAY BE ROUTED VIA
BIG 3D, BIG 1E, BNN 1E & OCK 1H AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES



113.75 *D-ATIS
115.1 128.07Apt Elev
83'Alt Set: hPa
Trans level: By ATC Trans alt: 6000'**TAWNY 3A [TAWN3A]
ARRIVAL**

TO BE USED WHEN LAM VOR UNSERVICEABLE
DURING PERIODS OF CONGESTION TRAFFIC MAY BE ROUTED VIA
BIG 3D, BIG 1E, BNN 1E & OCK 1H AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES
CROSS 3 MIN BEFORE HOLDING FACILITY AT 250 KT OR LESS



- 1 Due to proximity of EG(D)-138 do not fly south of track Abeam CLN until BRASO.
- 2 Aircraft will be instructed by ATC to fly the appropriate FL.

DESCENT PLANNING

Pilots should plan for possible descent clearance as follows:

FL250 by LOGAN (Aircraft Flight Planned at or above FL300 and all aircraft via airway UP-7),
FL240 by LOGAN (Aircraft Flight Planned at or below FL290),
FL150 by SABER.

**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC.**

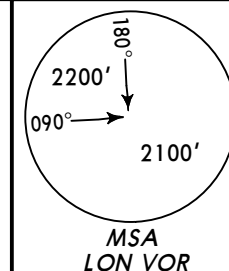
*D-ATIS
113.75 115.1 128.07

Apt Elev
83'

Alt Set: hPa
Trans level: By ATC Trans alt: 6000'

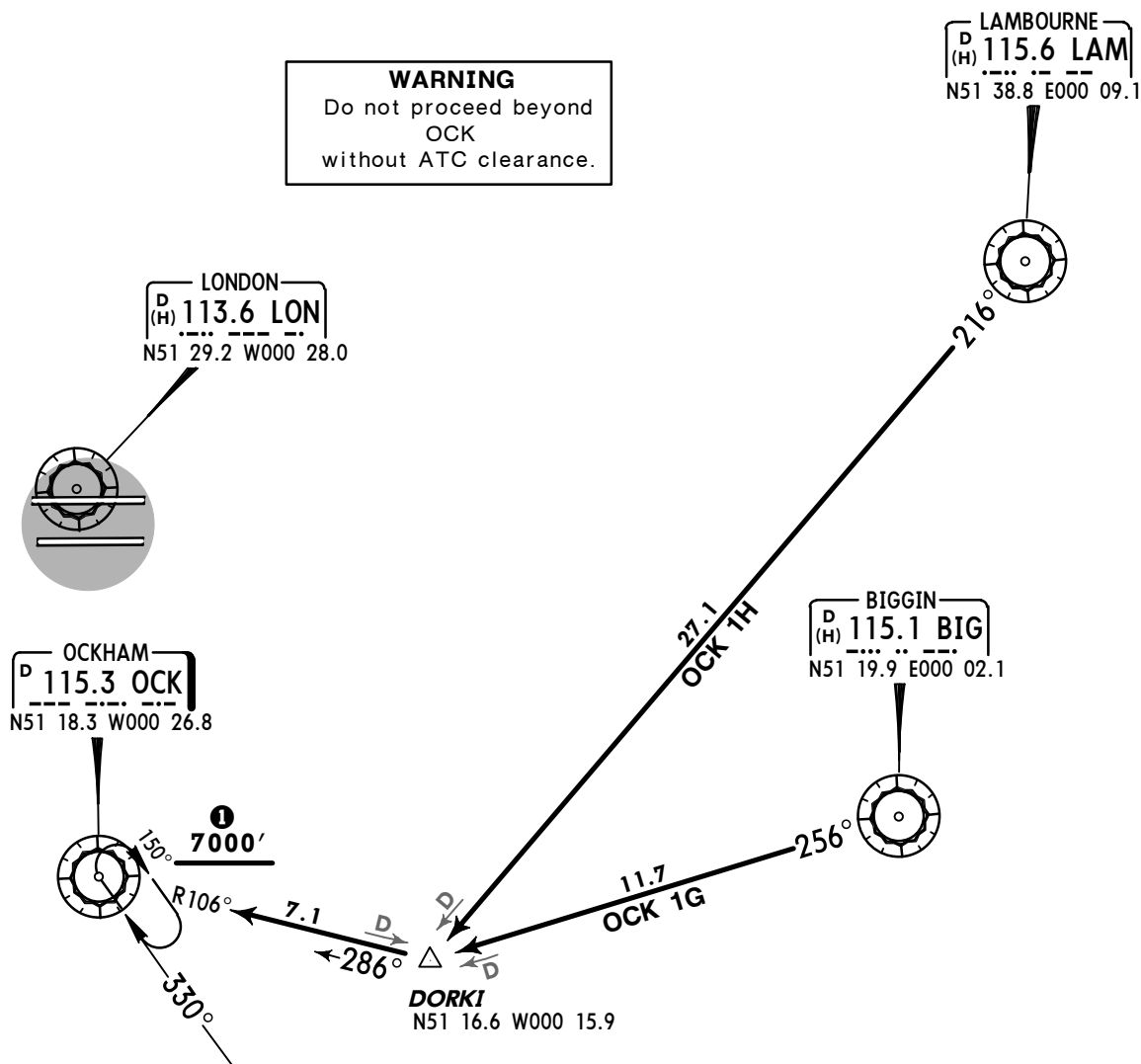
OCK 1G, OCK 1H ARRIVALS

STARS ARE TO FACILITATE THE TRANSFER OF
TRAFFIC BETWEEN TERMINAL HOLDING FACILITIES
AND ARE FOR USE ONLY AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES
CROSS 3 MIN BEFORE HOLDING FACILITY AT 250 KT OR LESS
DURING PERIODS OF CONGESTION TRAFFIC MAY
BE ROUTED VIA BIG 1G AS DIRECTED BY ATC



WARNING

Do not proceed beyond
OCK
without ATC clearance.



① Aircraft will be instructed by
ATC to fly the appropriate FL.

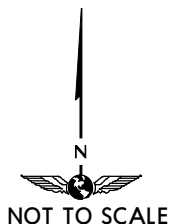
DESCENT PLANNING

Pilots should plan for possible descent
clearance as follows:

OCK 1G: FL150 by TIGER.

OCK 1H: FL150 by SABER.

**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC.**

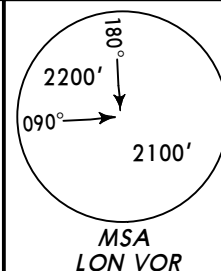


STAR	ROUTING
OCK 1G	At BIG, intercept BIG R-256 to DORKI, turn RIGHT, intercept OCK R-106 in-bound to OCK.
OCK 1H	At LAM, intercept LAM R-216 to DORKI, turn RIGHT, intercept OCK R-106 in-bound to OCK.

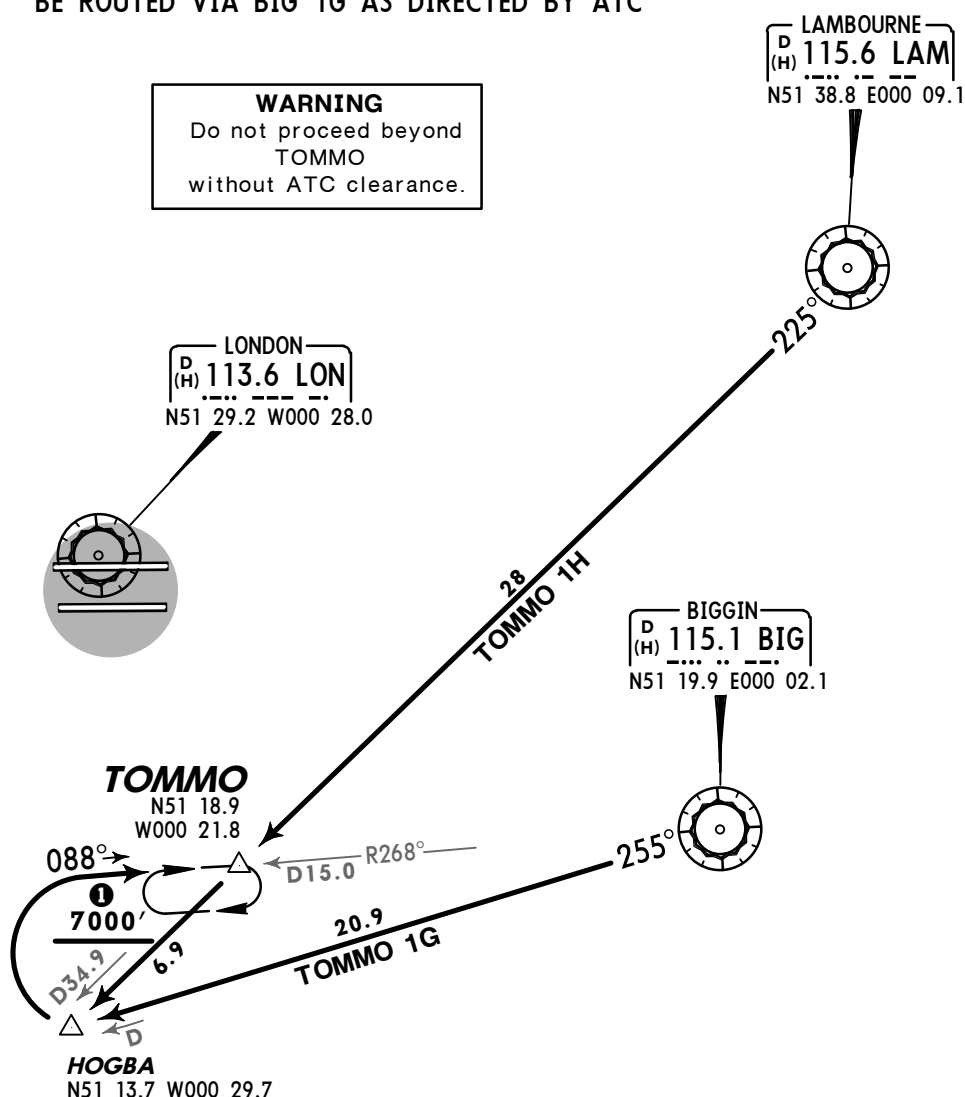
113.75 *D-ATIS 115.1 128.07 Apt Elev 83' Alt Set: hPa Trans level: By ATC Trans alt: 6000'

TOMMO 1G [TOMO1G]
TOMMO 1H [TOMO1H]
ARRIVALS

TO BE USED WHEN OCK VOR UNSERVICEABLE
STARS ARE TO FACILITATE THE TRANSFER OF
TRAFFIC BETWEEN TERMINAL HOLDING FACILITIES
AND ARE FOR USE ONLY AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES
CROSS 3 MIN BEFORE HOLDING FACILITY AT 250 KT OR LESS
DURING PERIODS OF CONGESTION TRAFFIC MAY
BE ROUTED VIA BIG 1G AS DIRECTED BY ATC

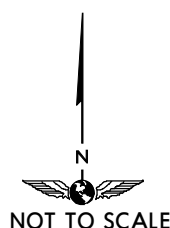


WARNING
Do not proceed beyond
TOMMO
without ATC clearance.

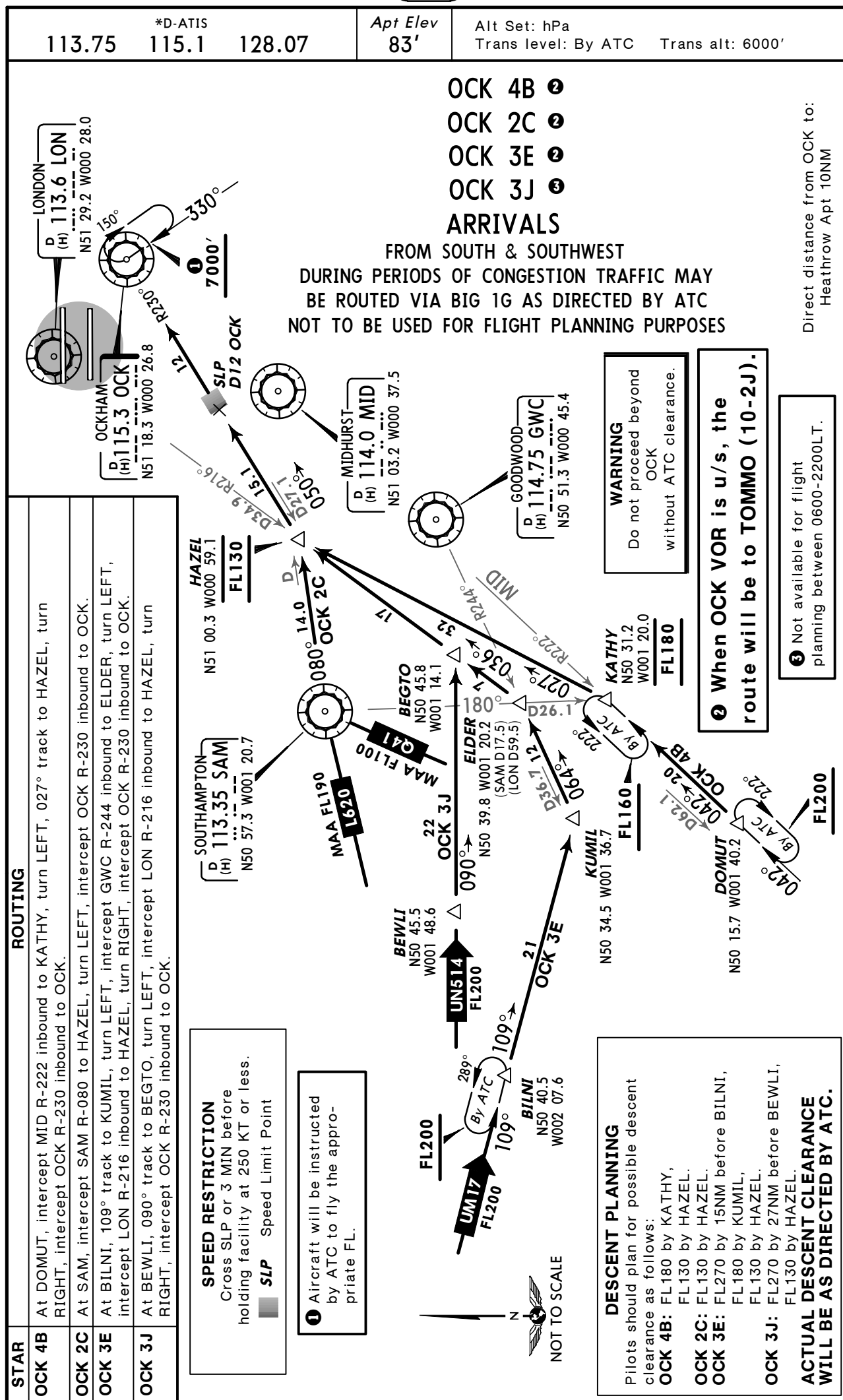


① Aircraft will be instructed by
ATC to fly the appropriate FL.

DESCENT PLANNING
Pilots should plan for possible descent
clearance as follows:
TOMMO 1G: FL150 by TIGER.
TOMMO 1H: FL150 by SABER.
**ACTUAL DESCENT CLEARANCE
WILL BE AS DIRECTED BY ATC.**



STAR	ROUTING
TOMMO 1G	At BIG, intercept BIG R-255 to HOGBA, turn RIGHT, 088° track to TOMMO.
TOMMO 1H	AT LAM, intercept LAM R-225 to HOGBA, turn RIGHT, 088° track to TOMMO.



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*D-ATIS
113.75 115.1 128.07Apt Elev
83'Alt Set: hPa
Trans level: By ATC Trans alt: 6000'

OCK 1A ②

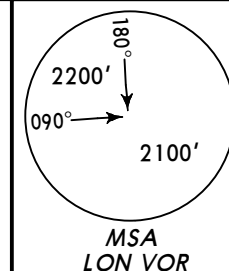
OCK 1D

OCK 2F ②

ARRIVALS

FROM WEST & NORTHWEST

WHEN OCK VOR UNSERVICEABLE REFER TO CHART 10-2L
DURING PERIODS OF CONGESTION TRAFFIC MAY
BE ROUTED VIA BIG 1G AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES



WARNING

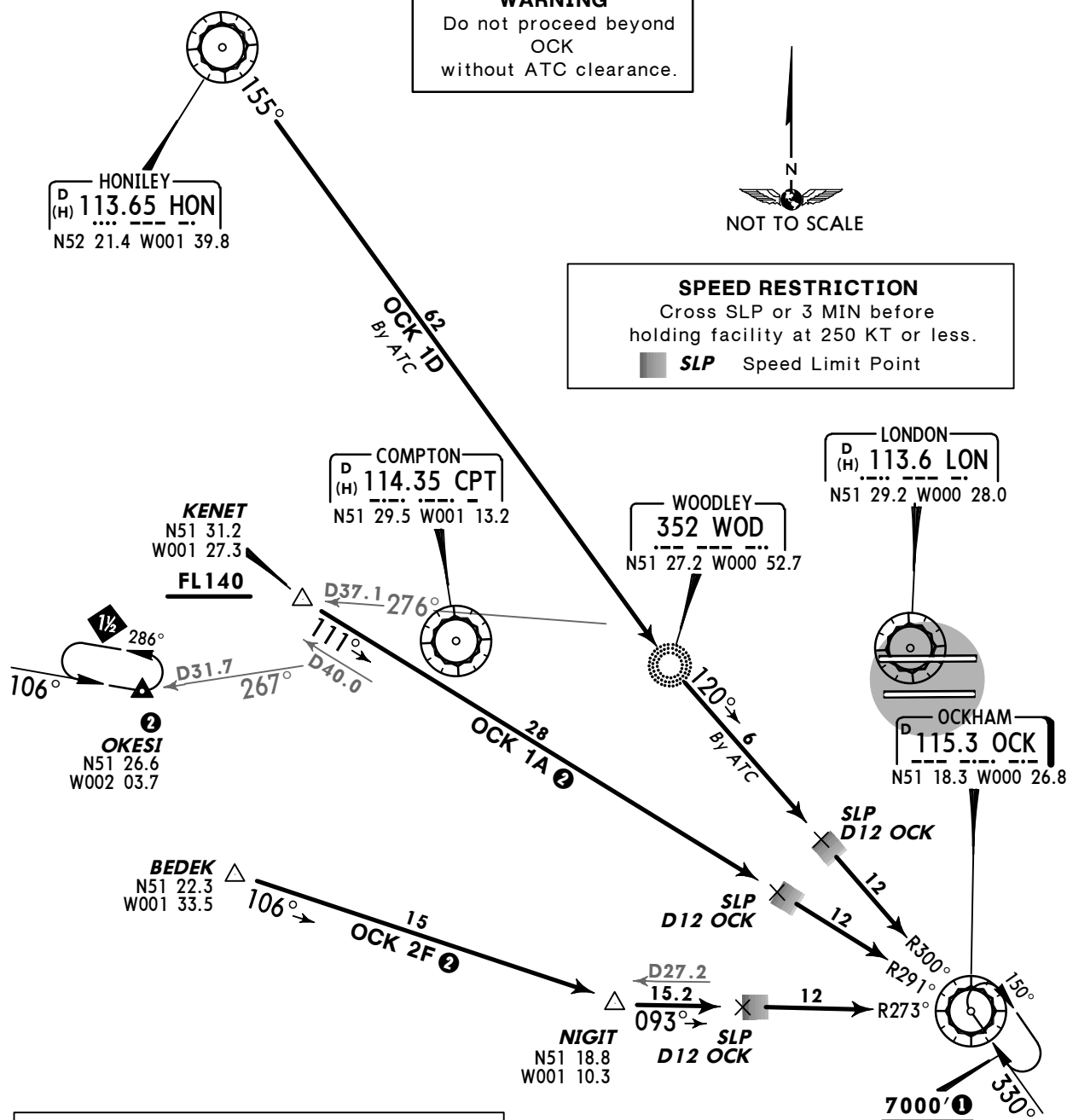
Do not proceed beyond
OCK
without ATC clearance.



SPEED RESTRICTION

Cross SLP or 3 MIN before
holding facility at 250 KT or less.

■ SLP Speed Limit Point



DESCENT PLANNING

Pilots should plan for possible descent
clearance as follows:

OCK 1A: FL140 by 40 NM before OCK.

OCK 1D: As directed by ATC.

OCK 2F: FL140 by BEDEK.

**ACTUAL DESCENT CLEARANCE WILL
BE AS DIRECTED BY ATC.**

① Aircraft will be instructed by ATC to
fly the appropriate FL.

② During periods of congestion in the
London TMA, traffic may be required
to hold at OKESI.

*D-ATIS	Apt Elev	Alt Set: hPa	Trans level: By ATC	Trans alt: 6000'
113.75 115.1 128.07	83'			

TOMMO 1A [TOMO1A] ②

TOMMO 1D [TOMO1D]

TOMMO 2F [TOMO2F] ②

ARRIVALS

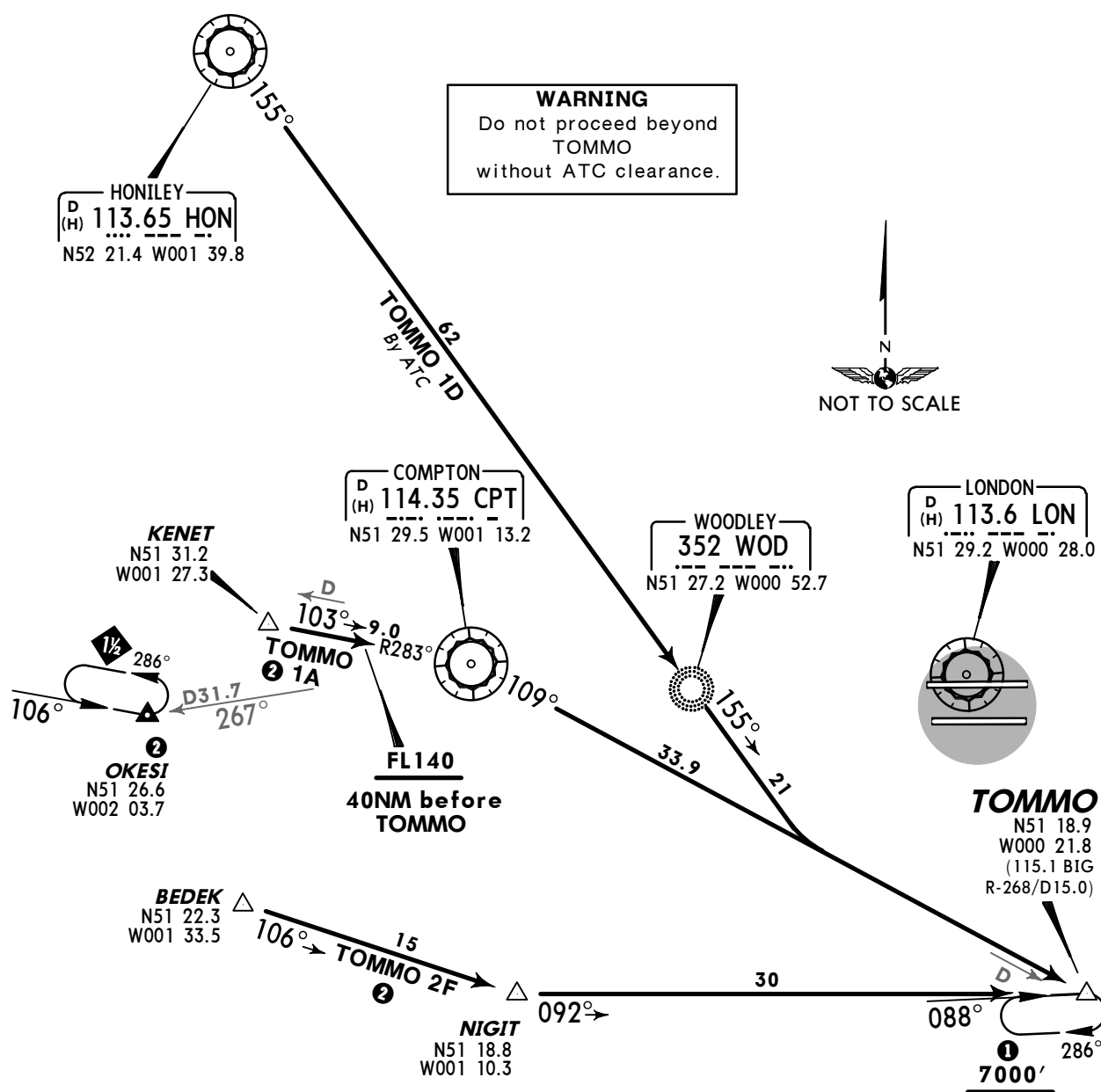
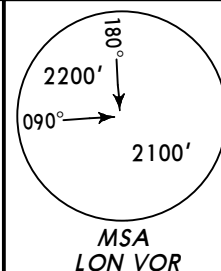
FROM WEST & NORTHWEST

TO BE USED WHEN OCK VOR UNSERVICEABLE

SPEED: CROSS 3 MIN BEFORE HOLDING FACILITY

AT 250 KT OR LESS

DURING PERIODS OF CONGESTION TRAFFIC MAY
BE ROUTED VIA BIG 1G AS DIRECTED BY ATC
NOT TO BE USED FOR FLIGHT PLANNING PURPOSES



DESCENT PLANNING

Pilots should plan for possible descent clearance as follows:

TOMMO 1A: FL140 by 40 NM before TOMMO.

TOMMO 1D: As directed by ATC.

TOMMO 2F: FL140 by BEDEK.

ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.

① Aircraft will be instructed by ATC to fly the appropriate FL.

② During periods of congestion in the London TMA, traffic may be required to hold at OKESI.

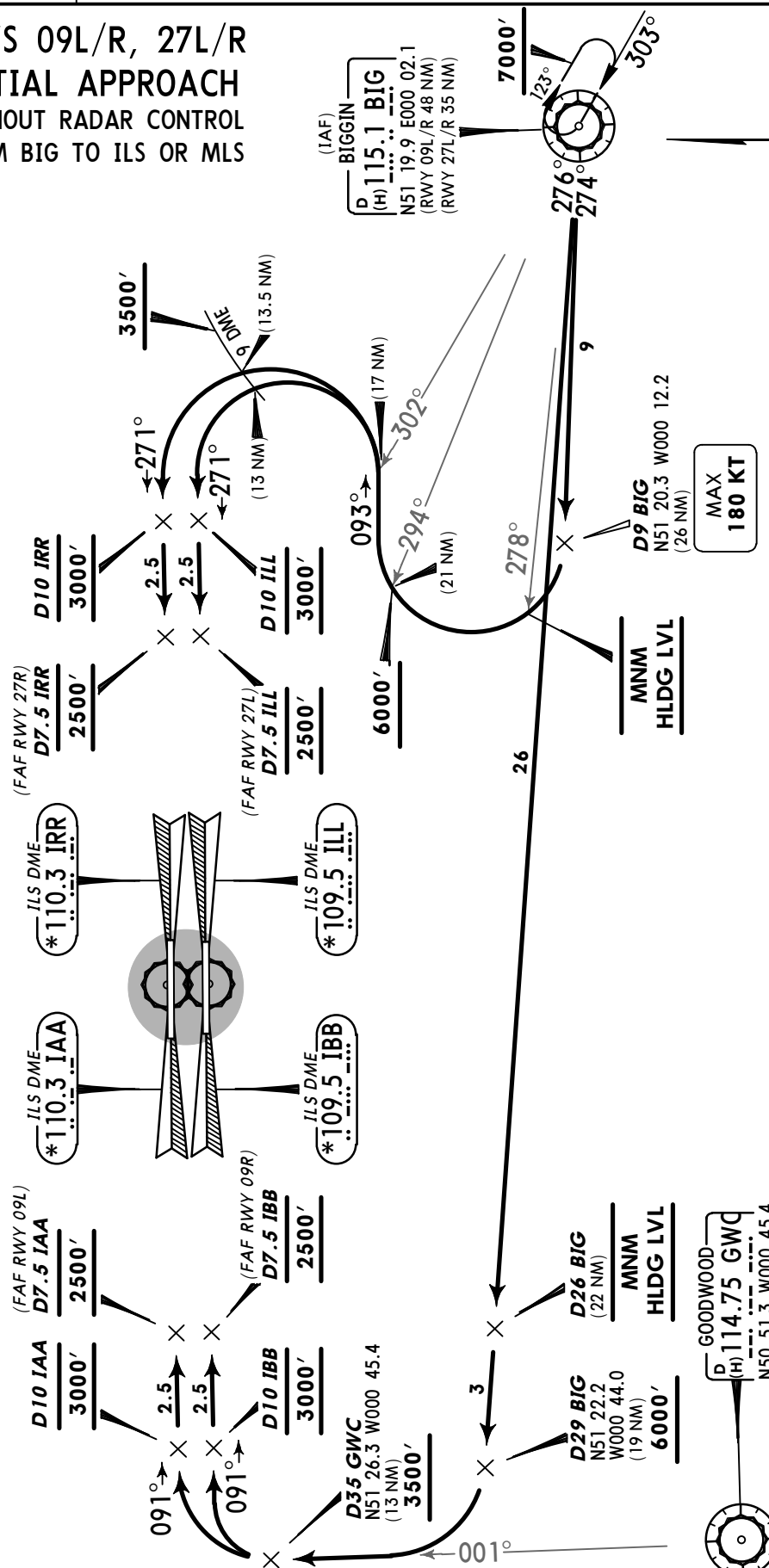
*D-ATIS
113.75
115.1
128.07

Apt Elev
83'

- Alt Set: hPa Trans level: By ATC Trans alt: 6000'
1. Minimum holding level (Flight Level equivalent of 7000') is above TA and will be allocated by ATC.
 2. Initial approach procedures are designed for manoeuvring speeds up to 220 KT and assume acft can maintain a descent gradient of approximately 320' per NM.
 3. Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000'.
 4. Approximate distances to touchdown are indicated in brackets.

RWYS 09L/R, 27L/R INITIAL APPROACH WITHOUT RADAR CONTROL FROM BIG TO ILS OR MLS

FOR FINAL APPROACH
SEE APPROACH CHARTS

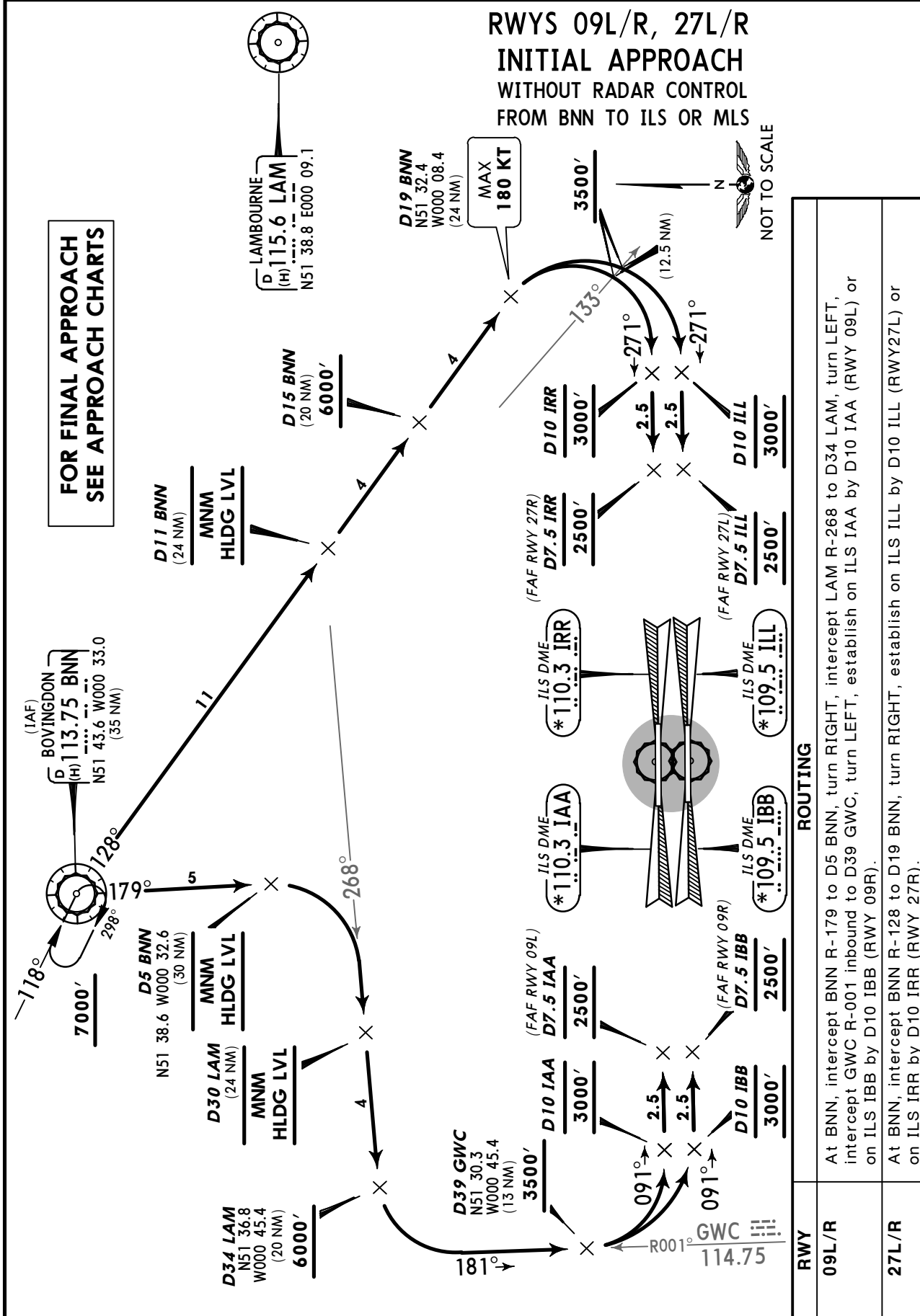


ROUTING

- | RWY | ROUTING |
|-------|---|
| 09L/R | At BIG, intercept BIG R-276 to D29 BIG, turn RIGHT, intercept GWC R-001 to D35 GWC, turn RIGHT, establish on ILS IAA by D10 IAA (RWY 09L) or on ILS IBB by D10 IBB (RWY 09R). |
| 27L/R | At BIG, intercept BIG R-274 to D9 BIG, turn RIGHT, 093° track, when crossing BIG R-302 turn LEFT, establish on ILS ILL by D10 ILL (RWY 27L) or on ILS IRR by D10 IRR (RWY 27R). |

Alt Set: hPa Trans level: By ATC Trans alt: 6000'

1. Minimum holding level (Flight Level equivalent of 7000') is above TA and will be allocated by ATC.
2. Initial approach procedures are designed for manoeuvring speeds up to 220 KT and assume acft can maintain a descent gradient of approximately 320' per NM.
3. Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000'.
4. Approximate distances to touchdown are indicated in brackets.

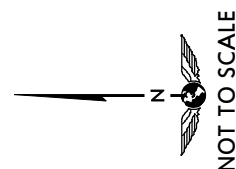


*D-ATIS
113.75
115.1
128.07

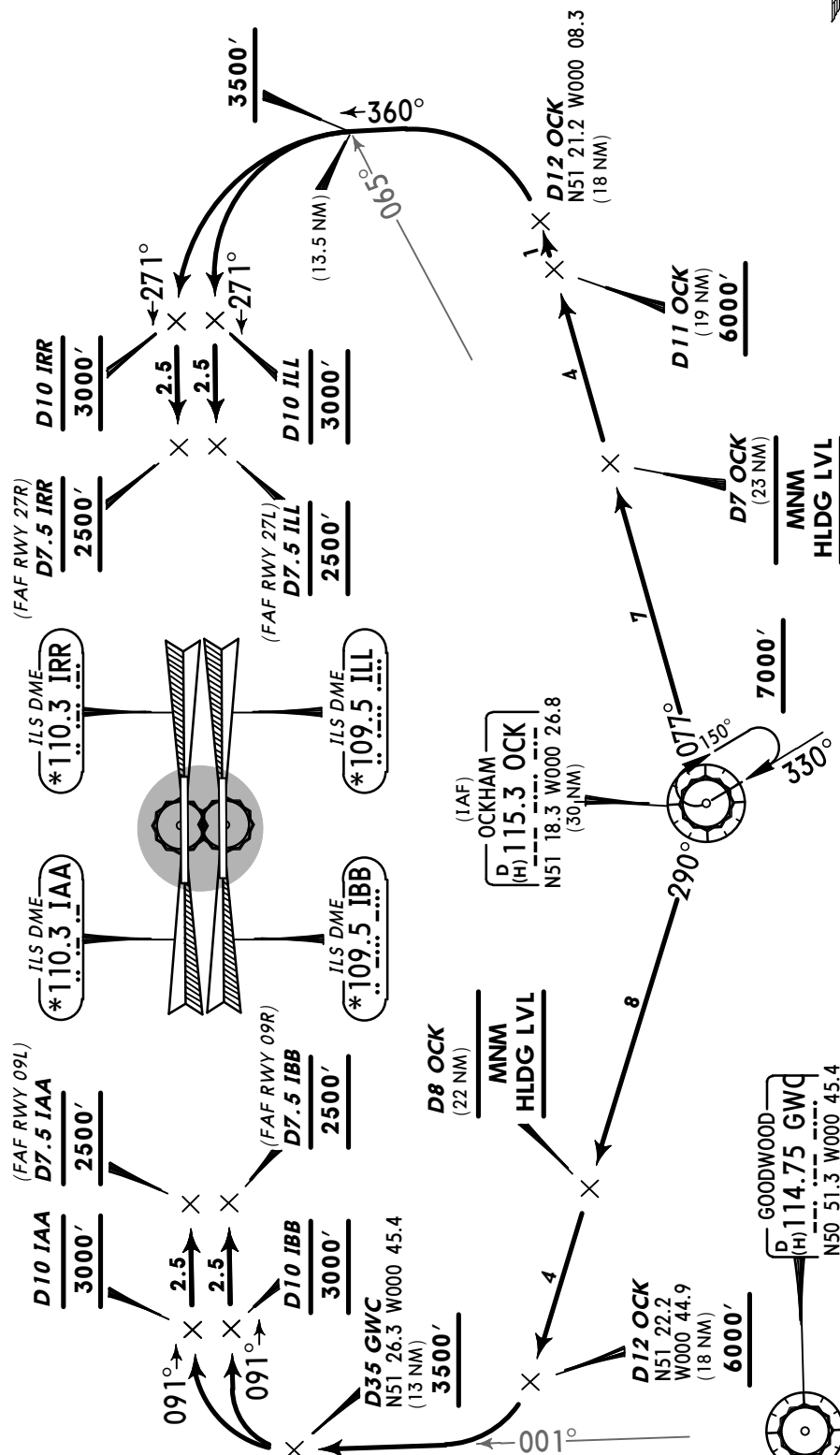
Apt Elev
83'

- Alt Set: hPa Trans level: By ATC Trans alt: 6000'
1. Minimum holding level (Flight Level equivalent of 7000') is above TA and will be allocated by ATC.
 2. Initial approach procedures are designed for manoeuvring speeds up to 220 KT and assume acft can maintain a descent gradient of approximately 320' per NM.
 3. Continuous descent approach should be used whenever practicable unless otherwise instructed by ATC. Procedure design is compatible with 3° descent path from 6000'.
 4. Approximate distances to touchdown are indicated in brackets.

RWYS 09L/R, 27L/R INITIAL APPROACH WITHOUT RADAR CONTROL FROM OCK TO ILS OR MLS



FOR FINAL APPROACH
SEE APPROACH CHARTS



LONDON Control
118.82Apt Elev
83'

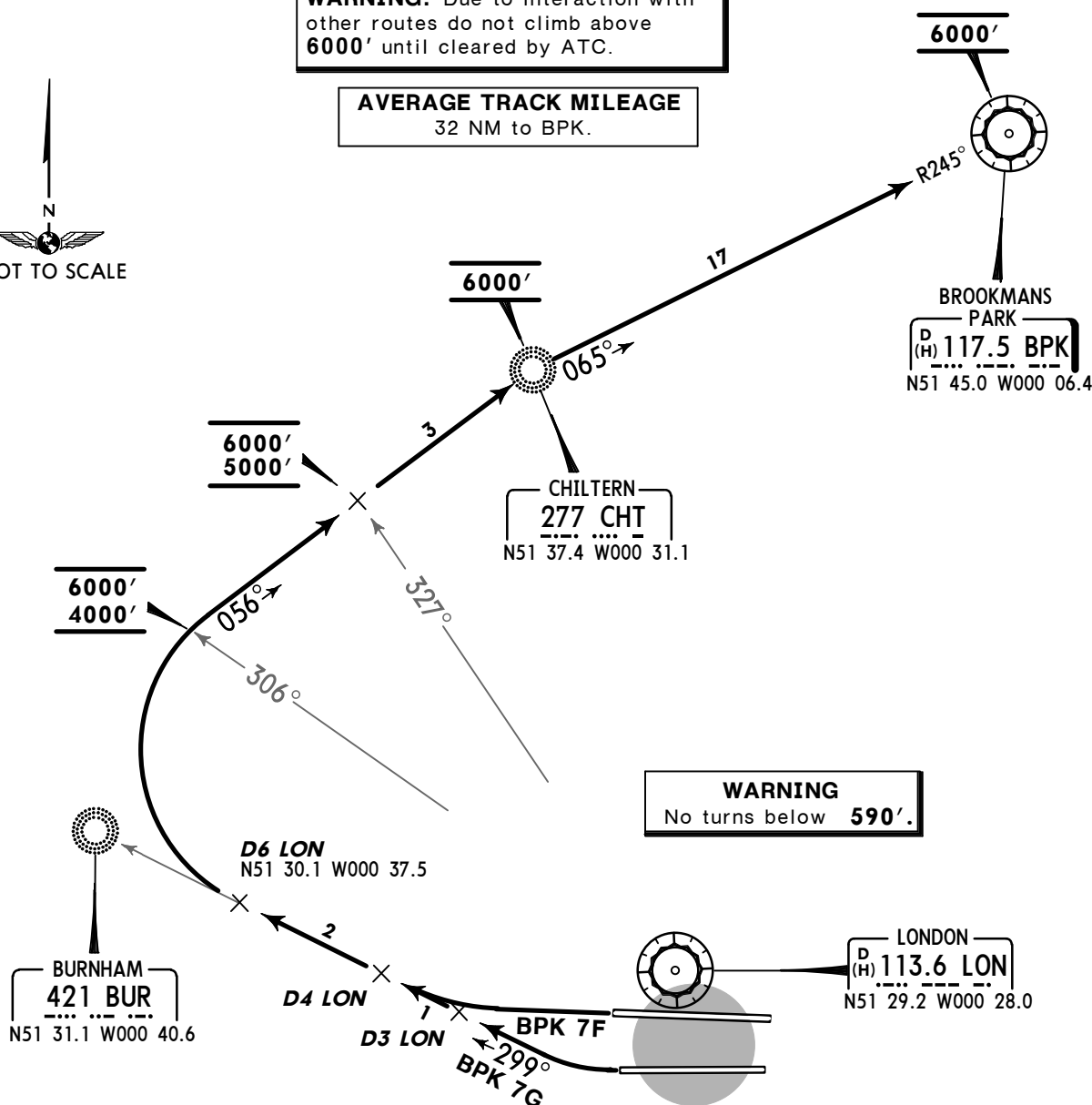
Trans level: By ATC Trans alt: 6000'

1. When instructed contact LONDON Control.
2. SIDs include noise preferential routes (refer to 10-4).
3. Cruising levels will be issued after take-off by LONDON Control.
4. Do not climb above SID levels until instructed by ATC.

BROOKMANS PARK SEVEN FOXTROT (BPK 7F)

BROOKMANS PARK SEVEN GOLF (BPK 7G)

RWYS 27R/L DEPARTURES

~~SPEED~~ MAX 250 KT BELOW FL100**UNLESS OTHERWISE AUTHORISED****WARNING:** Due to interaction with other routes do not climb above 6000' until cleared by ATC.AVERAGE TRACK MILEAGE
32 NM to BPK.

Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000' for ATM purposes.

Gnd speed-KT	75	100	150	200	250	300
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

SID	RWY	ROUTING / ALTITUDE
BPK 7F	27R	Climb straight ahead, intercept 299° bearing towards BUR by D4 LON, at D6 LON turn RIGHT, intercept 056° bearing towards CHT, cross LON R-306 at or above 4000' (MAX 6000'), LON R-327 at or above 5000' (MAX 6000'), to CHT at 6000', turn RIGHT, intercept BPK R-245 inbound to BPK.
BPK 7G	27L	Climb straight ahead, intercept 299° bearing towards BUR by D3 LON, at D6 LON turn RIGHT, intercept 056° bearing towards CHT, cross LON R-306 at or above 4000' (MAX 6000'), LON R-327 at or above 5000' (MAX 6000'), to CHT at 6000' turn RIGHT, intercept BPK R-245 inbound to BPK.

LONDON Control
118.82

Apt Elev
83'

- Trans level: By ATC Trans alt: 6000'
1. When instructed contact LONDON Control.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. Cruising levels will be issued after take-off by LONDON Control.
 4. Do not climb above SID levels until instructed by ATC.

BROOKMANS PARK SIX JULIETT (BPK 6J)

BROOKMANS PARK FIVE KILO (BPK 5K)

RWYS 09R/L DEPARTURES

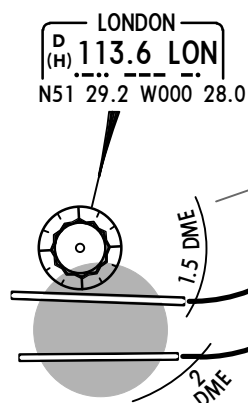
~~SPEED~~ MAX 250 KT BELOW FL100

UNLESS OTHERWISE AUTHORISED

WARNING: Due to interaction with other routes do not climb above 6000' until cleared by ATC.



WARNING
No turns below 590'.



D10 LON
N51 32.5 W000 12.8
6000'
3000'

AVERAGE TRACK MILEAGE
23 NM to BPK.

Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000' for ATM purposes.

Gnd speed-KT	75	100	150	200	250	300
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

SID	RWY	ROUTING / ALTITUDE
BPK 6J	09R	Climb straight ahead, at LON 2 DME turn LEFT, 052° track, intercept LON R-072, cross D10 LON at or above 3000' (MAX 6000'), turn LEFT, intercept BPK R-197 inbound, cross D10 BPK at or above 4000' (MAX 6000'), D6 BPK at 6000', via BAPAG to BPK.
BPK 5K	09L	Climb straight ahead, at LON 1.5 DME turn LEFT, 052° track, intercept LON R-072, cross D10 LON at or above 3000' (MAX 6000'), turn LEFT, intercept BPK R-197 inbound, cross D10 BPK at or above 4000' (MAX 6000'), D6 BPK at 6000', via BAPAG to BPK.

LONDON Control
119.77

Apt Elev
83'

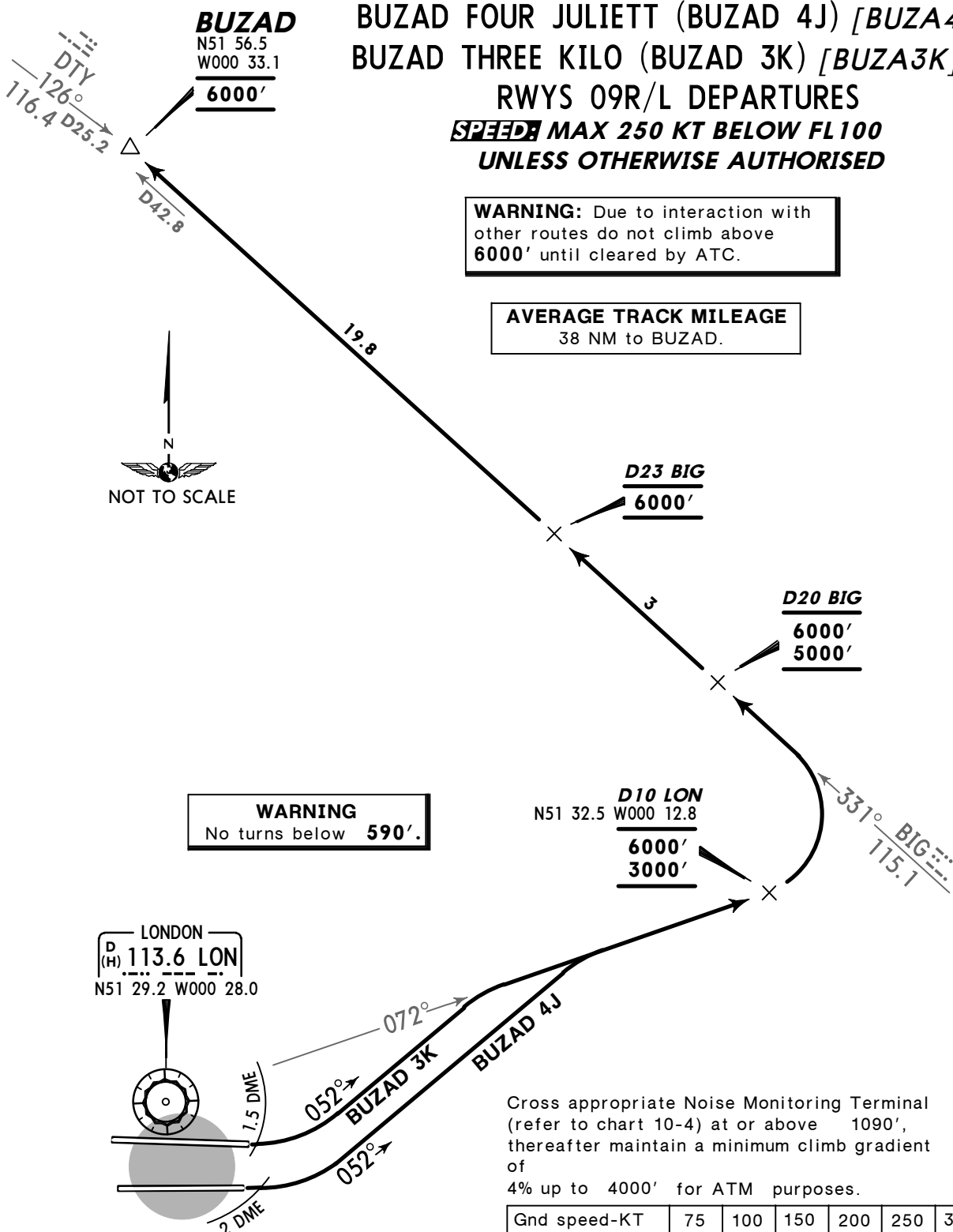
- Trans level: By ATC Trans alt: 6000'
1. When instructed contact LONDON Control.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. Cruising levels will be issued after take-off by LONDON Control.
 4. Do not climb above SID levels until instructed by ATC.

BUZAD FOUR JULIETT (BUZAD 4J) [BUZA4J]
BUZAD THREE KILO (BUZAD 3K) [BUZA3K]
RWYS 09R/L DEPARTURES

~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED

WARNING: Due to interaction with other routes do not climb above 6000' until cleared by ATC.

AVERAGE TRACK MILEAGE
38 NM to BUZAD.



SID	RWY	ROUTING / ALTITUDE
BUZAD 4J	09R	Climb straight ahead, at LON 2 DME turn LEFT, 052° track, intercept LON R-072, cross D10 LON at or above 3000' (MAX 6000'), turn LEFT, intercept BIG R-331, cross D20 BIG at or above 5000' (MAX 6000'), D23 BIG at 6000', to BUZAD.
BUZAD 3K	09L	Climb straight ahead, at LON 1.5 DME turn LEFT, 052° track, intercept LON R-072, cross D10 LON at or above 3000' (MAX 6000'), turn LEFT, intercept BIG R-331, cross D20 BIG at or above 5000' (MAX 6000'), D23 BIG at 6000', to BUZAD.

LONDON Control 134.12	<i>Apt Elev</i> 83'	Trans level: By ATC Trans alt: 6000' 1. When instructed contact LONDON Control. 2. SIDs include noise preferential routes (refer to 10-4). 3. Cruising levels will be issued after take-off by LONDON Control. 4. Do not climb above SID levels until instructed by ATC.
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COMPTON THREE FOXTROT (CPT 3F)

COMPTON THREE GOLF (CPT 3G)

RWYS 27R/L DEPARTURES

~~SPEED~~ MAX 250 KT BELOW FL100

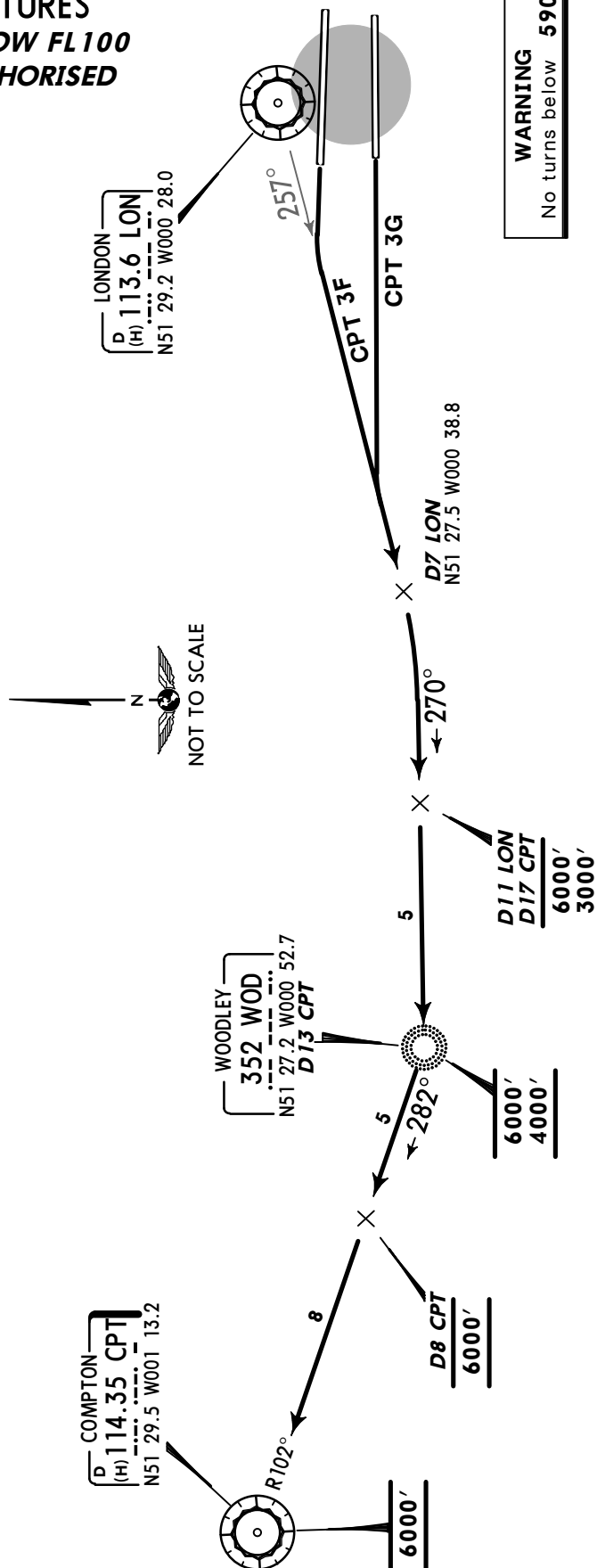
UNLESS OTHERWISE AUTHORISED

WARNING: Due to interaction with other routes do not climb above **6000'** until cleared by ATC.

Gnd speed-KT	75	100	150	200	250	300
5% V/V (fpm)	380	506	760	1013	1266	1519
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

AVERAGE TRACK MILEAGE
15 NM to WOD.



WARNING
No turns below **590'**.

SID	RWY	ROUTING / ALTITUDE
CPT 3F	27R	Straight ahead, intercept LON R-257 to D7 LON, turn RIGHT, intercept 270° bearing towards WOD (D13 CPT), cross D11 LON (D17 CPT) above 3000' (MAX 6000'), cross WOD (D13 CPT) above 4000' (MAX 6000'), then to CPT, cross D8 CPT at 6000'.
CPT 3G	27L	

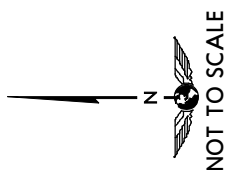
Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000'.
These SIDs require a minimum climb gradient of 5% until D8 CPT due to ATC and airspace purposes.

CHANGES: None. © JEPPESEN, 2010, 2013. ALL RIGHTS RESERVED.

LONDON Control
120.525

Apt Elev
83'

- Trans level: By ATC Trans alt: 6000'
- When instructed contact LONDON Control after take-off, report C/S, SID designator, current altitude and initial cleared altitude.
 - SIDs include noise preferential routes (refer to 10-4).
 - Cruising levels will be issued after take-off by LONDON Control.
 - Do not climb above SID levels until instructed by ATC.



DETLING TWO FOXTROT (DET 2F)
DETLING TWO GOLF (DET 2G)
RWYS 27R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED

ROUTING / ALTITUDE

DET 2F Straight ahead, at LON 2 DME turn LEFT, intercept 138° bearing to EPM, cross at or above 4000' (MAX 6000') at EPM but not before D10 LON intercept DET R-272 inbound, cross D32 DET at or above 5000' (MAX 6000') D29 DET at 6000', D5 DET at 6000', then to DET.

DET 2G Straight ahead, at ILL 1 DME (LON 2 DME if ILL u/s) turn LEFT, intercept 138° bearing to EPM, cross at or above 4000' (MAX 6000'), at EPM but not before D10 LON intercept DET R-272 inbound, cross D32 DET at or above 5000' (MAX 6000'), D29 DET at 6000', D5 DET at 6000', then to DET.

AVERAGE TRACK MILEAGE
DET 2F: 50 NM to DET.
DET 2G: 49 NM to DET.

WARNING
No turns below 590'.

Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000'.
These SIDs require minimum climb gradients of 4.6% until EPM.
5% until EPM due to ATC and airspace purposes.

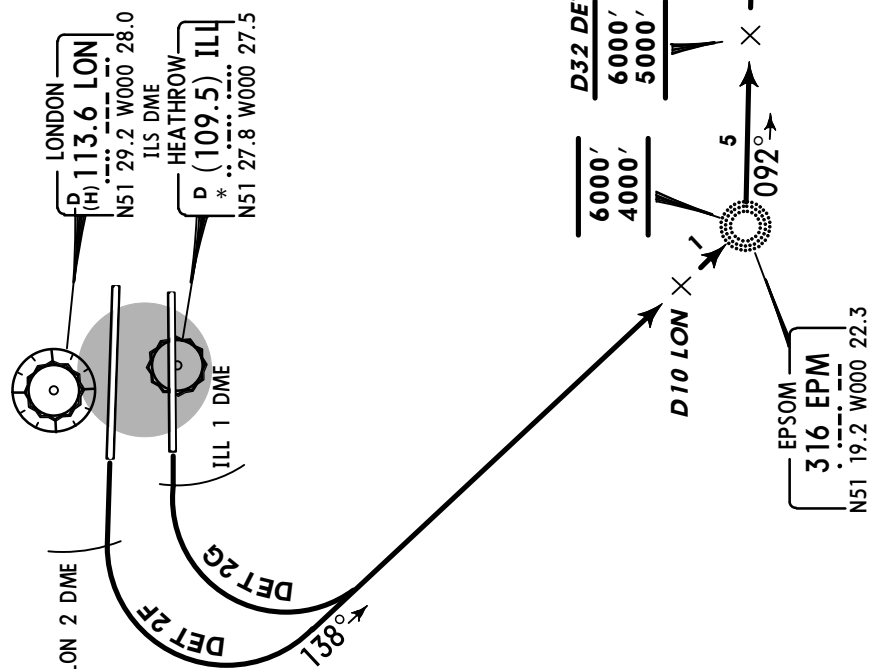
DET 2F

DET 2G

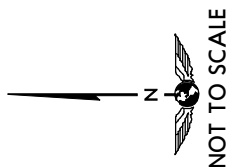
Gnd speed-KT	75	100	150	200	250	300
5% V/V (fpm)	380	506	760	1013	1266	1519
4.6% V/V (fpm)	349	466	699	932	1165	1398
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

WARNING: Due to interaction with other routes do not climb above 6000' until cleared by ATC.



LONDON Control 120.525	Apt Elev 83'	Trans level: By ATC Trans alt: 6000' 1. When instructed contact LONDON 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. Cruising levels will be issued after take-off by LONDON Control. 4. Do not climb above SID levels until instructed by ATC.
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DETLING ONE JULIETT (DET 1J)
DETLING ONE KILO (DET 1K)
RWYS 09R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED

SID	RWY	ROUTING / ALTITUDE
DET 1J	09R	Straight ahead, at LON 2 DME turn RIGHT, 122° track, at LON 4 DME turn LEFT, intercept DET R-284 inbound by D34 DET, cross D29 DET at or above 3000' (MAX 6000'), D20 DET at or above 5000' (MAX 6000'), D16 DET at 6000', D5 DET at 6000', then to DET.
DET 1K	09L	Straight ahead, at LON 1.5 DME turn RIGHT, 122° track, at LON 4 DME turn LEFT, intercept DET R-284 inbound by D34 DET, cross D29 DET at or above 3000' (MAX 6000'), D20 DET at or above 5000' (MAX 6000'), D16 DET at 6000', D5 DET at 6000', then to DET.

Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000'.

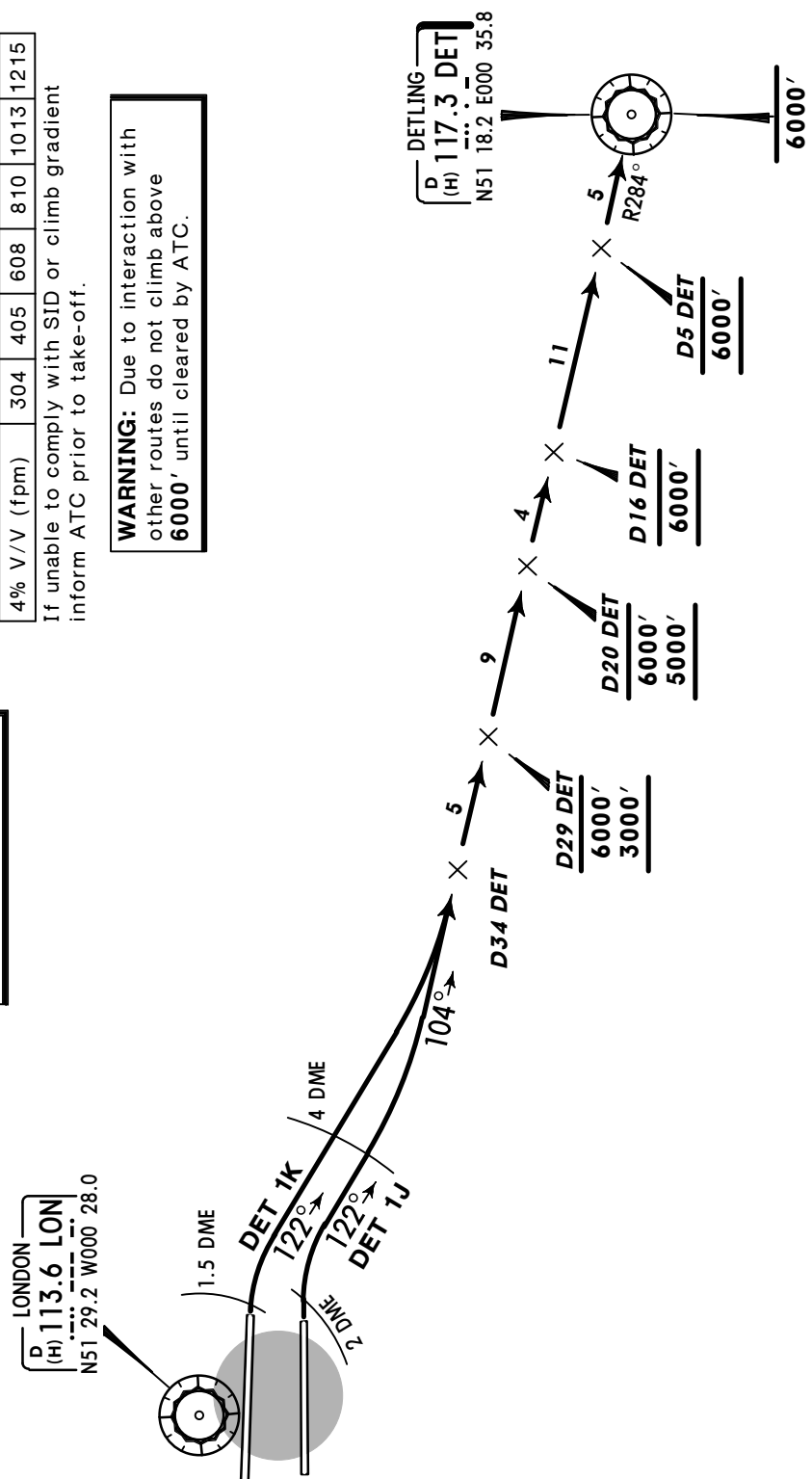
AVERAGE TRACK MILEAGE
41 NM to DET.

WARNING
No turns below **590'**.

Gnd speed-KT	75	100	150	200	250	300
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

WARNING: Due to interaction with other routes do not climb above 6000' until cleared by ATC.

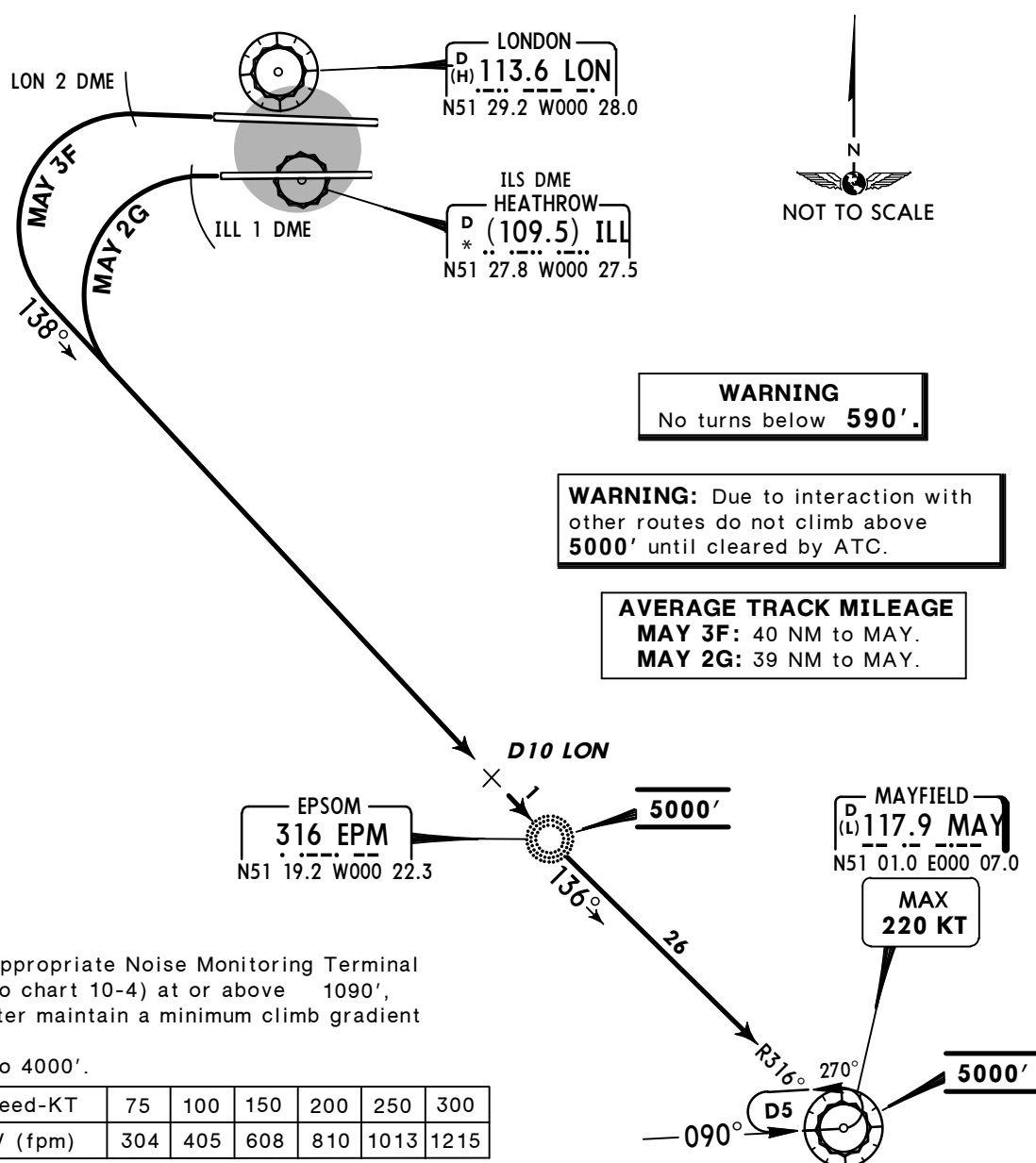


LONDON Control
126.825Apt Elev
83'

Trans level: By ATC Trans alt: 6000'

1. When instructed contact LONDON 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. Cruising levels will be issued after take-off by LONDON Control.
4. Do not climb above SID levels until instructed by ATC.
5. Aircraft VOR or DME failure advise ATC and comply with ATC instructions.

MAYFIELD THREE FOXTROT (MAY 3F)
MAYFIELD TWO GOLF (MAY 2G)
RWYS 27R/L DEPARTURES
TO EGKK ONLY
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED



SID	RWY	ROUTING / ALTITUDE
MAY 3F	27R	Straight ahead, at LON 2 DME turn LEFT, intercept 138° bearing to EPM, cross at 5000', at EPM but not before D10 LON intercept MAY R-316 inbound to MAY at 5000'.
MAY 2G	27L	Straight ahead, at ILL 1 DME (LON 2 DME if ILL u/s) turn LEFT, intercept 138° bearing to EPM, cross at 5000', at EPM but not before D10 LON intercept MAY R-316 inbound to MAY at 5000'.

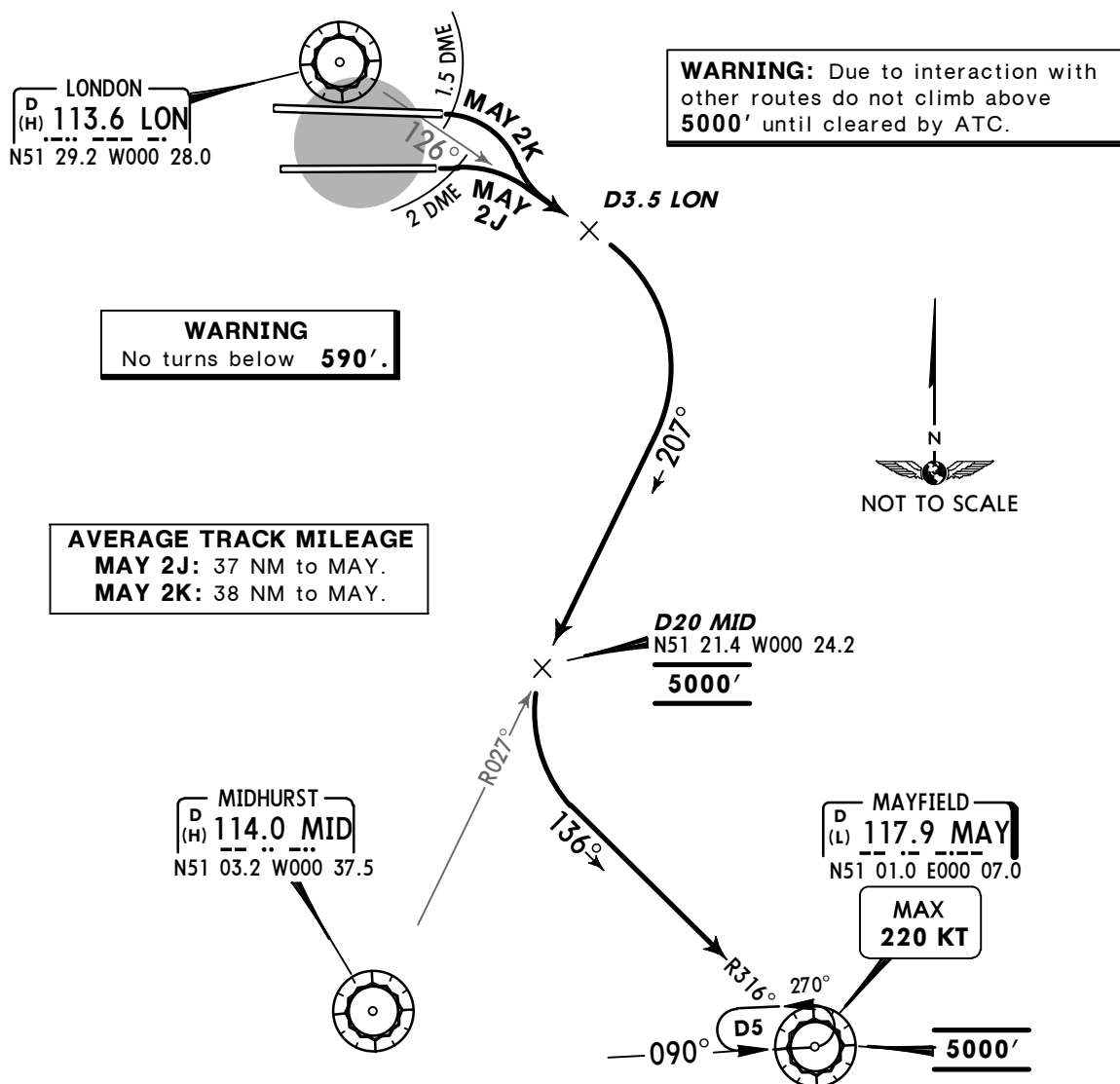
LONDON Control
126.82Apt Elev
83'

Trans level: By ATC Trans alt: 6000'

1. When instructed contact LONDON Control.
2. SIDs include noise preferential routes (refer to 10-4).
3. Cruising levels will be issued after take-off by LONDON Control.
4. Do not climb above SID levels until instructed by ATC.
5. Aircraft VOR or DME failure advise ATC and comply with ATC instructions.

MAYFIELD TWO JULIETT (MAY 2J)
MAYFIELD TWO KILO (MAY 2K)
RWYS 09R/L DEPARTURES
TO EGKK ONLY

~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED



Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000'.

Gnd speed-KT	75	100	150	200	250	300
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

SID	RWY	ROUTING / ALTITUDE
MAY 2J	09R	Straight ahead, at LON 2 DME turn RIGHT, intercept LON R-126 to D3.5 LON, turn RIGHT, intercept MID R-027 inbound to D20 MID, cross at 5000', turn LEFT, intercept MAY R-316 inbound to MAY at 5000'.
MAY 2K	09L	Straight ahead, at LON 1.5 DME turn RIGHT, intercept LON R-126 to D3.5 LON, turn RIGHT, intercept MID R-027 inbound to D20 MID, cross at 5000', turn LEFT, intercept MAY R-316 inbound to MAY at 5000'.

LONDON Control
133.17Apt Elev
83'

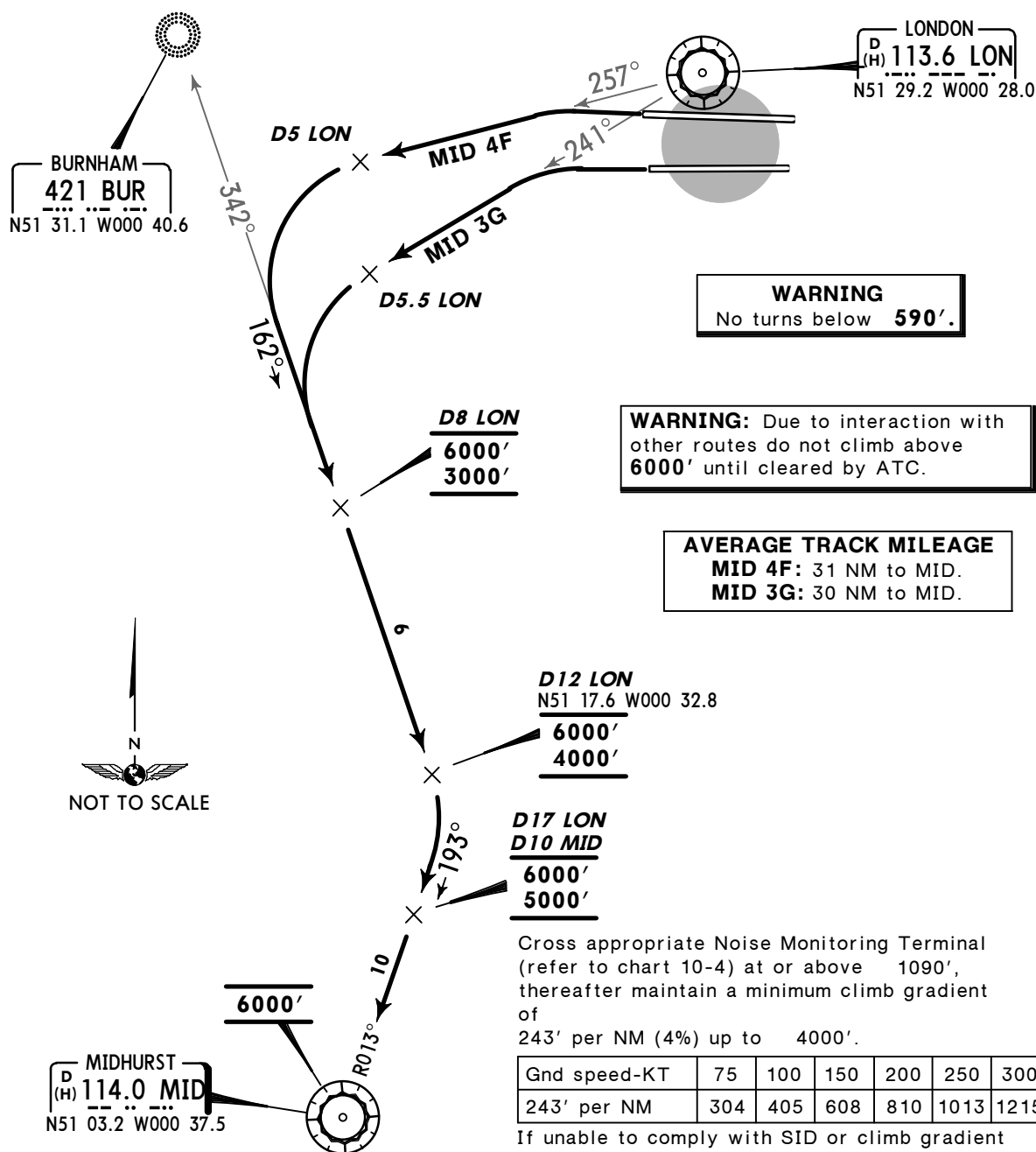
Trans level: By ATC Trans alt: 6000'

1. When instructed contact LONDON Control.
2. SIDs include noise preferential routes (refer to 10-4).
3. Cruising levels will be issued after take-off by LONDON Control.
4. Do not climb above SID levels until instructed by ATC.

MIDHURST FOUR FOXTROT (MID 4F)

MIDHURST THREE GOLF (MID 3G)

RWYS 27R/L DEPARTURES

**~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED**

SID	RWY	ROUTING / ALTITUDE
MID 4F	27R	Straight ahead, intercept LON R-257 to D5 LON, turn LEFT, intercept 162° bearing from BUR, cross D8 LON above 3000' (MAX 6000'), D12 LON above 4000' (MAX 6000'), turn RIGHT, intercept MID R-013 inbound, cross D17 LON (D10 MID) above 5000' (MAX 6000'), then cross MID at 6000'.
MID 3G	27L	Straight ahead, intercept LON R-241 to D5.5 LON, turn LEFT, intercept 162° bearing from BUR, cross D8 LON above 3000' (MAX 6000'), D12 LON above 4000' (MAX 6000'), turn RIGHT, intercept MID R-013 inbound, cross D17 LON (D10 MID) above 5000' (MAX 6000'), then cross MID at 6000'.

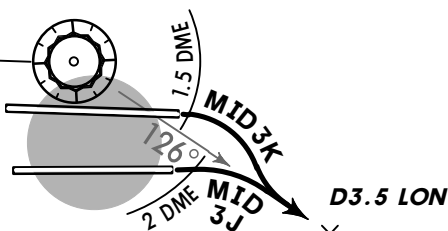
LONDON Control
133.17

Apt Elev
83'

- Trans level: By ATC Trans alt: 6000'
1. When instructed contact LONDON Control.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. Cruising levels will be issued after take-off by LONDON Control.
 4. Do not climb above SID levels until instructed by ATC.

MIDHURST THREE JULIETT (MID 3J)
MIDHURST THREE KILO (MID 3K)
RWYS 09R/L DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED

LONDON
D (H) 113.6 LON
N51 29.2 W000 28.0



WARNING
No turns below 590'.

WARNING: Due to interaction with other routes do not climb above 6000' until cleared by ATC.

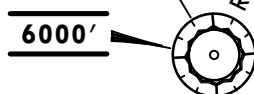
D19 MID
6000'
3000'

D15 MID
6000'
4000'

D12 MID
6000'
5000'

D8 MID
6000'

MIDHURST
D (H) 114.0 MID
N51 03.2 W000 37.5



AVERAGE TRACK MILEAGE
29 NM to MID.

Cross appropriate Noise Monitoring Terminal (refer to chart 10-4) at or above 1090', thereafter maintain a minimum climb gradient of 4% up to 4000'.

MID 3J

5% until D19 MID due to ATC and airspace purposes.

MID 3K

4.8% until D19 MID due to ATC and airspace purposes.

Gnd speed-KT	75	100	150	200	250	300
5% V/V (fpm)	380	506	760	1013	1266	1519
4.8% V/V (fpm)	365	486	729	972	1215	1458
4% V/V (fpm)	304	405	608	810	1013	1215

If unable to comply with SID or climb gradient inform ATC prior to take-off.

SID	RWY	ROUTING / ALTITUDE
MID 3J	09R	Straight ahead, at LON 2 DME turn RIGHT, intercept LON R-126 to D3.5 LON, turn RIGHT, intercept MID R-027 inbound, cross D19 MID at or above 3000' (MAX 6000'), D15 MID at or above 4000' (MAX 6000'), D12 MID at or above 5000' (MAX 6000'), D8 MID at 6000', then to MID at 6000'.
MID 3K	09L	Straight ahead, at LON 1.5 DME turn RIGHT, intercept LON R-126 to D3.5 LON, turn RIGHT, intercept MID R-027 inbound, cross D19 MID at or above 3000' (MAX 6000'), D15 MID at or above 4000' (MAX 6000'), D12 MID at or above 5000' (MAX 6000'), D8 MID at 6000', then to MID at 6000'.

LONDON Control
134.12

Apt Elev
83'

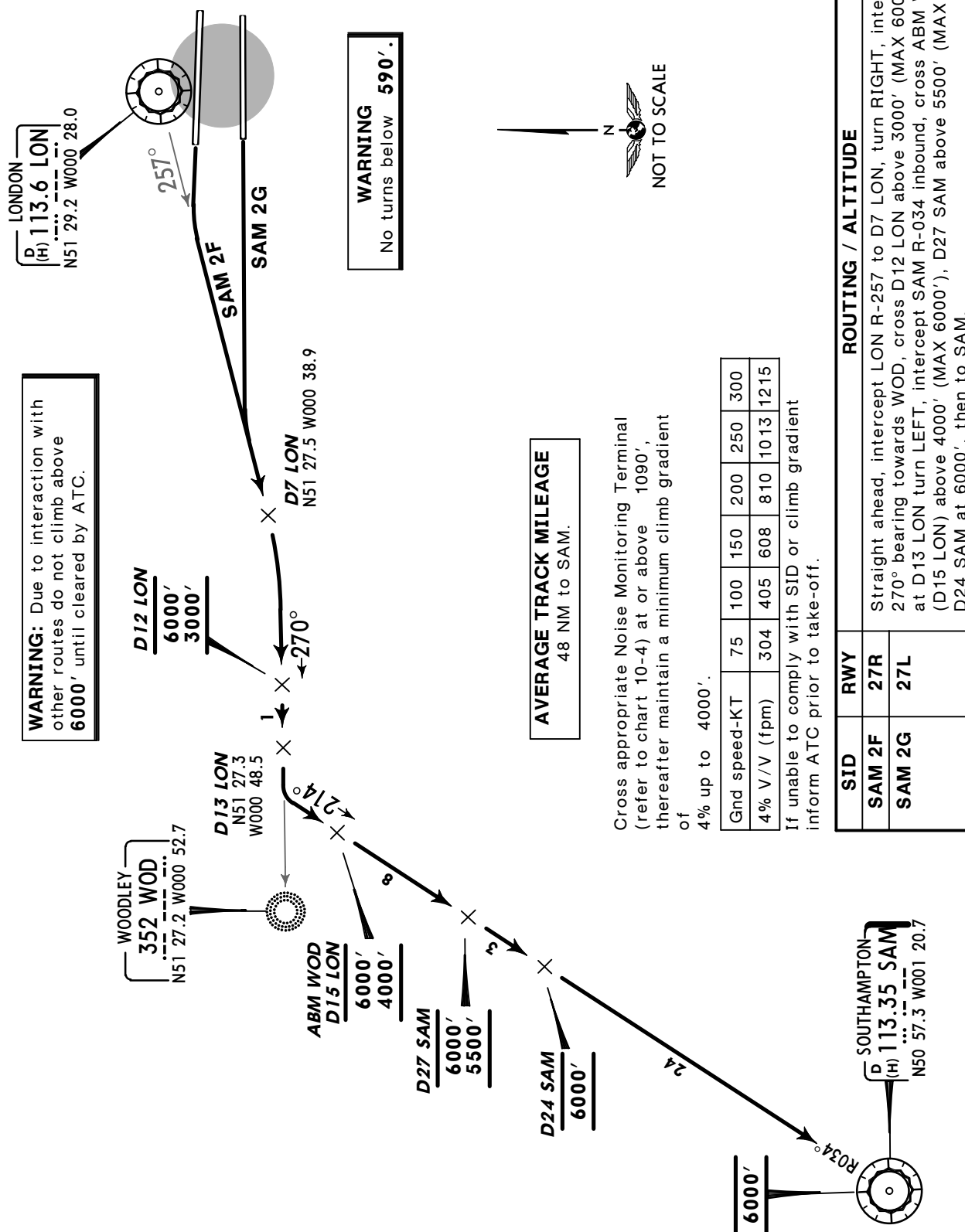
- Trans level: By ATC Trans alt: 6000'
1. When instructed contact LONDON Control.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. Cruising levels will be issued after take-off by LONDON Control.
 4. Do not climb above SID levels until instructed by ATC.

SOUTHAMPTON TWO FOXTROT (SAM 2F)

SOUTHAMPTON TWO GOLF (SAM 2G)

RWYS 27R/L DEPARTURES

~~REEDS~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED



LONDON Control
134.12

Apt Elev
83'

- Trans level: By ATC Trans alt: 6000'
1. When instructed contact LONDON Control.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. Cruising levels will be issued after take-off by LONDON Control.
 4. Do not climb above SID levels until instructed by ATC.

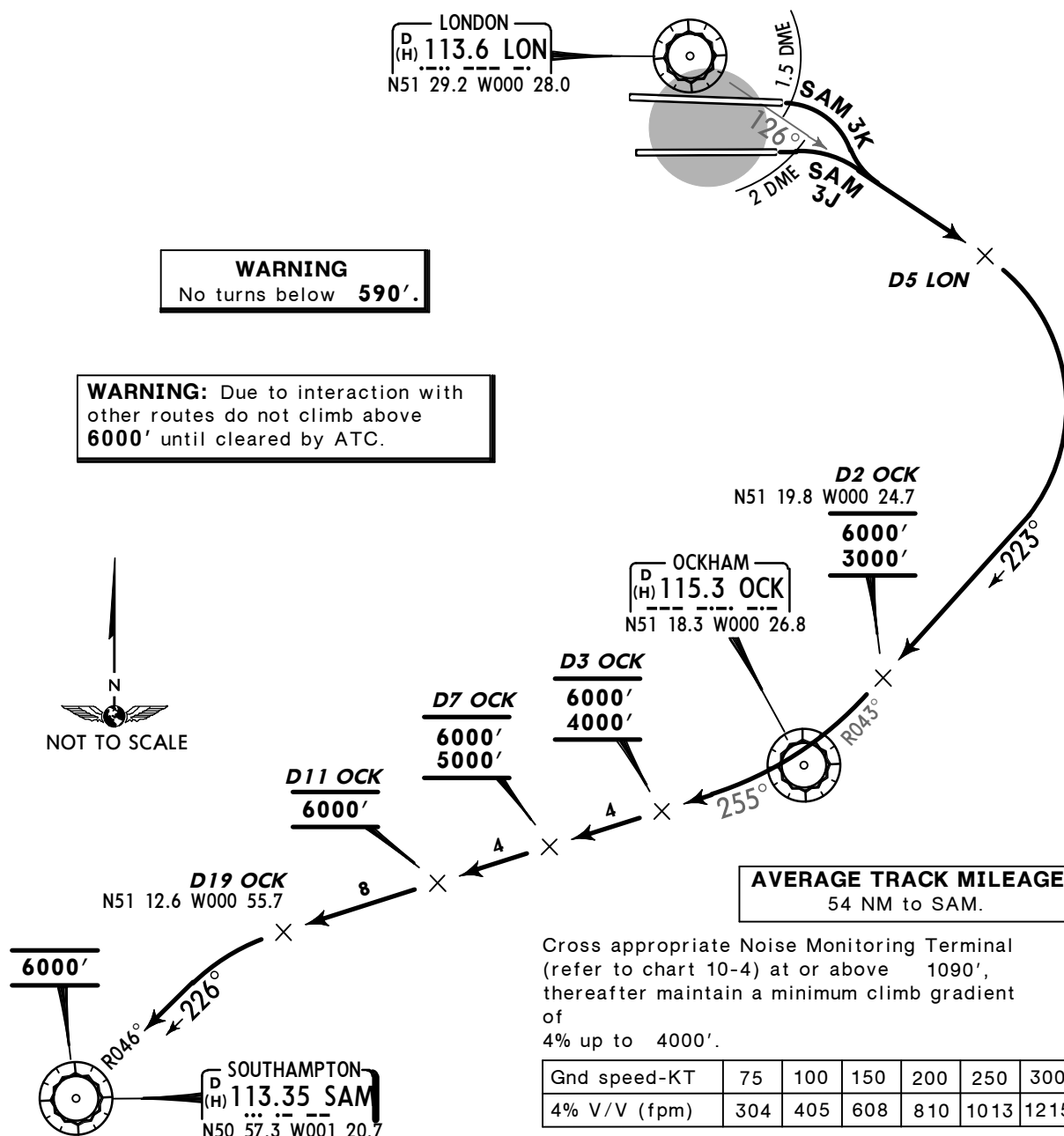
SOUTHAMPTON THREE JULIETT (SAM 3J)

SOUTHAMPTON THREE KILO (SAM 3K)

RWYS 09R/L DEPARTURES

SPEED MAX 250 KT BELOW FL100

UNLESS OTHERWISE AUTHORISED



SID	RWY	ROUTING / ALTITUDE
SAM 3J	09R	Straight ahead, at LON 2 DME turn RIGHT, intercept LON R-126 to D5 LON, turn RIGHT, intercept OCK R-043 inbound, cross D2 OCK above 3000' (MAX 6000'), turn RIGHT, intercept OCK R-255, cross D3 OCK above 4000' (MAX 6000'), D7 OCK above 5000' (MAX 6000'), D11 OCK at 6000', at D19 OCK turn LEFT, intercept SAM R-046 inbound to SAM.
SAM 3K	09L	Straight ahead, at LON 1.5 DME turn RIGHT, intercept LON R-126 to D5 LON, turn RIGHT, intercept OCK R-043 inbound, cross D2 OCK above 3000' (MAX 6000'), turn RIGHT, intercept OCK R-255, cross D3 OCK above 4000' (MAX 6000'), D7 OCK above 5000' (MAX 6000'), D11 OCK at 6000', at D19 OCK turn LEFT, intercept SAM R-046 inbound to SAM.

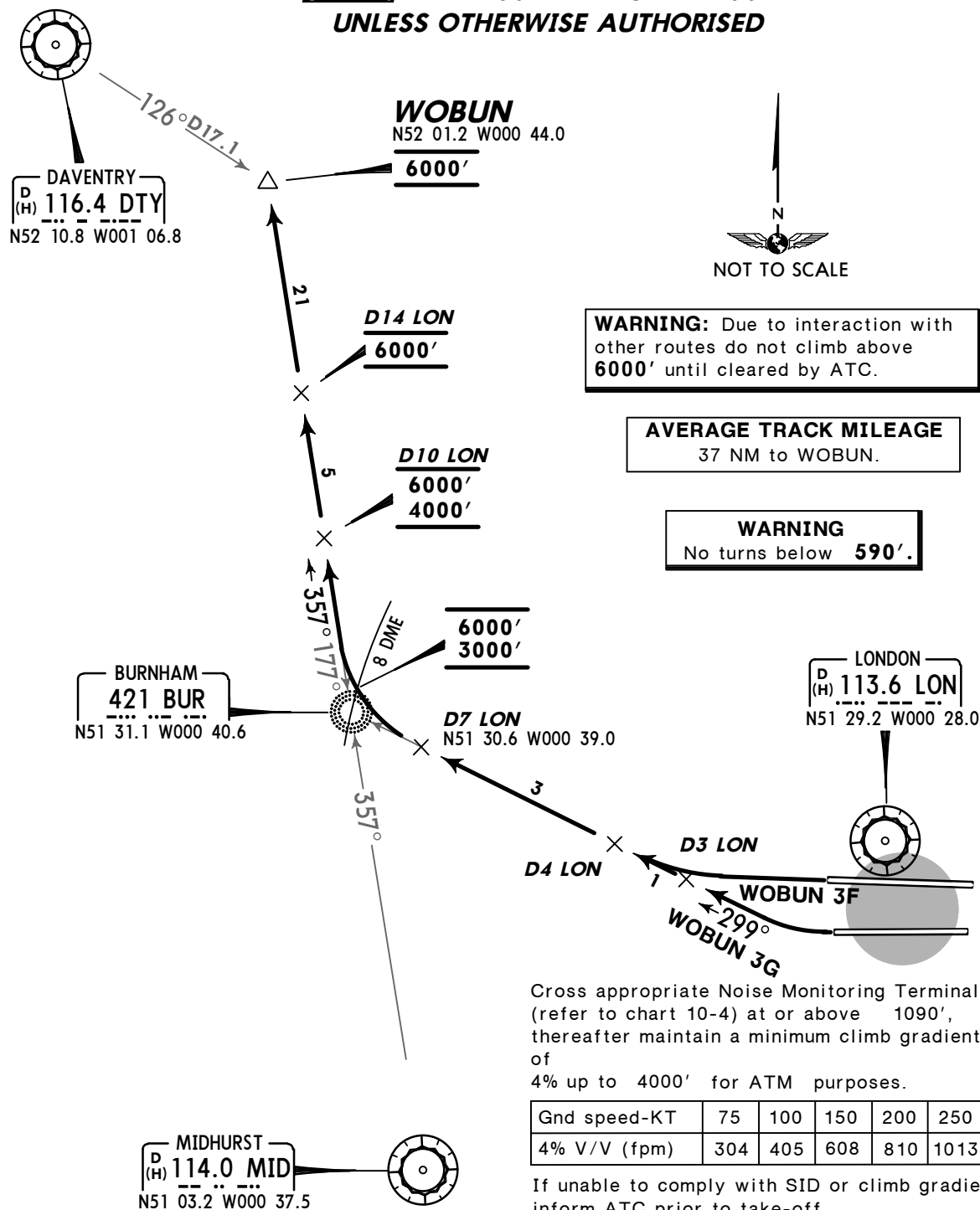
LONDON Control
119.77Apt Elev
83'

- Trans level: By ATC Trans alt: 6000'
1. When instructed contact LONDON Control.
 2. SIDs include noise preferential routes (refer to 10-4).
 3. Cruising levels will be issued after take-off by LONDON Control.
 4. Do not climb above SID levels until instructed by ATC.

WOBUN THREE FOXTROT (WOBUN 3F) [WOBU3F]

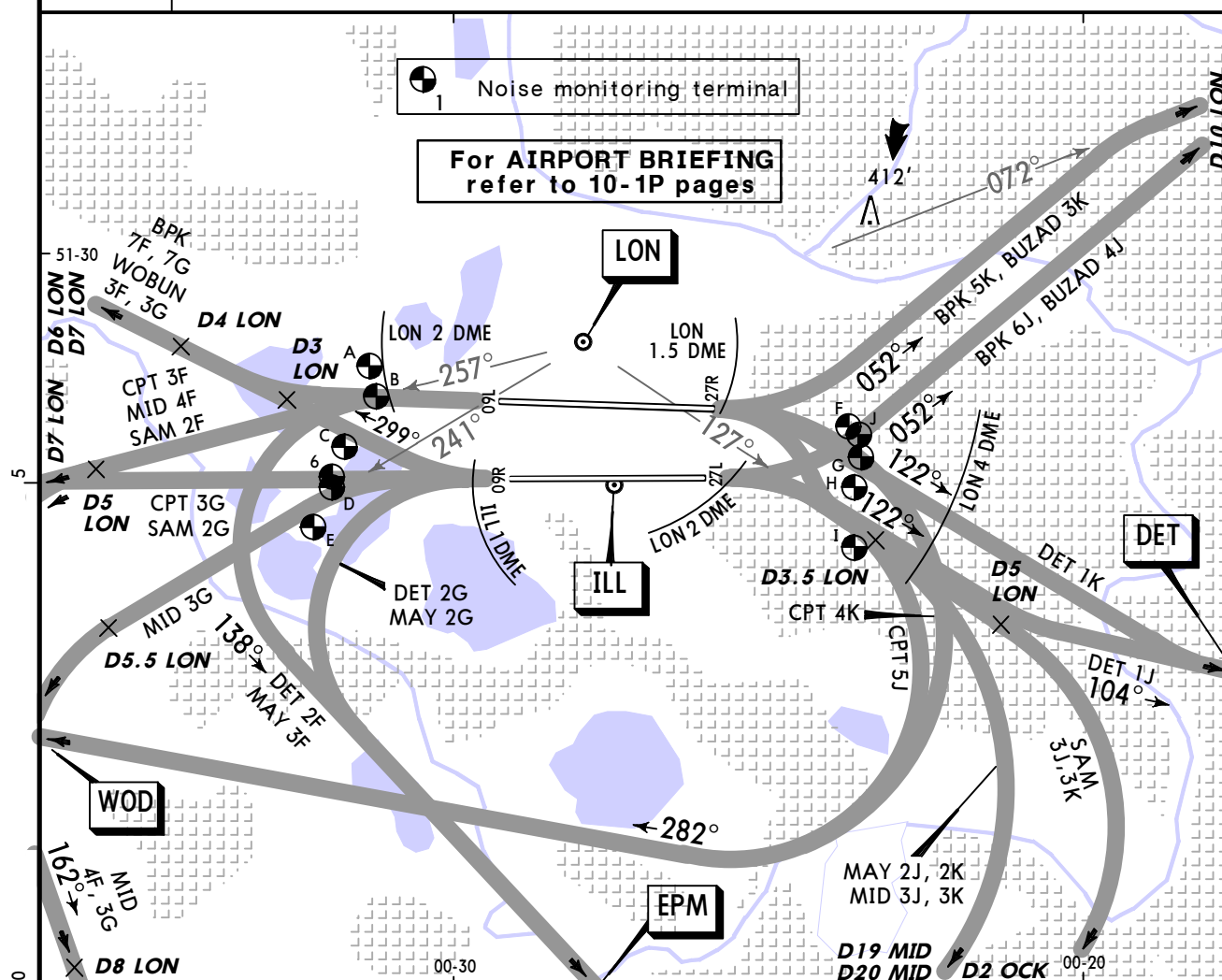
WOBUN THREE GOLF (WOBUN 3G) [WOBU3G]

RWYS 27R/L DEPARTURES

**~~SPEED~~ MAX 250 KT BELOW FL100
UNLESS OTHERWISE AUTHORISED**

SID	RWY	ROUTING / ALTITUDE
WOBUN 3F	27R	Climb straight ahead, intercept 299° bearing towards BUR by D4 LON to D7 LON, turn RIGHT, intercept 357° bearing from BUR (MID R-357), cross LON 8 DME at or above 3000' (MAX 6000'), D10 LON at or above 4000' (MAX 6000'), D14 LON at 6000' to WOBUN.
WOBUN 3G	27L	Climb straight ahead, intercept 299° bearing towards BUR by D3 LON to D7 LON, turn RIGHT, intercept 357° bearing from BUR (MID R-357), cross LON 8 DME at or above 3000' (MAX 6000'), D10 LON at or above 4000' (MAX 6000'), D14 LON at 6000' to WOBUN.

NOISE ABATEMENT



The operation limits as specified in para 3.2.1 (refer to Airport Briefing Page 10-1P7) shall be adjusted in respect of any noise monitoring terminal to take account of the location and its ground elevation relative to the aerodrome elevation as follows:

NOISE MONITORING TERMINAL/LOCATION/NAME	ELEVATION ABOVE AERODROME	ADJUSTMENT db(A)
 6 N51 27.9 W000 32.0 Thames Water, Wraysbury	- 6m	- 0.3
 A N51 29.0 W000 31.4 Colnbrook	- 4m	+ 2.3
 B N51 28.7 W000 31.3 Poyle	- 4m	+ 4.8
 C N51 28.2 W000 31.8 Horton	- 6m	- 0.3
 D N51 27.8 W000 32.0 Coppermill	- 7m	- 0.6
 E N51 27.4 W000 32.3 Wraysbury Reservoir (South)	- 7m	- 1.0
 F N51 28.4 W000 23.8 Hounslow West	- 3m	+ 0.9
 G N51 28.1 W000 23.6 Hounslow Cavalry Barracks	- 3m	- 0.1
 H N51 27.8 W000 23.7 Hounslow Heath	- 3m	+ 1.2
 I N51 27.2 W000 23.7 East Feltham	- 4m	- 0.3
 J N51 28.2 W000 23.6 Hounslow Cavalry Barracks North	- 3m	- 0.2

If the aircraft was required to take-off with a tailwind an amount of the noise recorded at the noise monitor should be disregarded.

Tailwind component	≤ 1 KT	≤ 2 KT	≤ 3 KT	≤ 4 KT	> 4 KT
Amount to be disregarded	0.4 dB	0.8 dB	1.2 dB	1.6 dB	2.0 dB

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ADDITIONAL RUNWAY INFORMATION

			USABLE LENGTHS		TAKE-OFF	WIDTH
RWY		RVR	LANDING BEYOND			
			Threshold	Glide Slope		
09L ① 27R	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L (3.0°)	RVR	11,795' 3595m	10,823' 3299m	②	164' 50m
			12,743' 3884m	11,649' 3551m		

① RWY grooved.

② TAKE-OFF RUN AVAILABLE

RWY 09L:

From rwy head 12,802' (3902m)
 twy A12 int 11,043' (3366m)
 twy A11 int 9321' (2841m)
 twy A10W int 8750' (2667m)
 twy A10E int 7733' (2357m)
 (not avbl during
 hours of darkness)

RWY 27R:

From rwy head 12,743' (3884m)
 twy A4 int 11,663' (3555m)
 twy A5 int 10,335' (3150m)
 twy A6 int 9446' (2879m)
 twy A7 int 8642' (2634m)
 twy A8 int 7976' (2431m)

09R ③ 27L	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L (3.0°)	RVR	11,001' 3353m	9968' 3038m	⑤	164' 50m
	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L (3.0°)	④ RVR		10,914' 3327m		

③ RWY grooved.

④ HST - N6

⑤ TAKE-OFF RUN AVAILABLE

RWY 09R:

From rwy head 12,008' (3660m)
 twy N10 int 11,585' (3531m)
 twy N8 int 11,001' (3353m)
 twy N7, SB7 int 9364' (2854m)
 twy N6 int 7635' (2327m)
 twy S6 int 7369' (2246m)

RWY 27L:

From rwy head 12,008' (3660m)
 twy N2E int 11,601' (3536m)
 twy N2W int 11,093' (3381m)
 twy N3 int 10,581' (3225m)
 twy S3 int 10,541' (3213m)
 twy N4E int 8878' (2706m)

HOT SPOTS

(For information only, not to be construed as ATC instructions.)

HS1 Pilots are to ensure they have clearance to enter the RWY before crossing the holding point.

HS2 Pilots are to maintain a good lookout at all times and are responsible for wing tip clearance.

HS3
**SEQUENCING OF AIRCRAFT GROUND MOVEMENTS
FOR TAKE-OFF IN LOW VISIBILITY**

When the reported RVR is below 400m do not request start-up until the reported RVR is equal to or greater than the appropriate value as shown below:

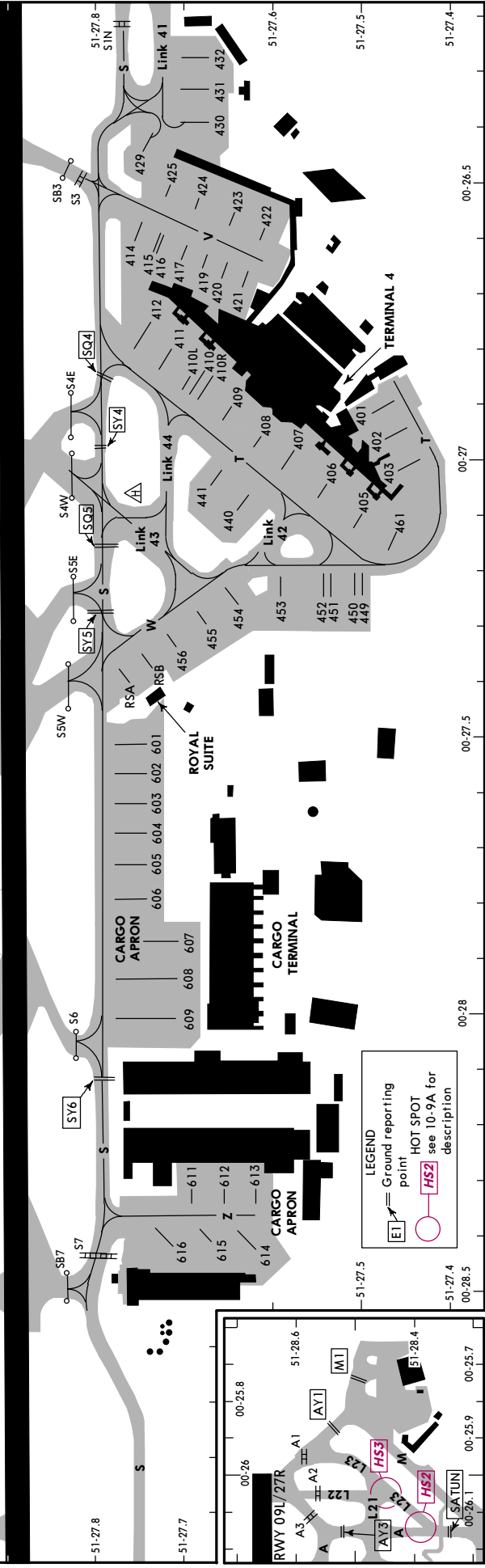
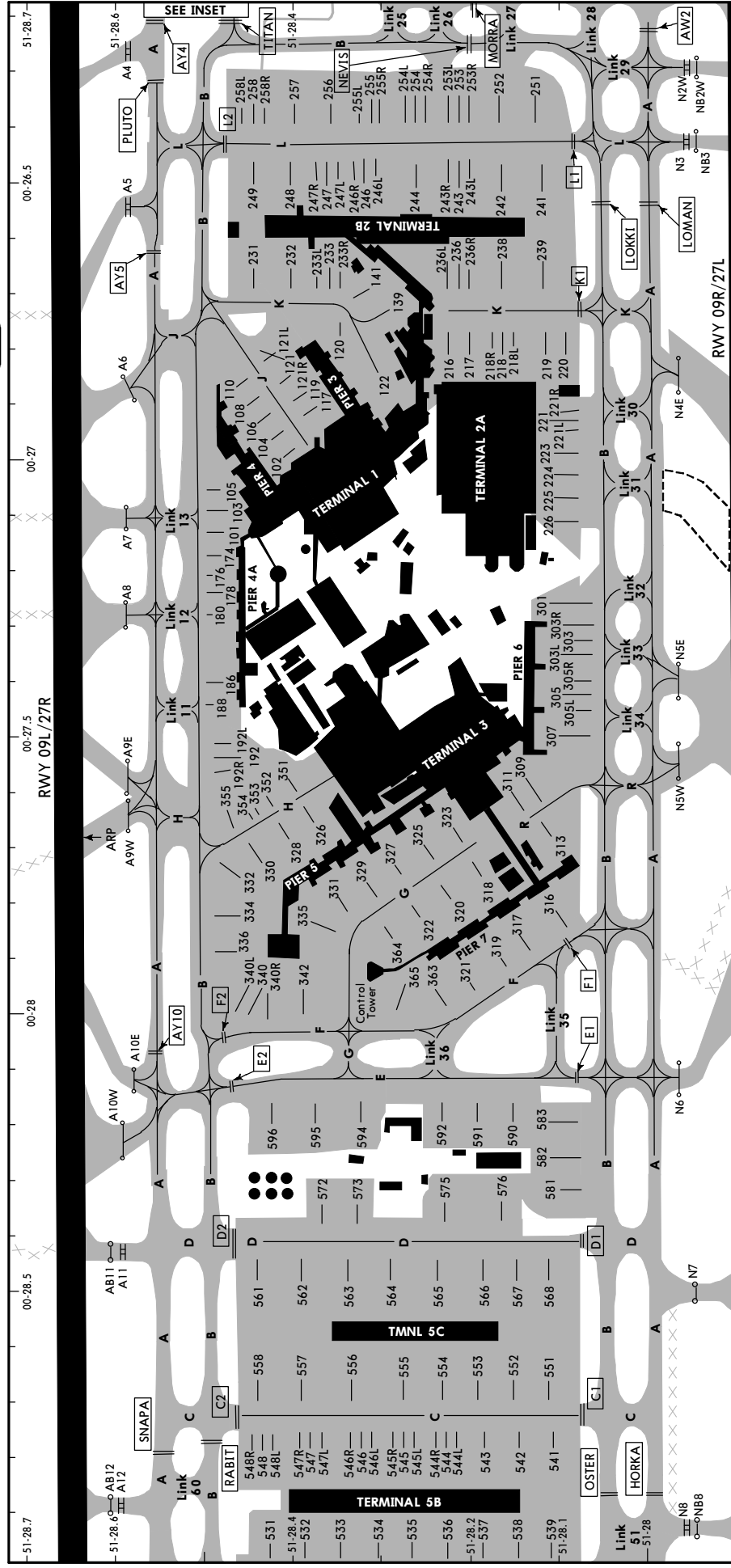
AIRCRAFT TAKE-OFF MINIMA	MINIMUM RVR FOR START-UP
350m RVR	300m
300m RVR	250m
250m RVR	200m
200m RVR	150m
150m RVR	150m
100m RVR	100m
75m RVR	75m

Standard
TAKE-OFF ①

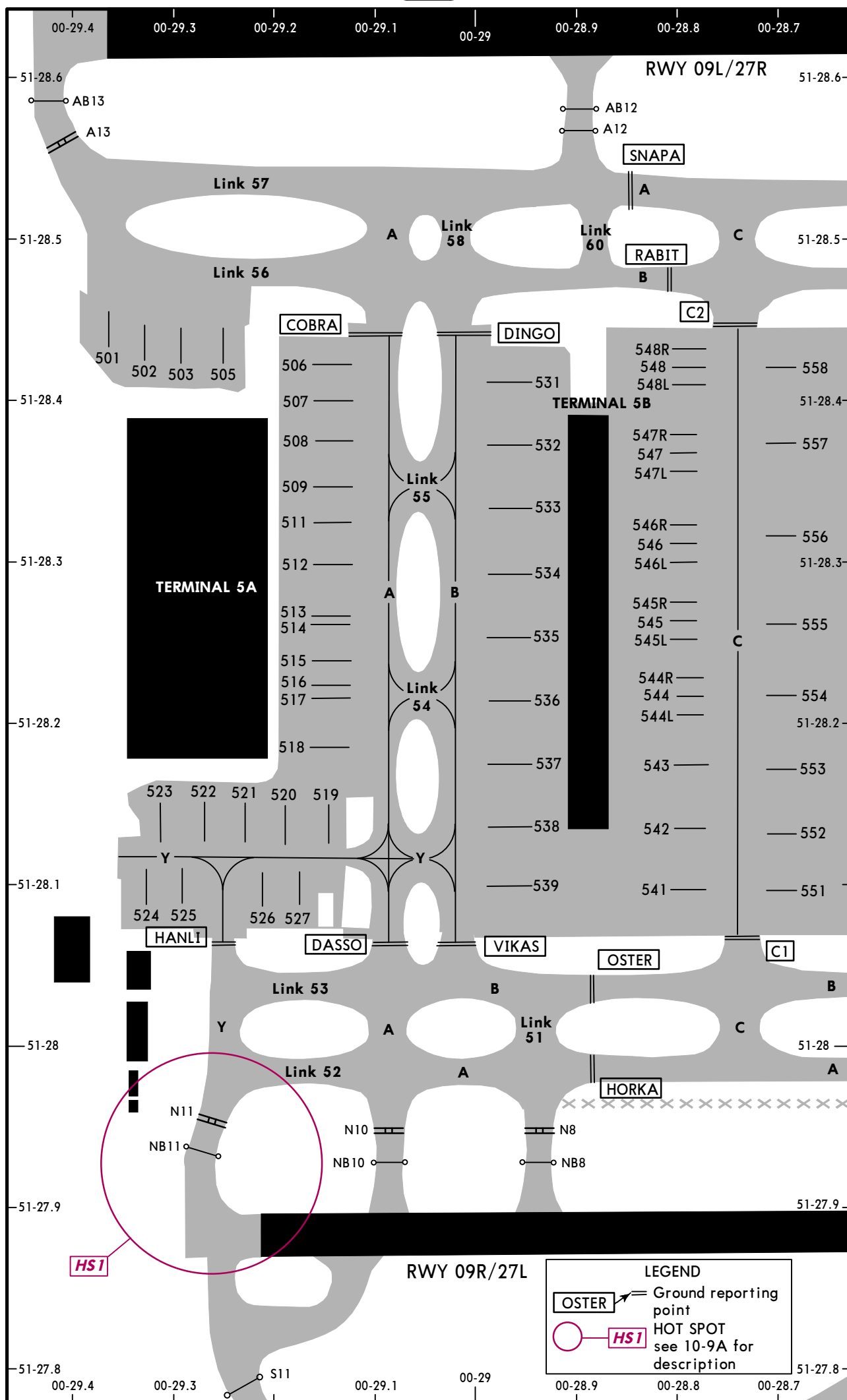
	LVP must be in Force				RCLM (DAY only) or RL	NIL (DAY only)
	Approved Operators HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL		
A					400m	500m
B	125m	150m	200m	250m		
C						
D	150m	200m	250m	300m		

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





CHANGES: Twy under construction.



INS COORDINATES			
STAND No.	COORDINATES	STAND No.	COORDINATES
101	N51 28.5 W000 27.1	258L	N51 28.5 W000 26.4
102	N51 28.4 W000 27.0	258R	N51 28.4 W000 26.4
103	N51 28.5 W000 27.1	301	N51 28.1 W000 27.3
104	N51 28.4 W000 27.0	303L	N51 28.1 W000 27.4
105	N51 28.5 W000 27.0	303, 303R	N51 28.1 W000 27.3
106	N51 28.4 W000 26.9	305, 305L/R	N51 28.1 W000 27.4
108	N51 28.5 W000 26.9	307	N51 28.1 W000 27.5
110	N51 28.5 W000 26.9	309	N51 28.1 W000 27.6
117, 119	N51 28.4 W000 26.9	311	N51 28.2 W000 27.6
120, 121, 121L	N51 28.4 W000 26.8	313	N51 28.1 W000 27.7
121R	N51 28.4 W000 26.9	316	N51 28.1 W000 27.8
122	N51 28.3 W000 26.8	317	N51 28.1 W000 27.9
139, 141	N51 28.3 W000 26.7	318	N51 28.2 W000 27.7
174, 176	N51 28.5 W000 27.2	319	N51 28.2 W000 27.9
178, 180	N51 28.5 W000 27.3	320	N51 28.2 W000 27.8
186, 188	N51 28.5 W000 27.4	321	N51 28.2 W000 28.0
192, 192L	N51 28.5 W000 27.5	322	N51 28.3 W000 27.8
192R	N51 28.5 W000 27.6	323	N51 28.2 W000 27.7
216 thru 218R	N51 28.2 W000 26.8	325	N51 28.3 W000 27.7
219, 220	N51 28.1 W000 26.8	326	N51 28.4 W000 27.6
221, 221R	N51 28.1 W000 26.9	327	N51 28.3 W000 27.7
221L, 223, 224	N51 28.1 W000 27.0	328	N51 28.4 W000 27.7
225, 226	N51 28.1 W000 27.1	329	N51 28.3 W000 27.8
231 thru 233R	N51 28.4 W000 26.7	330	N51 28.4 W000 27.7
236 thru 238	N51 28.2 W000 26.6	331	N51 28.3 W000 27.8
239	N51 28.1 W000 26.6	332, 334	N51 28.5 W000 27.8
241	N51 28.1 W000 26.5	335	N51 28.4 W000 27.9
242 thru 243R	N51 28.2 W000 26.5	336	N51 28.5 W000 27.9
244 thru 246R	N51 28.3 W000 26.5	340, 340L/R	N51 28.5 W000 28.0
247	N51 28.4 W000 26.5	342	N51 28.4 W000 28.0
247L	N51 28.3 W000 26.5	350 thru 354	N51 28.4 W000 27.6
247R thru 249	N51 28.4 W000 26.5	355	N51 28.5 W000 27.6
251	N51 28.1 W000 26.4	363	N51 28.2 W000 28.0
252 thru 253R	N51 28.2 W000 26.4	364	N51 28.3 W000 27.9
254 thru 255R	N51 28.3 W000 26.4	365	N51 28.3 W000 28.0
256 thru 258	N51 28.4 W000 26.4		

INS COORDINATES			
STAND No.	COORDINATES	STAND No.	COORDINATES
401	N51 27.5 W000 26.9	547L thru 548L	N51 28.4 W000 28.8
402	N51 27.5 W000 27.0	548R	N51 28.5 W000 28.8
403	N51 27.4 W000 27.0	551	N51 28.1 W000 28.7
405	N51 27.5 W000 27.1	552 thru 554	N51 28.2 W000 28.7
406	N51 27.6 W000 27.1	555, 556	N51 28.3 W000 28.7
407, 408	N51 27.6 W000 27.0	557, 558	N51 28.4 W000 28.7
409 thru 410R	N51 27.7 W000 26.9	561, 562	N51 28.4 W000 28.5
411	N51 27.7 W000 26.8	563, 564	N51 28.3 W000 28.5
412	N51 27.8 W000 26.8	565, 566	N51 28.2 W000 28.5
414 thru 419	N51 27.7 W000 26.6	567, 568	N51 28.1 W000 28.5
420	N51 27.7 W000 26.7	572	N51 28.4 W000 28.4
421	N51 27.6 W000 26.7	573	N51 28.3 W000 28.4
422, 423	N51 27.6 W000 26.6	575, 576	N51 28.2 W000 28.4
424	N51 27.7 W000 26.6	581, 582	N51 28.1 W000 28.3
425	N51 27.7 W000 26.5	583	N51 28.1 W000 28.2
429, 430	N51 27.7 W000 26.4	590 thru 592	N51 28.2 W000 28.2
431, 432	N51 27.7 W000 26.3	594	N51 28.3 W000 28.2
440	N51 27.6 W000 27.1	595, 596	N51 28.4 W000 28.2
441	N51 27.7 W000 27.0	601	N51 27.8 W000 27.5
449 thru 452	N51 27.5 W000 27.3	602, 603	N51 27.8 W000 27.6
453	N51 27.6 W000 27.2	604	N51 27.8 W000 27.7
454	N51 27.6 W000 27.3	605, 606	N51 27.8 W000 27.8
455, 456	N51 27.7 W000 27.3	607	N51 27.8 W000 27.9
461	N51 27.5 W000 27.2	608, 609	N51 27.8 W000 28.0
501	N51 28.5 W000 29.4	611, 612	N51 27.7 W000 28.3
502, 503, 505	N51 28.5 W000 29.3	613	N51 27.6 W000 28.3
506 thru 509	N51 28.4 W000 29.1	614	N51 27.6 W000 28.4
511 thru 515	N51 28.3 W000 29.1	615, 616	N51 27.7 W000 28.4
516 thru 518	N51 28.2 W000 29.1	RSA	N51 27.8 W000 27.4
519	N51 28.1 W000 29.1	RSB	N51 27.7 W000 27.4
520, 521	N51 28.1 W000 29.2		
522 thru 525	N51 28.1 W000 29.3		
526, 527	N51 28.1 W000 29.2		
531, 532	N51 28.4 W000 29.0		
533 thru 535	N51 28.3 W000 29.0		
536, 537	N51 28.2 W000 29.0		
538, 539	N51 28.1 W000 29.0		
541, 542	N51 28.1 W000 28.8		
543 thru 544R	N51 28.2 W000 28.8		
545L thru 546R	N51 28.3 W000 28.8		

STAND ENTRY GUIDANCE SYSTEMS (SEG)

A. GENERAL

If a Stand Entry Guidance System becomes unserviceable or is not illuminated, call Ground Movement Control (GMC) to request marshalling assistance.

Aircrew must not attempt to self-park if the Stand Entry Guidance is unserviceable, uncalibrated or not switched on.

STOP SHORT PROCEDURE

The term "STOP SHORT" is defined as a requirement to stop the acft in a position that allows mobile or integral airstairs to be deployed, due to the unserviceability of the stand loading bridge or some other obstruction. The requirement to "STOP SHORT" will be indicated to the flight crew by marshalling signals.

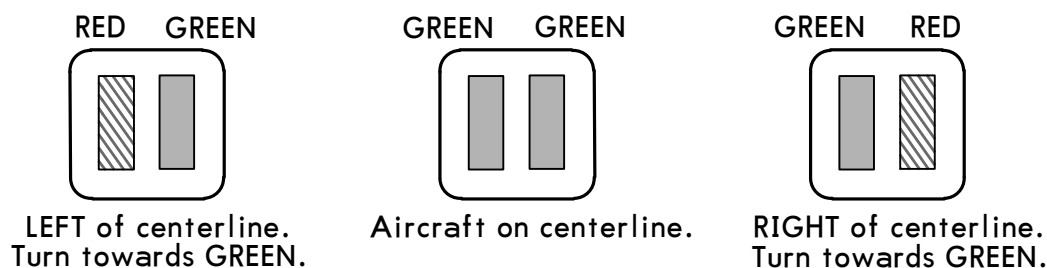
EMERGENCY STOP

Should an emergency arise as the acft is taxiing onto stand, the airline or handling agent representative can activate the SEG emergency over-ride button, colocated with all emergency stop buttons at ramp level at the head of the stand. This will instantly cut power to the parking aids and activate a sign mounted at pilot's eye level which will flash "STOP".

B. GUIDANCE SYSTEMS

1. AGNIS - AZIMUTH GUIDANCE FOR NOSE-IN STANDS

AGNIS units display red and/or green light signals through two parallel vertical slots. The system is aligned for interpretation from the left hand cockpit seat. Acft should be turned towards the green light to remain on centerline. AGNIS does not provide stopping guidance. Stopping guidance is provided by a sign (PAPA or STOP ARROW) positioned near the AGNIS unit.



2. APIS - AIRCRAFT POSITIONING AND INFORMATION SYSTEM

The unit combines both alignment and stopping signals in one visual display mounted ahead of the pilot and is to be used from the left hand cockpit seat.

Display can be used to show stand number, acft type selected and final STOP wording when the acft has reached its final stopping position.

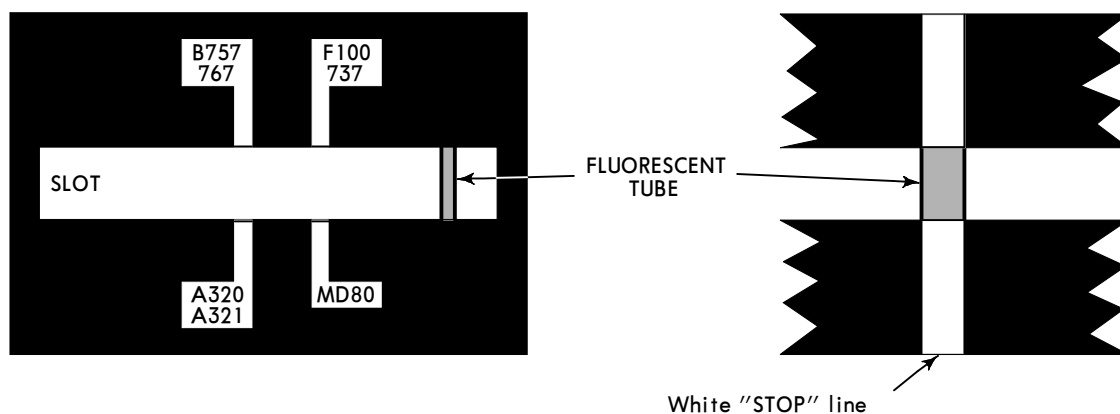
Indicates progress of the acft over the last 52'/16m of the approach to the stop position.

Azimuth guidance element



3. PAPA - PARALLAX AIRCRAFT PARKING AID

This stopping aid is commonly positioned to the right side of the stand centerline. On some stands it will be located to the left side and indicated as such by the sign adjacent to the AGNIS unit. The aid consists of a black board, bearing acft type identification labels and "STOP" lines, with a horizontal slot running across the center. Behind the board is a vertically mounted fluorescent light tube. As an acft is taxiing onto the stand, the pilot will see the fluorescent tube appear to move across the slot towards the "STOP" lines. When the tube is in line with the appropriate acft type "STOP" line, the acft has reached the correct position.



4. STOP ARROWS

This provides stopping guidance only, used in conjunction with AGNIS in the form of one or two painted lines with the word "STOP" above the line and, where appropriate, the acft type below the line. The line is aligned with the pilot's eye position and is normally located to the left of the stand centerline, but may be provided on the right or both sides.

5. MIRROR

The mirror is normally mounted on the port side of the extended centerline. It is angled to give the pilot in the left hand seat view of the aircraft's nose landing gear (NLG). Associated mirror image paint markings will indicate the various stopping positions of the NLG. All mirrors are heated to prevent misting and icing.

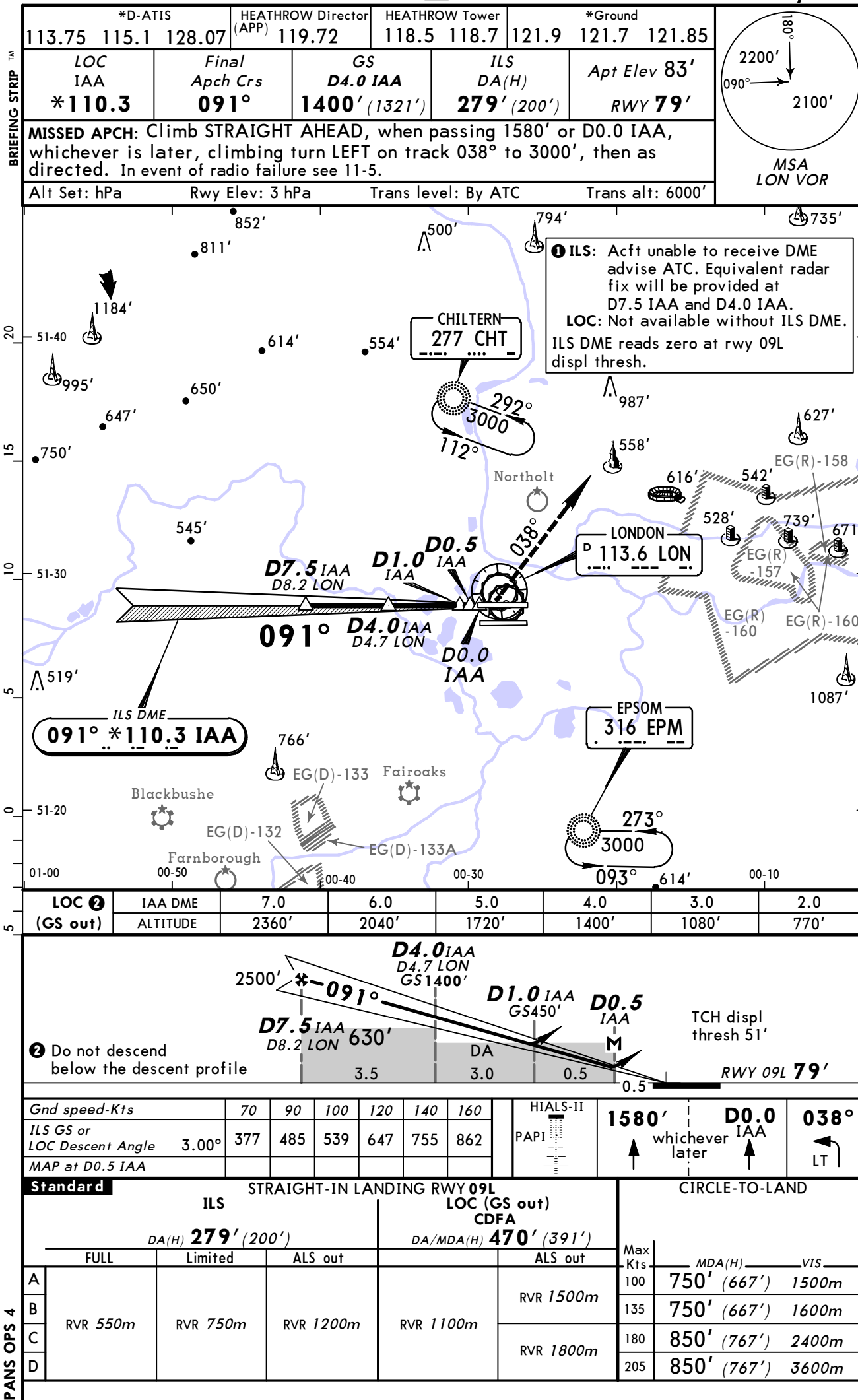
STRAIGHT-IN RWY		DA(H) / MDA(H)	RVR (ALS/ALS out)
09L	CAT 2 ILS DME	179' (100')	RA 100' - 300m
	ILS DME	279' (200')	500m / 1000m
	LOC	470' (391')	800m / 1000m
	RNAV (LNAV/VNAV)	570' (491')	1000m / 1000m
	RNAV (LNAV)	630' (551')	1000m / 1000m
	SRA	720' (641')	1000m / 1000m
09R	CAT 2 ILS DME	175' (100')	RA 100' - 300m
	ILS DME	275' (200')	500m / 1000m
	LOC	480' (405')	800m / 1000m
	RNAV (LNAV/VNAV)	500' (425')	800m / 1000m
	RNAV (LNAV)	630' (555')	1000m / 1000m
	SRA	720' (645')	1000m / 1000m
27L	CAT 2 ILS DME	177' (100')	RA 102' - 300m
	ILS DME	277' (200')	500m / 1000m
	LOC	460' (383')	800m / 1000m
	RNAV (LNAV/VNAV)	510' (433')	800m / 1000m
	RNAV (LNAV)	560' (483')	1000m / 1000m
	SRA	720' (643')	1000m / 1000m
27R	CAT 2 ILS DME	178' (100')	RA 102' - 300m
	ILS DME	278' (200')	500m / 1000m
	LOC	430' (352')	800m / 1000m
	RNAV (LNAV/VNAV)	510' (432')	800m / 1000m
	RNAV (LNAV)	530' (452')	1000m / 1000m
	SRA	720' (642')	1000m / 1000m

CIRCLE-TO-LAND	MDA(H)	VIS
	750' (667')	1000m

TAKE-OFF RWY 09L/R, 27L/R				
LVP must be in Force ❶				
RL, FATO LTS, CL & RVR info	RL, FATO LTS & RCLM	Unlit/unmarked defined RWY/FATO	Nil Facilities DAY	Nil Facilities NIGHT
150m	200m	200m	250m ❷	800m

❶ Without LVP 400m are stipulated.

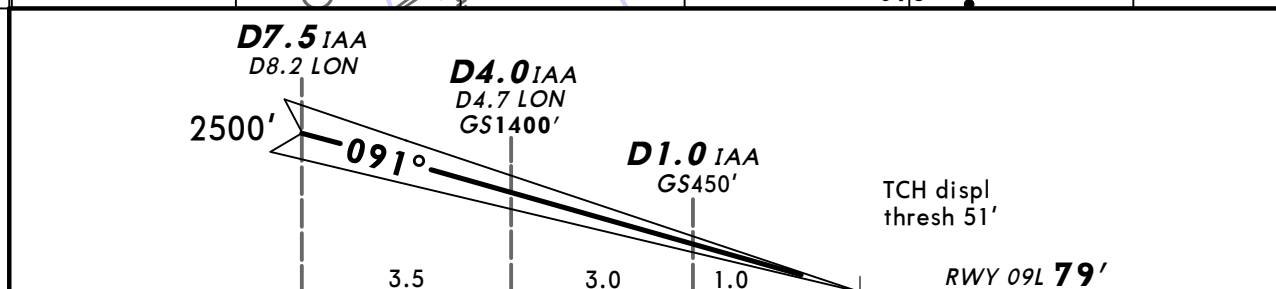
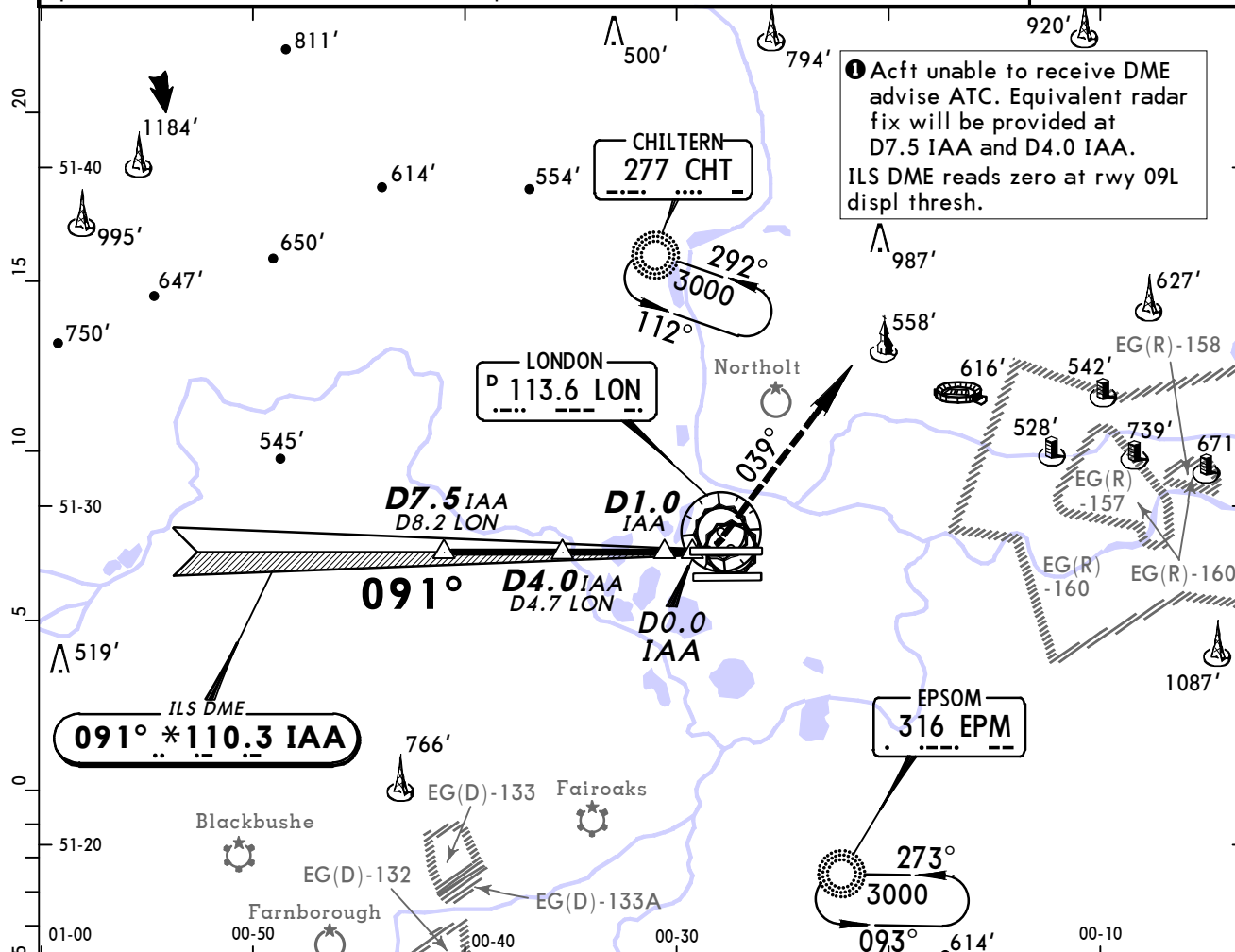
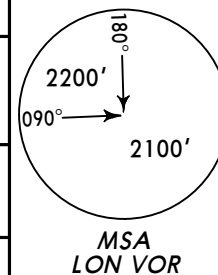
❷ Or rejected take-off distance whichever is the greater.



*D-ATIS 113.75 115.1 128.07	HEATHROW Director (APP) 119.72	HEATHROW Tower 118.5 118.7	*Ground 121.9 121.7 121.85
LOC IAA *110.3	Final Apch Crs 091°	GS D4.0 IAA 1400' (1321')	CAT II & IIIA ILS Refer to Minimums
			Apt Elev 83' RWY 79'

MISSED APCH: Climb STRAIGHT AHEAD, when passing 1580' or D0.0 IAA, whichever is later, climbing turn LEFT on track 038° to 3000', then as directed. In event of radio failure see 11-5.

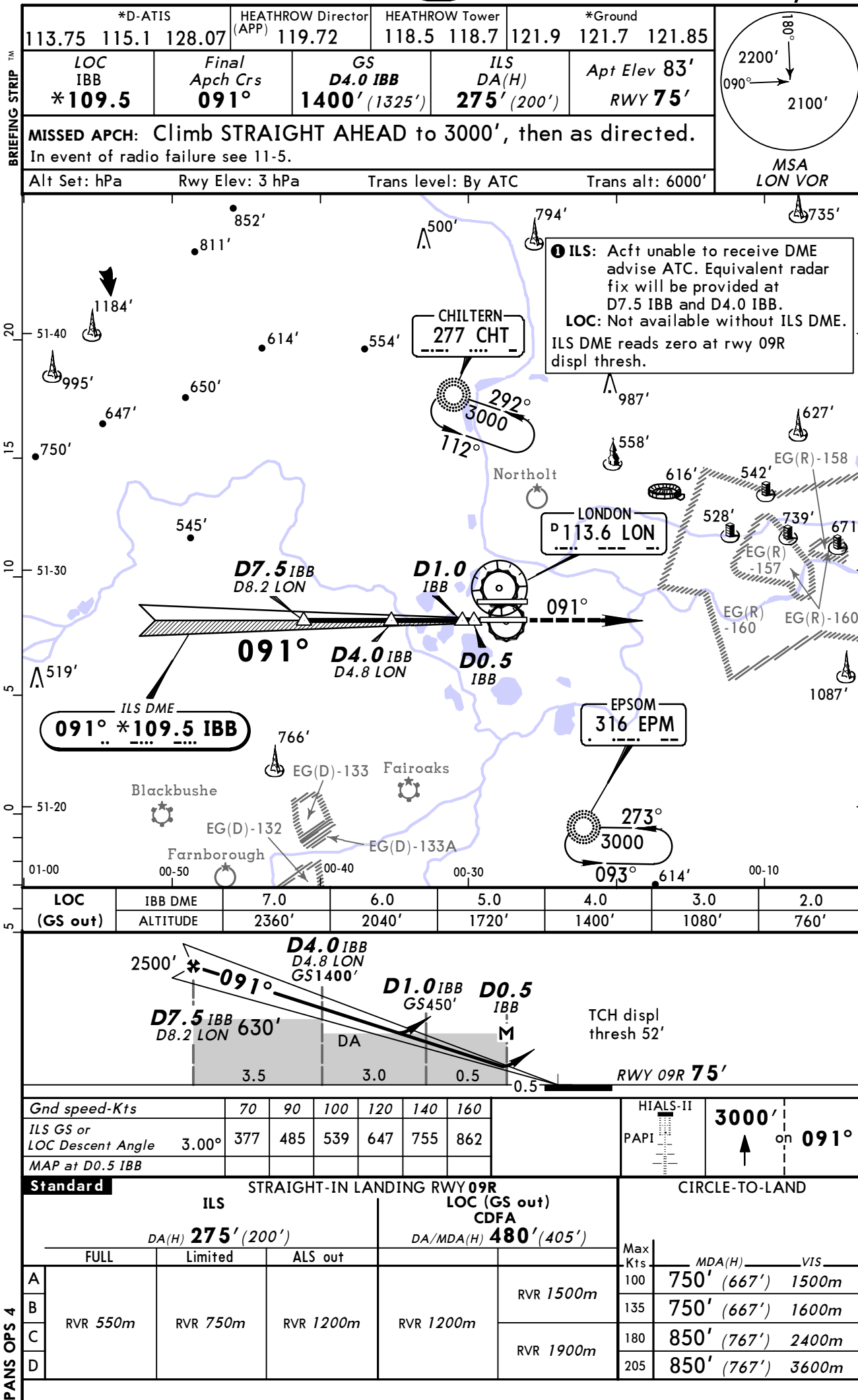
Alt Set: hPa Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 6000'
Special Aircrew & Acft Certification Required.

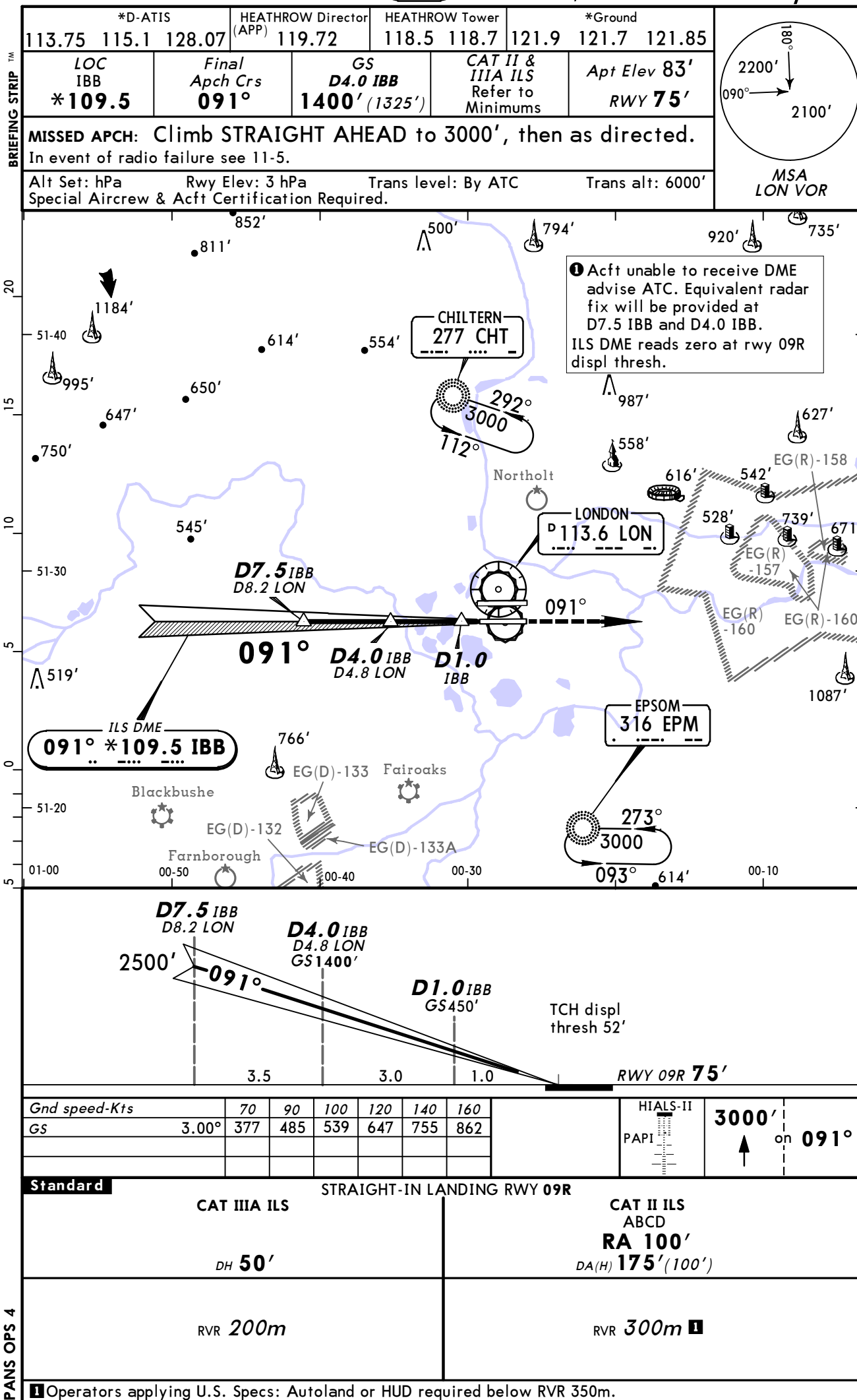


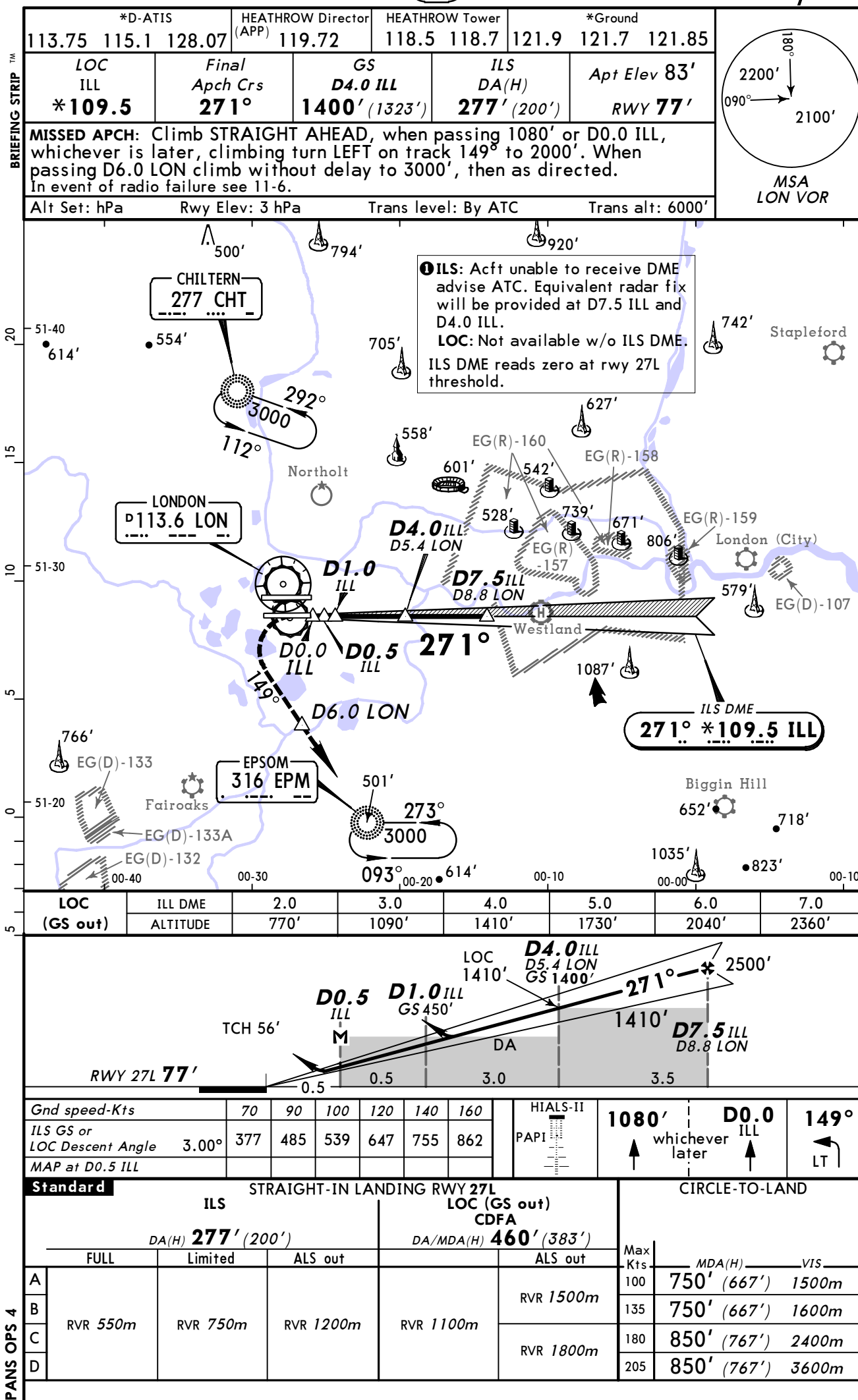
Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	1580'	D0.0 IAA	038°
GS	3.00°	377	485	539	647	755	PAPI	↑	↑	LT
								↑	↑	

Standard	STRAIGHT-IN LANDING RWY 09L	
CAT IIIA ILS	CAT II ILS ABCD	
RA 100'	RA 100'	
DA(H) 179' (100')	DA(H) 179' (100')	
RVR 200m	RVR 300m	

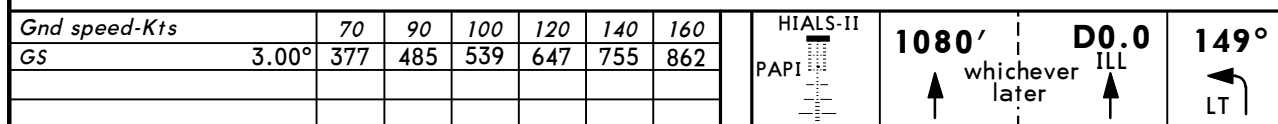
Operators applying U.S. Specs: Autoland or HUD required below RVR 350m.







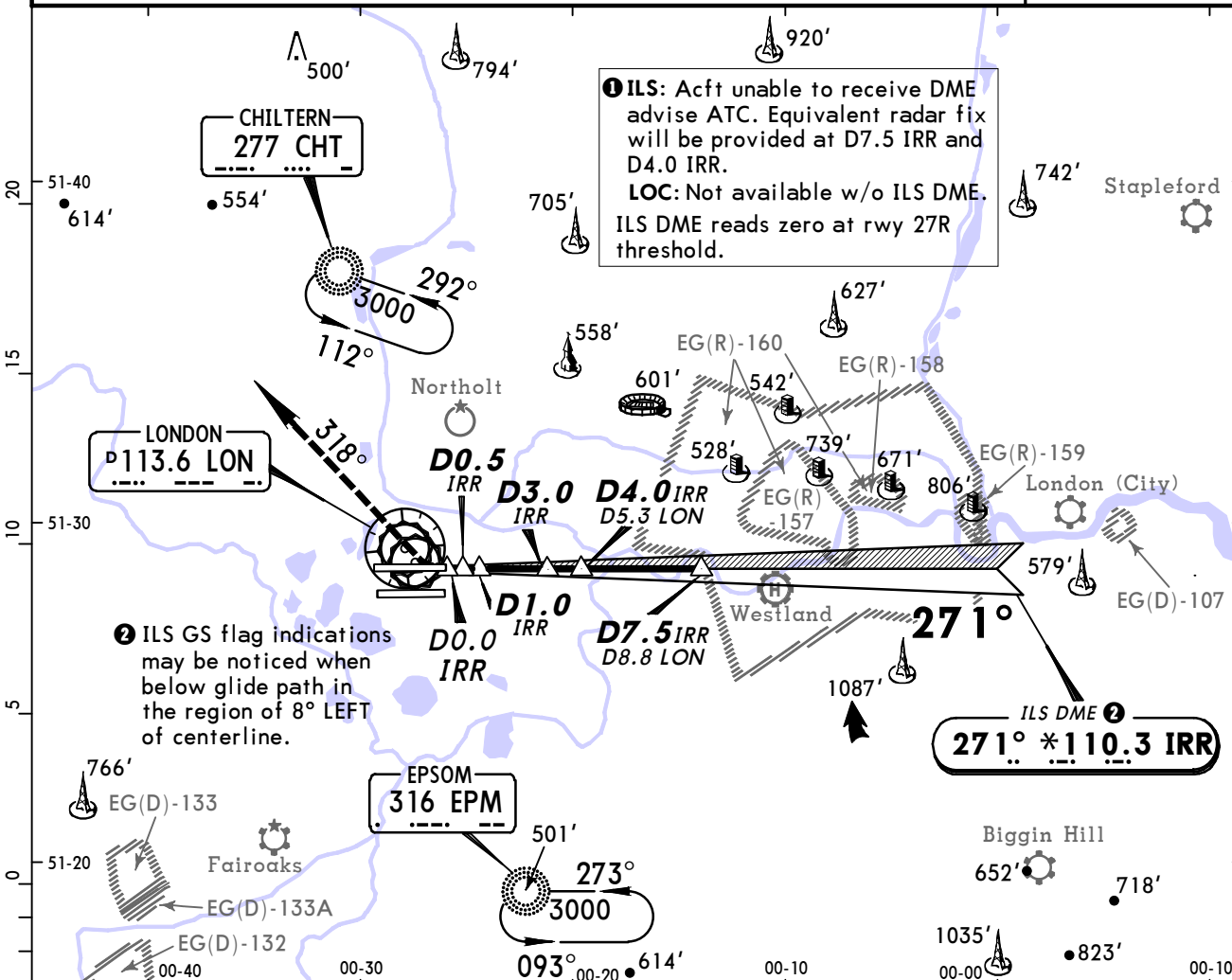
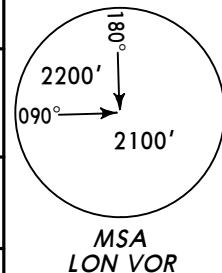
Alt Set: hPa	Rwy Elev: 3 hPa	Trans level: By ATC	Trans alt: 6000'
Special Aircrew & Acft Certification Required.			



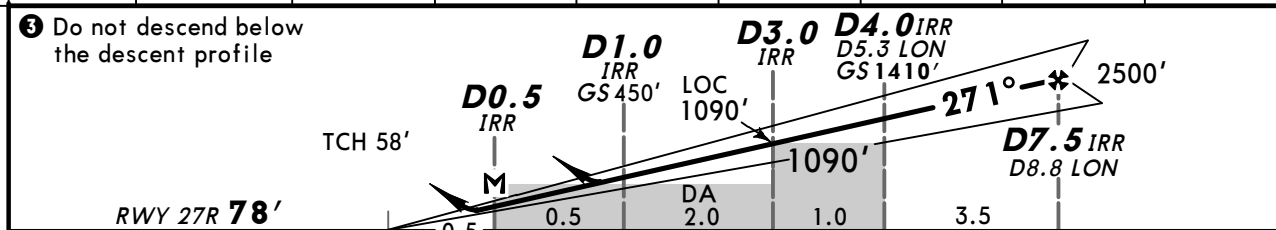
Standard		STRAIGHT-IN LANDING RWY 27L	
CAT IIIA ILS		CAT II ILS ABCD RA 102' <i>DA(H) 177' (100')</i>	
<i>DH</i> 50'			
RVR 200m		RVR 300m 1	

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*D-ATIS 113.75 115.1 128.07	HEATHROW Director (APP) 119.72	HEATHROW Tower 118.5 118.7	*Ground 121.9 121.7 121.85
LOC IRR *110.3	Final Apch Crs 271°	GS D4.0 IRR 1410' (1332')	ILS DA(H) 278' (200')
Apt Elev 83' RWY 78'			
MISSED APCH: Climb STRAIGHT AHEAD when passing 1580' or D0.0 IRR, whichever is later, climbing turn RIGHT on track 318° to 3000', then as directed. In event of radio failure see 11-6.			
Alt Set: hPa	Rwy Elev: 3 hPa	Trans level: By ATC	Trans alt: 6000'



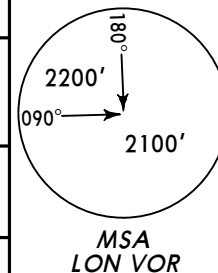
LOC ③ (GS out)	IRR DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0
	ALTITUDE	450'	770'	1090'	1410'	1730'	2050'	2370'



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	377	485	539	647	755	862
MAP at D0.5 IRR						

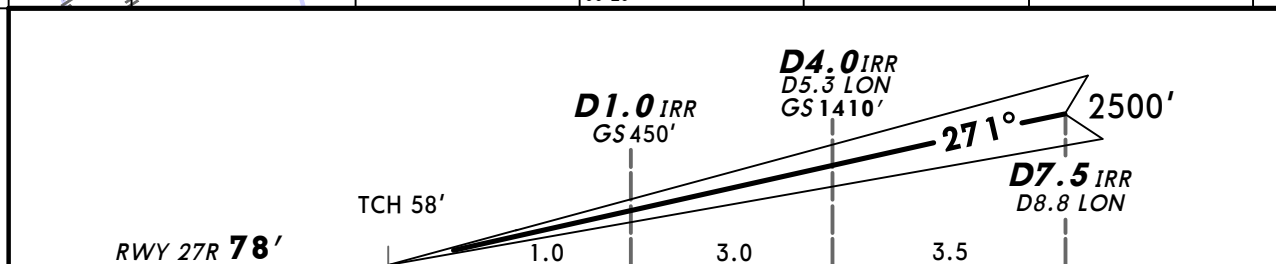
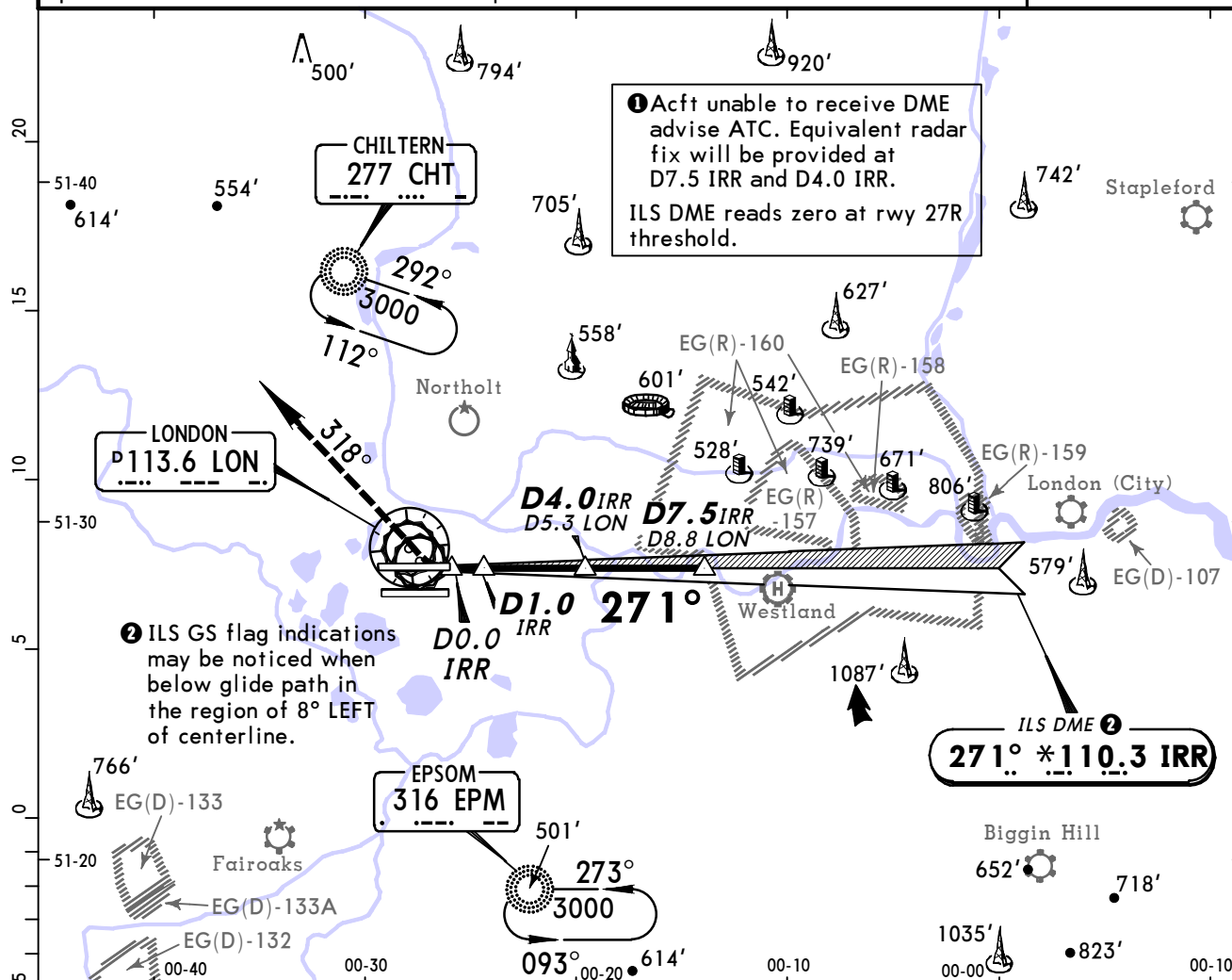
Standard ILS STRAIGHT-IN LANDING RWY 27R				CIRCLE-TO-LAND			
ILS		LOC (GS out) CDFA		Max Kts		MDA(H) VIS	
DA(H) 278' (200')		DA/MDA(H) 430' (352')					
FULL	Limited	ALS out	ALS out	100	750' (667')	1500m	
B	RVR 550m	RVR 750m	RVR 1200m	135	750' (667')	1600m	
C				180	850' (767')	2400m	
D				205	850' (767')	3600m	

*D-ATIS			HEATHROW Director (APP)	HEATHROW Tower	*Ground		
113.75	115.1	128.07	119.72	118.5 118.7	121.9	121.7	121.85
LOC IRR *110.3	Final Apch Crs 271°	GS D4.0 IRR 1410' (1332')	CAT II & IIIA ILS Refer to Minimums	Apt Elev 83' RWY 78'			



MISSED APCH: Climb **STRAIGHT AHEAD** when passing 1580' or D0.0 IRR, whichever is later, climbing turn **RIGHT** on track 318° to 3000', then as directed. In event of radio failure see 11-6.

Alt Set: hPa Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 6000'
Special Aircrew & Acft Certification Required.



<i>Gnd speed-Kts</i>	70	90	100	120	140	160	
<i>Gs</i> 3.00°	377	485	539	647	755	862	

Standard

STRAIGHT-IN LANDING RWY 27R

CAT IIIA ILS

***DH* 50'**

RVR *200m*

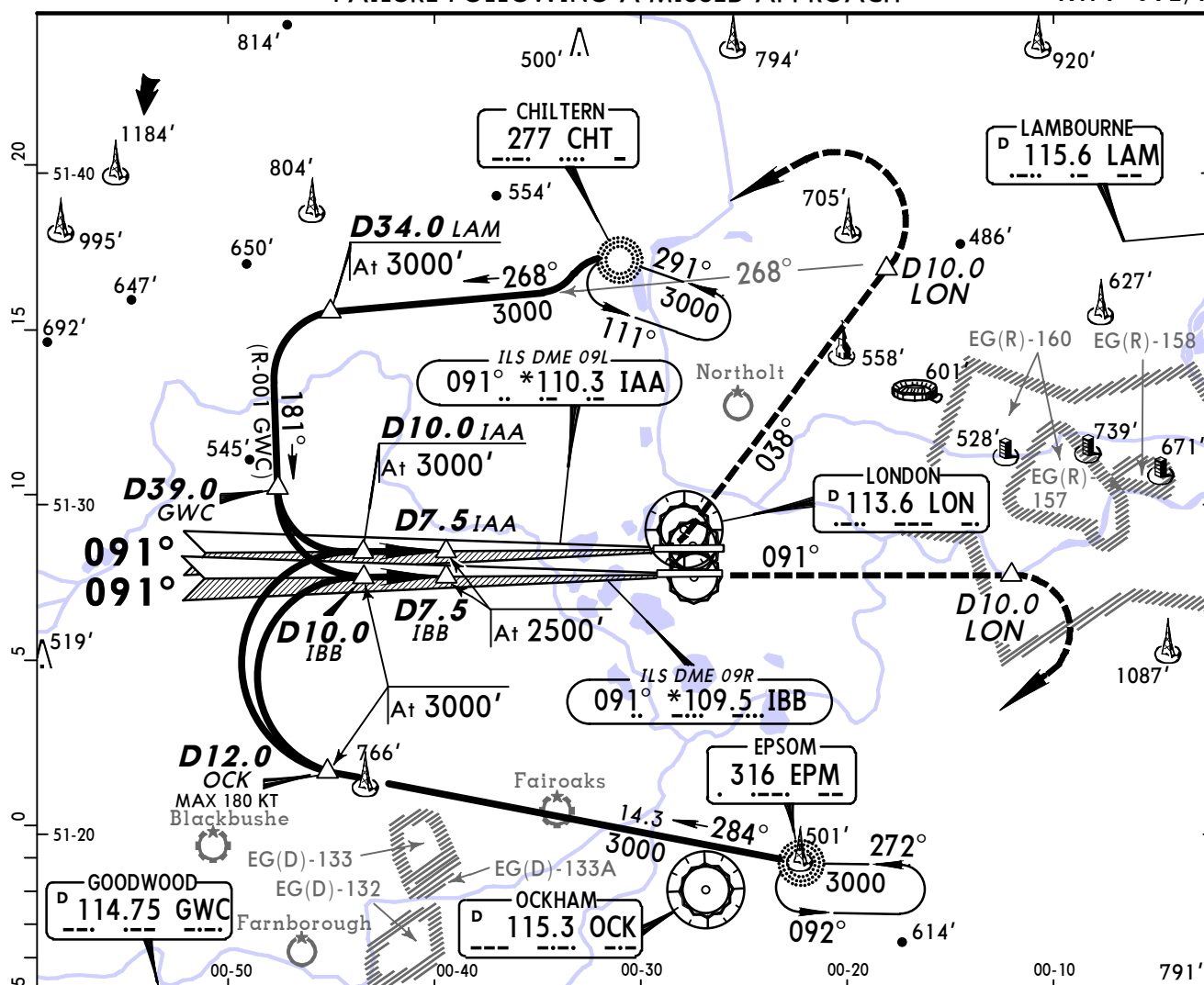
CAT II ILS
ABCD
RA 102

 $DA(H) \mathbf{178'} (100')$ RVR **300m 1**

I Operators applying U.S. Specs: Autoland or HUD required below RVR 350m.

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

RWY 09L/R



Holdings, initial and intermediate approach valid up to 220 KT.

VIA EPSOM NDB

MISSED APCH: In event of radio failure, on passing D10.0 LON turn RIGHT to EPM NDB at 3000', thence:

Rwy 09L: After holding leave EPM NDB on track 284° maintaining 3000'. At D12.0 OCK (MAX 180 KT) turn RIGHT to intercept ILS localizer course to be established at D10.0 IAA. After D10.0 IAA descend to 2500'. Continue approach as charted for rwy 09L.

Rwy 09R: After holding leave EPM NDB on track 284° maintaining 3000'. At D12.0 OCK (MAX 180 KT) turn RIGHT to intercept ILS localizer course to be established at D10.0 IBB. After D10.0 IBB descend to 2500'. Continue approach as charted for rwy 09R.

VIA CHILTERN NDB

MISSED APCH: In event of radio failure, on passing D10.0 LON proceed to CHT NDB at 3000', thence:

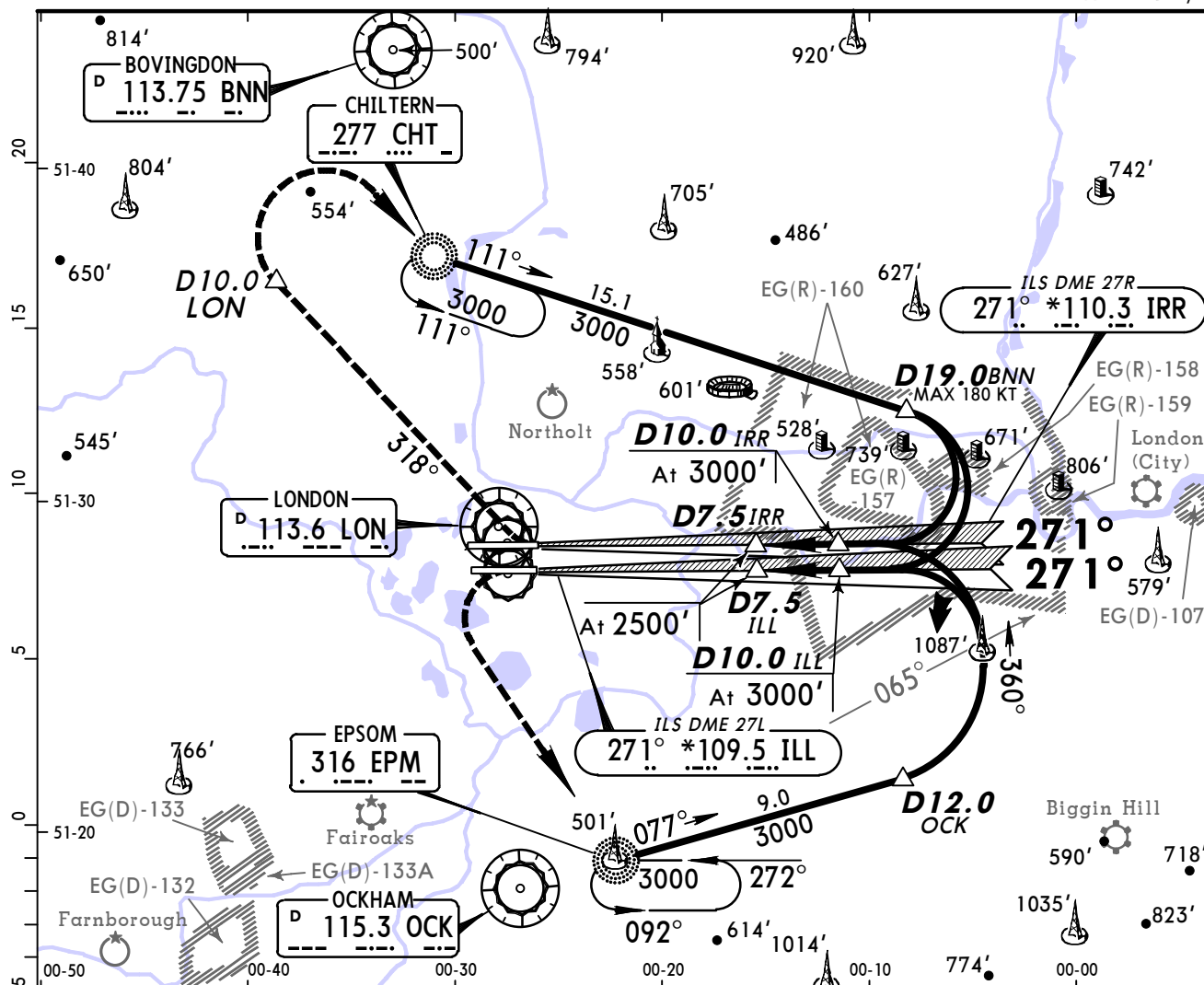
Rwy 09L: After holding leave CHT NDB on R-268 LAM maintaining 3000'. At D34.0 LAM turn LEFT to 181° (R-001 GWC). At D39.0 GWC turn LEFT to intercept ILS localizer course to be established at D10.0 IAA. After D10.0 IAA descend to 2500'. Continue approach as charted for rwy 09L.

Rwy 09R: After holding leave CHT NDB on R-268 LAM maintaining 3000'. At D34.0 LAM turn LEFT to 181° (R-001 GWC). At D39.0 GWC turn LEFT to intercept ILS localizer course to be established at D10.0 IBB. After D10.0 IBB descend to 2500'. Continue approach as charted for rwy 09R.

PANS OPS

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

RWY 27L/R



Holdings, initial and intermediate approach valid up to 220 KT.

VIA EPSOM NDB

MISSED APCH: In event of radio failure, on reaching 3000' proceed to EPM NDB at 3000', thence:

Rwy 27L: After holding leave EPM NDB on R-077 OCK maintaining 3000'. At D12.0 OCK turn LEFT onto track 360°. At R-065 OCK turn LEFT to intercept ILS localizer to be established at D10.0 ILL. After D10.0 ILL descend to 2500'. Continue approach as charted for rwy 27L.

Rwy 27R: After holding leave EPM NDB on R-077 OCK maintaining 3000'. At D12.0 OCK turn LEFT onto track 360°. At R-065 OCK turn LEFT to intercept ILS localizer to be established at D10.0 IRR. After D10.0 IRR descend to 2500'. Continue approach as charted for rwy 27R.

VIA CHILTERN NDB

MISSED APCH: In event of radio failure, on passing D10.0 LON turn RIGHT to CHT NDB at 3000', thence:

Rwy 27L: After holding leave CHT NDB on track 111° maintaining 3000'. At D19.0 BNN (MAX 180 KT) turn RIGHT to intercept ILS localizer to be established at D10.0 ILL. After D10.0 ILL descend to 2500'. Continue approach as charted for rwy 27L.

Rwy 27R: After holding leave CHT NDB on track 111° maintaining 3000'. At D19.0 BNN (MAX 180 KT) turn RIGHT to intercept ILS localizer to be established at D10.0 IRR. After D10.0 IRR descend to 2500'. Continue approach as charted for rwy 27R.

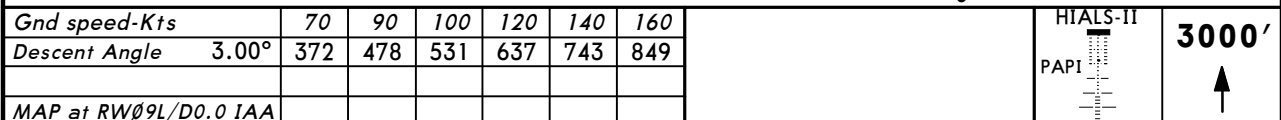
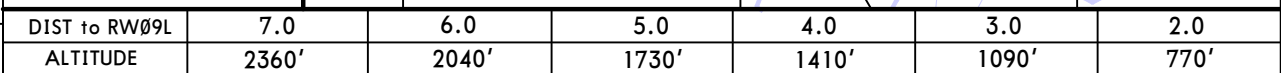
PANS OPS

LONDON, UK
RNAV (GNSS) Rwy' 09L

BRIEFING STRIP™

MSA ARP

Date	Cases per 100,000 population
March 2020	0.0
April 2020	0.5
May 2020	8.5
June 2020	4.0
July 2020	2.0
August 2020	1.5
September 2020	1.0
October 2020	1.5
November 2020	4.5
December 2020	2.0
January 2021	1.5
February 2021	1.0
March 2021	1.5



PANS OPS

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*D-ATIS			HEATHROW Director (APP)		HEATHROW Tower		*Ground		
113.75 115.1 128.07			119.72		118.5 118.7		121.9 121.7 121.85		
RNAV	Final Apch Crs 091°	Minimum Alt L09RF 2500' (2425')	LNAV/VNAV DA(H) 500' (425')		Apt Elev 83' RWY 75'		2300' MSA ARP		
MISSED APCH: Climb STRAIGHT AHEAD to 3000' and as directed.									
In event of radio failure see 11-5.									

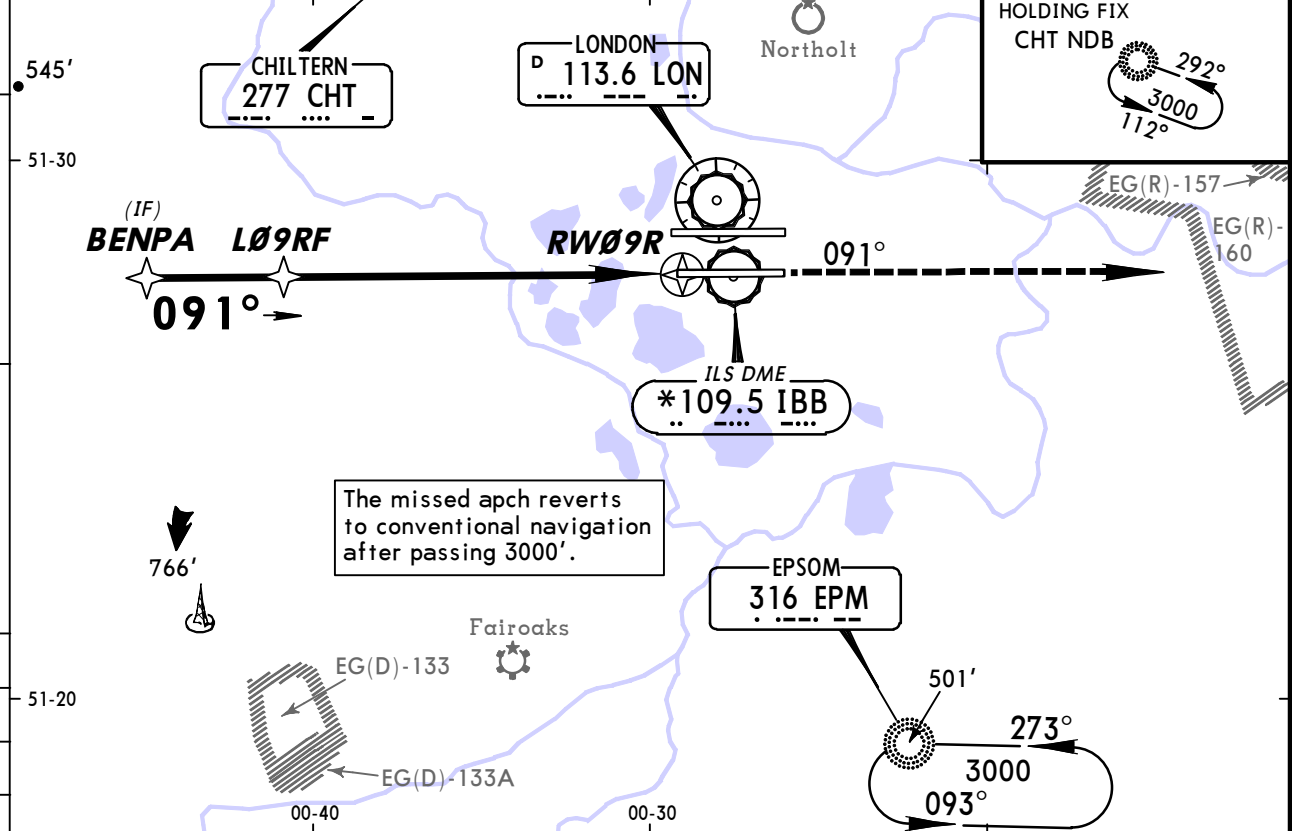
Alt Set: hPa

Rwy Elev: 3 hPa

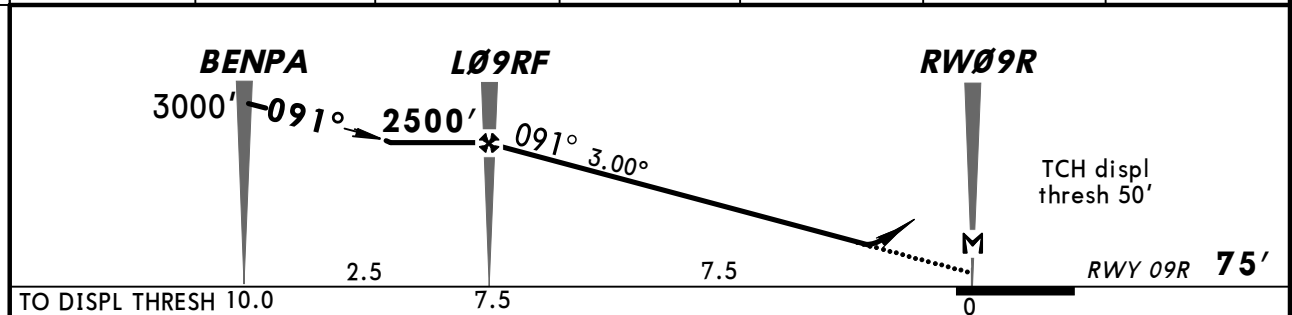
Trans level: By ATC

Trans alt: 6000'

1. Pilots should request RNAV approach on first contact with Director. 2. Acft will normally be radar vectored from holding/IAF. 3. ILS DME reads zero at rwy 09R displ thresh. 4. Minimum temperature -10°C.



DIST to RWY09R	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2360'	2040'	1720'	1400'	1090'	770'

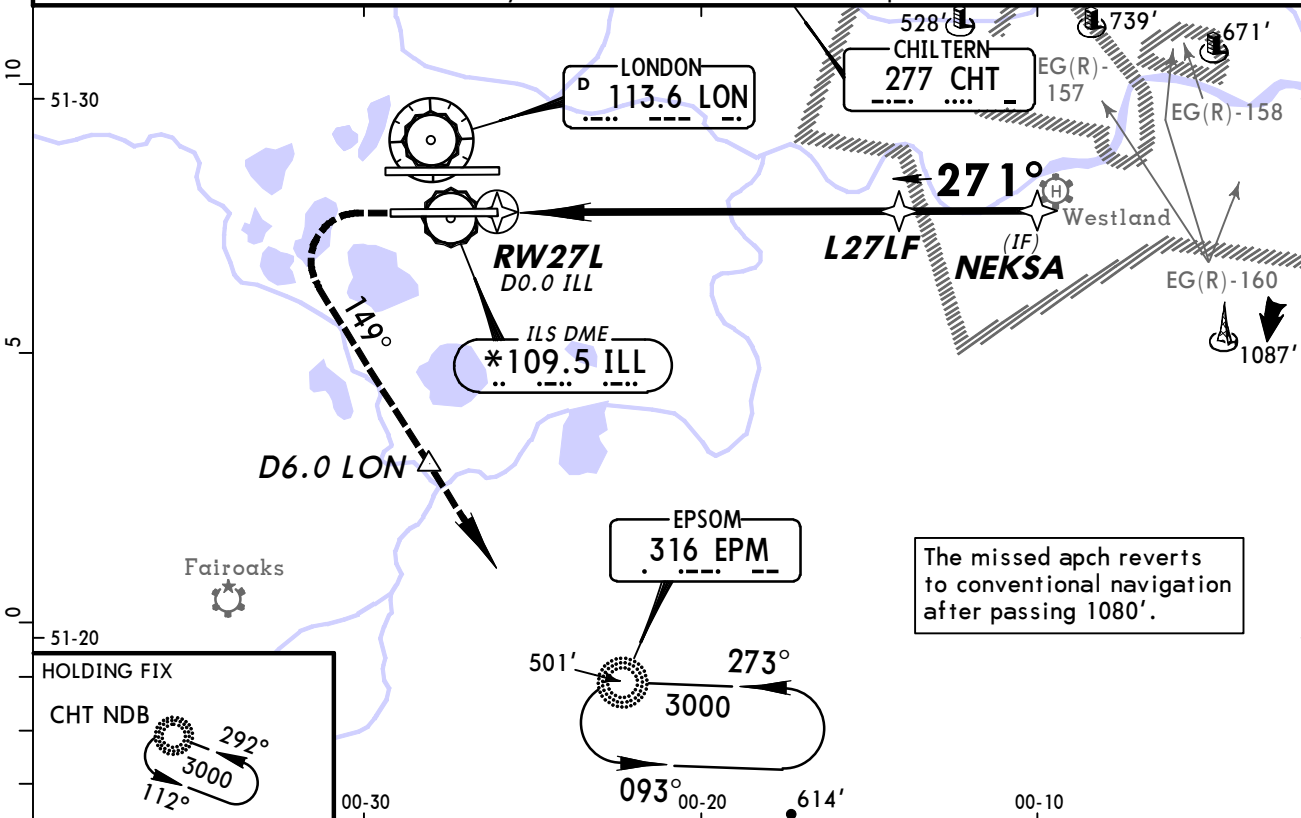


Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI 3000' ↑
Descent Angle 3.00°	372	478	531	637	743	849	
MAP at RW09R							

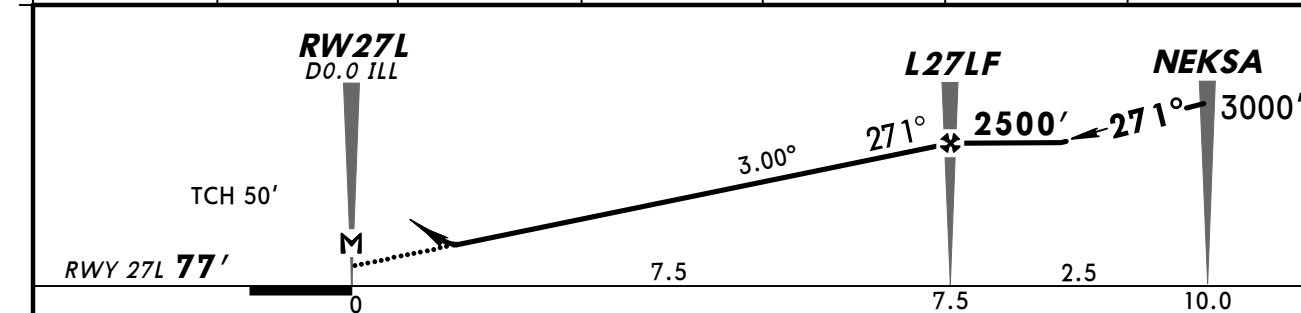
Standard		STRAIGHT-IN LANDING RWY 09R				CIRCLE-TO-LAND	
		LNAV/VNAV		LNAV CDFA			
		DA(H) 500'(425')		DA/MDA(H) 630'(555')			
		ALS out		ALS out		Max Kts	MDA(H) VIS
A	RVR 1300m	RVR 1500m		RVR 1500m		100	750'(667') 1500m
B						135	750'(667') 1600m
C						180	850'(767') 2400m
D		RVR 2000m		RVR 1800m	CMV 2400m	205	850'(767') 3600m

BRIEFING STRIP™

*D-ATIS			HEATHROW Director (APP)		HEATHROW Tower		*Ground			
113.75 115.1 128.07			119.72		118.5 118.7		121.9 121.7 121.85			
RNAV		Final ApcH Crs 271°		Minimum Alt L27LF 2500' (2423')		LNAV/VNAV DA(H) 510' (433')		Apt Elev 83' RWY 77'		2300' MSA ARP
MISSED APCH: Climb to 2000'. STRAIGHT AHEAD until passing 1080' or D0.0 ILL inbound, whichever is later, then turn LEFT onto 149°. When passing D6.0 LON climb to 3000' without delay and as directed. In event of radio failure see 11-6.										
Alt Set: hPa Rwy Elev: 3 hPa Trans level: By ATC Trans alt: 6000'										
1. Pilots should request RNAV approach on first contact with Director. 2. Acft will normally be radar vectored from holding/IAF. 3. Pilots should not expect descent clearance below 4000' until 13 NM from touchdown. 4. ILS DME reads zero at rwy 27L threshold. 5. Minimum temperature -10°C.										



DIST to RW27L	2.0	3.0	4.0	5.0	6.0	7.0
ALTITUDE	770'	1090'	1410'	1720'	2040'	2360'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI 2000'
Descent Angle	3.00°	372	478	531	637	743	
MAP at RW27L/D0.0 ILL							

STRAIGHT-IN LANDING RWY 27L				CIRCLE-TO-LAND	
LNAV/VNAV		LNAV CDFA		Max Kts	VIS
DA(H) 510' (433')		DA/MDA(H) 560' (483')			
ALS out		ALS out			
A	RVR 1500m	RVR 1500m		100	750' (667') 1500m
B				135	750' (667') 1600m
C	RVR 1300m	RVR 2000m	RVR 1500m	180	850' (767') 2400m
D			CMV 2300m	205	850' (767') 3600m

LONDON, UK
RNAV (GNSS) Rwy 27R

BRIEFING STRIP TM

2300'

MSA ARP

Alt Set: hPa

Rwy Elev: 3 hPa

Trans level: By ATC

Trans alt: 6000'



ANS OPS

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Chart changes since cycle 26-2014

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

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
LONDON, (HEATHROW - EGLL)				
REV	BNN 4A, 1B, 1C, 1D & 1E A...	10-2B	05 Dec 2014	11 Dec 2014
REV	BOVVA 4A, 1B, 1C, 1D & 1E...	10-2C	05 Dec 2014	11 Dec 2014

TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport EGLL

Type: Terminal

Effectivity: Permanent

Begin Date: 20141113

End Date: No end date

(10-3P/3Q, 10-3S/3T, 10-3X1 thru 10-3X8) RNAV TRIAL SIDs CPT 1A, 1B, DOKEN 2A, 2B, MID 2N, 2Q, PIBUG 1N, 1Q and SAM 1A, 1B, 1N, 1Q suspended.

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(all SIDs) Eff 8 Mar 12, when ATC removes MAX 250 KT speed restriction below FL100 by the phrase 'No ATC speed restriction', this must not be interpreted as removing the responsibility to adhere to any speed/power limitations due to noise abatement procedures. If a pilot can anticipate to be unable to comply with speed restriction, state minimum speed acceptable when requesting start-up.

Type: Terminal

Effectivity: Permanent

Begin Date: Immediately

End Date: No end date

(10-3P/Q/U/V/X9/X10) Trial RNAV SIDs BPK 1A,1B, DET 1A,1B & WOBUN 1A,1B suspended.