SOP

LPPT

Standard Operating Procedures

Lisboa

10 Jul 2025

Contents

Chapter 1

Administrative

1.1 Distribution and Scope

This manual is for controllers of Portugal vACC and contains procedures to be used on the VATSIM Network.

The procedures laid here are of mandatory use while controlling on the Network and shall never be adopted for real world use.

1.2 Nomenclature

The following is an explanation of the terms “should”, “must”, “shall” and "may" as used in this manual:

- “Should” is used to indicate a recommended practice or policy that is considered as desirable for the safety of operations.
- “Shall” and “must” are used to indicate a practice or policy that is considered as necessary for the safety of operations.
- "May" is used to indicate an optional additional practice or policy that is considered as enhancing for the safety of operations

Chapter 2

General

2.1 Airport Data

Name	Aeroporto Humberto Delgado
ICAO	LPPT
IATA	LIS

2.2 Runways and Declared Distances

Takeoff Run Available (TORA) [m]						
RWY	Total	M5	N2	P	S4	U5
02	3707x45	3707	3631	3007	N/A	N/A
20		N/A	N/A	N/A	3707	2412

Departures from intersections not listed above are not allowed, except for helicopters.

2.3 Radio Navigation Aids

ID	Name	Type	Frequency
LIS	Lisboa	VOR DME	114.80 MHz
ESP	Espichel	VOR DME	112.50 MHz
CAS	Cascais	VOR DME	114.30 MHz
FTM	Fátima	VOR DME	113.50 MHz
NSA	Nisa	VOR DME	115.50 MHz
LAR	Arruda	NDB	382 kHz

2.4 Landing Aids

RWY	ID	Type	Frequency	Course	Glide Path	Category
02	ILI	LOC	109.10 MHz	025º	3º	CAT III
20	ILB	LOC	109.50 MHz	205º	3º	CAT III

2.5 Approach Procedures

RWY	ILS	RNP	VOR DME	LOC
02	✓	✓		✓
20	✓	✓		✓

2.5.1 Intrument Approaches

ILS is the default type of approach at Lisboa.

Should a pilot request another type of instrument approach it should be accommodated, as no significant impact is expected. In Euroscope, assign the corresponding STAR+APP or only APP in the STAR field of the Sector List. No further coordination is required.

2.5.2 Visual Approaches

If the pilot requests a visual approach, first assess if traffic conditions allow for it. When traffic conditions allow, clear the visual approach and restrict descent to 2500' until on final. This ensures separation from the VFR tunnels and traffic within Cascais CTR.

[CALLSIGN], CLEARED VISUAL APPROACH RUNWAY 02, DO NOT DESCEND BELOW 2500 FEET UNTIL ESTABLISHED ON FINAL.

ATC shall not clear for a Visual Approach until clear of traffic:

- In Salemas Route;
- Operating above 1500 FT east of CAS radial 168;

Visual approaches should only be approved when the arrival sequence is assured to be maintained, without negative impact for the aircraft downstream of the visual approach, and provided the traffic requesting visual has the traffic ahead in sight.

Note	Clearing a visual approach in practical terms hands off the control of when the aircraft turns base to the pilots, thus removing the controller's ability to fine tune the arrival sequence by shortening or lengthening the downwind vector. This is the main reason why visual approaches are only feasible during periods of lesser traffic.

2.6 Holdings

FIX	Maximum Altitude	Minimum Altitude	Inbound Course	Direction of Turns	Use/Remarks
ADSAD	FL200	4000ft	343º	Right	RCF RW02
CASLU	FL140	3000ft	357º	Left	Intermediate hold
DEKKI	FL140	FL60	272º	Left	PMS arc hold RW20
EKLID	FL140	FL60	137º	Right	PMS arc hold RW20
EKMAR	FL140	3000ft	042º	Left	LPCS Missed Approach
ESP	FL240	3000ft	245º	Right	Non-RNAV RW02
EXONA	FL240	FL110	245º	Right	TMA entry and intermediate hold
FTM	FL240	FL100	219º	Left	Non-RNAV RW20
GANSU	FL240	FL110	047º	Left	Intermediate hold
INBOM	FL240	FL110	192º	Left	TMA entry hold
ITVIT	FL140	FL60	272º	Left	PMS arc hold RW20
LAR	FL80	4000ft	205º	Right	RCF RW20
LUXUT	FL240	FL110	344º	Left	Intermediate hold
MAZUK	FL140	FL60	092º	Left	PMS arc hold RW02
NATID	FL240	FL60	095º	Left	Intermediate hold
ORTUG	FL140	FL60	317º	Right	PMS arc hold RW02
PESEX	FL90	4000ft	025º	Right	PMS runoff RW02
RINOR	FL200	FL70	224º	Left	Non-RNAV RW20
RULOX	FL240	FL110	089º	Right	Intermediate hold
UNPOT	FL240	FL110	049º	Left	Intermediate hold
UPKAT	FL90	4000ft	205º	Left	PMS runoff RW20
YETSI	FL140	FL060	317º	Right	Intermediate hold
XAMAX	FL240	FL110	178º	Left	TMA entry hold

The following holds are considered not horizontally separated:

- PMS runoff holds from PMS arc holds;

- PMS arc holds from intermediate holds;
- Intermediate holds from other intermediate holds of the same arrival;
- DEKKI from D10 or D66;
- ESP from ORTUG or PESEX;
- EXONA from TRA57;
- GANSU from UNPOT hold;
- LUXUT from D63 or D64;
- XAMAX from INBOM hold or R70;
- YETSI from TRA13 or ORTUG;

Holding should primarily take place at PMS arc holds. Holding at or below FL140 ensures separation from intermediate holds.
Intermediate holds should be used to avoid saturating PMS arc holds. Holding between FL150 and FL240 ensures separation from PMS arc holds.
Enroute sectors may use TMA entry holds when transfer of new arrivals is temporarily suspended.

Vertical separation shall be used when horizontal separation between holds or segregated airspace does not exist.
ITVIT hold shall be used when DEKKI becomes unavailable due to the activation of D10 or D66.
EXONA is used as a substitute of UPULO as a TMA entry hold, due to lack of separation between UPULO and Spanish segregated airspace.

2.7 Preferential Runway Configuration

Runway in use at Lisboa will be the runway with a headwind component.

In case of calm or cross winds, refer to the weather forecast to determine which runway to use and avoid unnecessary runway changes.

If both runways are suitable, prefer the use of RWY02.

In case of Low Visibility operations, refer to *Low Visibility Procedures (LVP)*.

2.7.1 Runway Changes

Runway changes shall be based on weather observations, forecasts and pilot reports, and should take the traffic situation into account.

TWR advises APP about the intended time of runway change. Based on this, APP informs TWR who will be the last arrival to the previous runway, and TWR advises APP, GND and DEL who the last departure will be. TWR, GND and DEL shall manually change the runway and SID of the flights departing from the new runway, and reissue clearances accordingly.
Runway in use and ATIS should be reconfigured with the new runway at the intended time of runway change.

2.8 Transition Altitude and Transition Level

The transition altitude in Lisboa is 4000'. The Transition Level is automatically calculated by the ATIS using the table below. Issuing altitudes within the transition layer (between TA and TL) shall be avoided.

QNH	From 942.2 to 959.4	From 959.5 to 977.1	From 977.2 to 995.0	From 995.1 to 1013.2	From 1013.3 to 1031.6	From 1031.7 to 1050.3
TL	70	65	60	55	50	45

2.9 Positions and Responsibilities

2.9.1 Lisboa Airport

ID	Position	Callsign	Frequency	Responsibilities
DELPT	LPPT_DEL	Lisboa Delivery	118.955	Check Flight Plans; Issue ATC Clearances; Manage Departure Sequence
GNDPT	LPPT_GND	Lisboa Ground	121.755	Ground Movements; Enforce Departure Sequence
CTRPT	LPPT_TWR	Lisboa Tower	118.105	Lisboa CTR; RWY02/20; RWY crossings
ARRLI	LPPT_F_APP	Lisboa Arrival	125.130	LPPT arrivals from sequencing legs onwards, LPCS arrivals when LPPT RW02, LPCS departures when LPPT RW20
TME	LPPT_APP	Lisboa Approach	119.105	LPPT departures, Lisboa TMA East
TMO	LPPT_W_APP	Lisboa Control	123.980	Lisboa TMA West

2.9.2 Adjacent Positions

ID	Position	Callsign	Frequency	Responsibilities
CTRCS	LPCS_CTR	Cascais Tower	120.305	Cascais CTR
ZMOJ	LPMT_TWR	Montijo Tower	134.100	Montijo MCTR
ZSTR	LPST_TWR	Sintra Tower	119.860	Sintra MCTA
ZSTW	LPST_APP	Sintra Approach	118.610	Sintra MCTA
ZAVR	LPAR_TWR	Alverca Tower	119.235	Alverca CTR
OESX	LPPC_O CTR	Lisboa Control	128.900	West Expanded Sector
WSTL	LPPC_W CTR	Lisboa Control	131.325	West Sector
LPPC	LPPC_CTR	Lisboa Control	132.850	Lisboa FIR
ESTL	LPPC_E CTR	Lisboa Control	125.550	East Sector
NORL	LPPC_N CTR	Lisboa Control	132.305	North Sector
CENL	LPPC_C CTR	Lisboa Control	136.030	Centre Sector
SULL	LPPC_S CTR	Lisboa Control	132.705	South Sector

ZMTRN	LPMR_APP	Monte Real Approach	122.035	Monte Real MCTA
ZFIS	LPAM_CTR	Lisboa Information	123.755	Flight Information; Military airspace

2.10 Transfers

From	To	Conditions/Remarks
DEL	GND	Pilot reports ready/TSAT window, whichever is later
GND	TWR	Approaching runway holding point or point to cross the RWY
TWR	APP	Automatic handoff at 1000'. Give a firm goodbye to increase chances of pilot switching to APP frequency automatically
APP	CTR	Reaching FL240/Reaching lateral limits if CRZ FL BLW FL245
CTR	APP	Reaching FL250/Reaching lateral limits if CRZ FL BLW FL245
APP	TWR	Instrument Approach: Stabilized on the approach Visual Approach: In the vicinity and visual with the AD
CTRCS	CTRPT	Destination LPJB: Reaching Caxias 500 FT Destination LPPT: Reaching Belas 1500 FT

Refer to PMS presentation for more detailed information.

2.11 Separation Minima

Separation between aircrafts shall always be equal or greater than the separation minima.

In LPPT, separation minima is as follows:

- 5Nm
- 3Nm below FL245 and within 50Nm of LPPT

2.12 Flight Planning

When performing flight plan validation verify the filled route complies with the points detailed below.

Additionally, perform a sanity check based on good sense. For example, checking half the route is missing from the flight, a flight from Europe to North America does not route through the South Atlantic, etc.

If the filled route is not acceptable, but the controller is able to correct it without undue workload, correct it and advise the pilot via private message of the new route.

If the filled route is not acceptable to the point the controller does not have the ability to correct it or provide a valid one, inform the pilot via private message and request the pilot to refile.

Note	In some circumstances the pilot may report that a new flight plan was filled, but it does not show to the controller. This is due to the flight plan entering a locked state where the pilot can no longer update it. Either request the new flight plan details via private message, or request the pilot to reconnect to the network.

2.12.1 VFR

No requirements are in place for VFR fixed wing departures from LPPT.

VFR helicopters entering or leaving Lisboa CTR are to comply with published AIP VFR helicopter routes.

Traffic permitting, only two VFR flights will be simultaneously accepted concerning any activity in Lisboa CTR, except for flights from/to LPPT.

Low altitude VFR Flights over Lisboa City, must maintain permanent two way radio communications with ATC, and minimum altitude of 1500FT.

Pilots should be prepared to exit the area at any time or hold VFR over one of the following designated points:

- Farol do Bugio and Algés - at an altitude of 500FT
- Mata de Queluz - only for helicopters in stationary flight at an altitude of 1000FT and operating in conditions of visibility equal or greater than 10KM and with clouds scattered at or above 3000FT (conditions forecast to the next hour)

2.12.2 IFR

Any CFMU validated flight plan should be considered valid, even if not meeting the below guidelines.

Note	It is not required, or expected, to CFMU validate flight plans. The below guidelines are a noncomprehensive simplification of what a CFMU valid flight plan should be, for the purposes of quickly validating a VATSIM flight plan.

Departures must begin their route at a point associated with an SID. At aerodromes without SIDs the route must begin at a named fix or navigation aid within 25 NM of the aerodrome.

FTM and ESP are reserved for non-RNAV aircraft.

After the first point aircraft route as follow:

Cruise < FL195	**FL195 < Cruise < FL245**	**FL245 < Cruise**
Lower airways and DCT (DCT max 300nm)	Upper airways and DCT (DCT max 300nm)	DCT (no max distance)

Domestic flights' route to a destination with STARs must end at the beginning of a STAR. Routes to domestic destinations without STARs must end at a named fix or navigation aid within 25 NM of the aerodrome, or 50 NM of LPLA.

IXIDA - ABLEG with RFL below FL245 compulsory for traffic destination LPPR.
DUZOP - ODEMI with RFL below FL235 compulsory for traffic destination LPFR.

International flights must route through a LPPC FIR boundary fix.

LECM flights must then route via airways, or DCT if leaving northbound via a point West of ADORO, or DCT along airway fixes if East of ADORO.

GMMM flights must then route via airways or DCT (max 75nm).

Ensure routes via unidirectional airways obey their directionality.

2.13 Low Visibility Procedures (LVP)

Low Visibility Procedures will be in force when:

- RWY 20 in use:
  - RVR TDZ RWY 20 is 550m or below
  - Cloud ceiling height is 200ft or below
- RWY 02 in use:
  - RVR TDZ RWY 02 is 800m or below
  - Cloud ceiling height is 200ft or below

LVP in force shall be communicated to the pilot during the clearance or during the initial contact with APP (ATIS URL should also be changed to inform about LVP - `(...)lvp=true`).

When implementing LVP, set A-CDM departure rate by typing `.cdm lvo on` on the EuroScope command line.
To return to NVP, set A-CDM departure rate by typing `.cdm lvo off` on the EuroScope command line.
Ground Radar LVP Status shall be toggled to LVP when LVP are implemented, and NORMAL when LVP are suspended.

Holding position of the runway will be the CAT II/III holding point

Do not issue conditional clearances relying on visual references (when clear of traffic, P/S approved, behind landing traffic, line up and wait behind, etc.).
Do not issue conflicting taxi clearances. Issue shorter taxi clearances that do not intersect other taxi clearances. Progressively issue new clearances until reaching the CAT II/III holding point.
Wait until the preceding traffic has vacated the taxi segment before issuing a new clearance using it.
As we are unable to light up stop bars, separate traffic on the ground by issuing holding clearances at various taxiways (max. 1 traffic per taxiway segment/holding).

Issue landing clearances no later than 2NM final and only if the ILS sensitive area is clear.

Inform about RVR during takeoff, landing and continue approach clearances.

Chapter 3

Delivery (DEL)

3.1 General

Lisboa Delivery is responsible for validating new flight plans from LPPT, issuing enroute clearances and takes part in managing and enforcing the departure sequence.

3.2 Area of Responsibility

Lisboa Delivery does not have an area of responsibility, however it takes part on the departure timeline, being the first ATC agency to be contacted.

Lisboa Delivery will provide departure information and enroute clearance. Departure information shall consist of ATIS letter and QNH (when ATIS is inoperative, provide departure runway, wind and QNH, in this order). Enroute clearance shall consist of the clearance limit, assigned SID and assigned squawk code. Clearance limit shall always be the destination aerodrome.

Additionally, it will task the administrative roles of validating flight plans, creating the departure sequence and calculating departure delays when needed.

Lisboa Delivery will keep departures until the aircraft reports ready, or TSAT window, whichever comes later, at which point it will handoff the aircraft to Lisboa Ground.

Lisboa Delivery, as the lowest position of LPPT, is responsible for hosting DCL, ATIS and CDM Master.

3.3 Procedures

3.3.1 Flight Plan validation

Items to check on each Flight Plan:

- Flight rules coherent with rest of the flightplan
- Valid ICAO aircraft code
- Navigation equipment code letter present in accordance with VATSIM internal *equipment list*. Add or correct if needed
- Correct departure and destination aerodromes
- Route check. Refer to *Flight Planning* for details
- Check remarks for important information

3.3.2 A-CDM

TSAT is automatically handled by the CDM plugin.

When connecting to the network, it is required for one, and only one, controller to be the CDM Master, the one who hosts the CDM. Other positions are Slaved to the Master.
When connecting to the network, to become CDM Master, input `.cdm master lppt` in the EuroScope command line.
To disconnect and handoff the master to another controller, the leaving controller inputs `.cdm slave lppt` in the EuroScope command line. Then, the new host can input `.cdm master lppt` on their command line.

Operation of CDM is done through the Departure List. For more details see TOPLIS Manual, Systems A-CDM.

CDM calculations become available from the moment a TOBT is assigned.

Departures are planned with the following spacing:

- 3 minutes in NVO;
- 5 minutes in LVO.

CDM spacing is for planning purposes only and does not constitute a separation minima requirement. For departure separation minima see *Separation*.

When a flight reports "Ready", TOBT shall be assigned or updated to the current time.

TSAT shall be transmitted to the flight when the flight reports ready, if there's any delay.

Start up or pushback clearance can only be issued within the TSAT window, +/- 5 minutes of the TSAT.

Flights that have missed their TSAT window shall report "Ready" again, and only then should TOBT be updated to the current time. Advise the flight of any subsequent TSAT, if any.

For more information on the CDM Plugin, refer to the TOPLIS Manual.

3.3.3 IFR Departure

Departures climb to FL100.

Assign an RNAV SID to RNAV capable aircraft. Assign FTM or ESP SID to non-RNAV capable aircraft.

Flights exiting LPPC FIR via TOSDI (RIVRO) assign IXIDA departure.

Flights exiting LPPC FIR via UREDI/OGERO(above FL245) or PORTA/PORLI (below FL245), assign ORVED departure.

SIDs ending with 1X (shorter, over the river) are the default. SIDs ending with 1L (longer, east of D10) only on pilot request, for aircraft with insufficient climb performance to cross PT755 +FL160 on the 1X departures.

Other cases assign SID according to the closest Lisboa TMA exit point.

If the pilot cannot accept any SID, coordinate with Lisboa Approach. Expect to assign runway heading and FL100.

Departures with outdated AIRAC shall be cleared to climb on runway heading to FL100.

3.3.4 VFR Departure

Departures to LPCS climb to 1500 FT and:

- Turn left to Cascais D point, when departing runway 02;
- Turn right to Cascais C point, when departing runway 20.

Other fixed wing aircraft departures subject to Approval Request with TME.

Except for priority flights, VFR helicopters should comply with VFR Helicopter Routes. Departures should be cleared to turn to Igreja das Galinheiras 1500ft or RALIS 1000ft, for Visual Salemas Route or Visual Tejo Route accordingly.
Other VFR helicopter departures, including priority flights, subject to Approval Request with TME, or TWRCAS when destination is within Cascais CTR and proceeding at 1500 FT or below.

Start-up and/or taxi clearance shall not be issued before flight plan clearance has been successfully readback unless there is a specific reason to do so (i.e. Aircraft reporting low battery voltage or priority status).

A discrete SSR code shall be assigned to all traffic.

3.3.5 DCL Clearance

If connected as DEL, GND or TWR the logon code will be LPPT.
When connected as a CPDLC capable position, the logon code shall be the CPDLC logon code allocated to that position.

If the pilot does not reply within 3 minutes, the clearance will timeout automatically and you should revert to voice procedures

For more information on the DCL functions, refer to the TOPLIS Manual.

3.3.6 Delivery Coordinator Procedures

Delivery can be manned by two controllers: one executive and one coordinator.

Executive Controller Duties (LPPT_DEL):

- Responsible for all voice communication with flights on the frequency
- Responsible to set the clearance received flag and the "READY" state
- Responsible for CDM (CDM Master)
- Responsible for ATIS
- Datalink clearances (DCL Host)

Coordinator Controller Duties (LPPT_C_DEL):

- Validate flightplans
- Text communications, including private messages related to flight plan issues and text only flights
- Coordination with other ATC positions

Note	After a text only flight has been successfully given clearance, Coordinator Controller should notify Executive Controller of such, to increase situational awareness

Note	Only assign a squawk code AFTER the flightplan has been validated, to signal to the executive controller that all checks have been done

3.4 Phraseology

3.4.1 IFR Departure

ATC	Aircraft
[callsign] information [ATIS letter] QNH [QNH] (low visibility procedures in force), cleared to [destination], [SID], squawk [transponder code] *Air Portugal 541, information E, QNH 1018, cleared to Madrid, ORVED1N departure, squawk 4501*	
	[readback]
[callsign] readback correct, (slot time [CTOT]/TSAT time [TSAT]), report ready. *Air Portugal 541, readback correct, report ready.* OR [callsign] confirm [repeat incorrect readback item]? *Air Portugal 541, confirm ORVED1N?*	

Note	In Lisboa, when issuing a clearance with a SID, the initial climb clearance is omitted

3.4.2 VFR Departure

ATC	Aircraft
	[clearance request]
[callsign] standby for coordination. OR [callsign] cleared to [destination], after departure [departure instructions], squawk [transponder code] *Whitejet 401, cleared to Cascais, after departure turn left to Cascais 1500 feet, squawk 4751*	

Note	Departure instructions shall include a directional (such as turn left/right/proceed to/join/etc) and a climb instruction

Note	VFR traffic will typically be smaller aircraft that might need to start their engines right away. Be ready to transmit the clearance at a later stage, such as just before or during taxi

Chapter 4

Ground (GND)

4.1 General

For the standard taxi routes, refer to the AIP.

Transponder should be ON:

- From clearance for push-back or taxi, whichever is earlier
- After landing, continuously until the aircraft is parked on stand

The transponder must be ON at the latest before issuing take off clearance during NVP, or before taxi clearance during LVP.

Departures have priority over arrivals regarding taxi/pushback. Sometimes it can be better to give priority to the arrival to ease traffic flow.

4.2 Area of Responsibility

Lisboa Ground will be responsible for all ground movements excluding those on or West of the runway.

Lisboa Ground will take departures from pushback or startup clearance until reaching the departure holding point, and arrivals from exiting the Rapid Exit Taxiway until reaching the stand. It will additionally be responsible for any movements such as aircraft towing or taxiing to other positions, run-ups, etc.

4.3 Procedures

4.3.1 Departures

When RWY02 in use, ACFT taxiing via G2, U1 and N1 are to be assigned position N for departure. For ACFT taxiing via M4 assign position M for departure. Position P is available if the pilot requests it and Tower is able to accommodate the request (in these cases annotate the intersection on the Ground Radar RMK label field). Departures from stands 122, 123, 124, 125 and 126 should push facing north to taxi via G. Stands 117 and further south should push facing south and taxi via M. Some flexibility is allowed regarding direction facing in apron 12x when an operational advantage exists to push in the other direction.

When RWY20 in use, medium and light ACFT are to be assigned position U for departure, unless the pilot requests full rwy length (in these cases annotate the intersection on the Ground Radar RMK label field). Heavies will go for S.

As soon as there are no further conflicts and it is unlikely that the pilot will follow an incorrect taxi route, the aircraft should be released to tower.
Ground shall instruct the aircraft to “contact Tower” if the holding point is empty, or to “standby for Tower” otherwise.

4.3.1.1 Helicopters

Helicopters should taxi via W2 and T to T5 holding point.

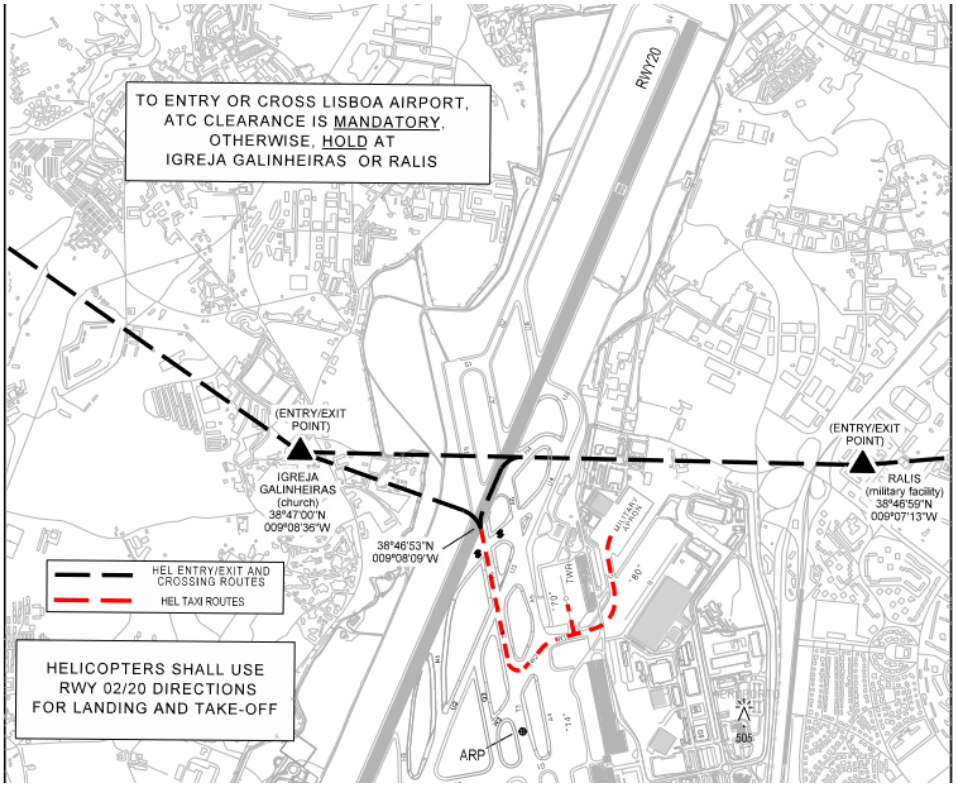


Figure 4.1: Helicopter Ground Routes

4.3.1.2 Runway crossing

If needed, runway crossing shall be made in contact with Lisboa TWR. The normal position to cross is taxiway A6, however crossing via T or via U is also a possibility. All three taxiways can be used to cross the runway simultaneously, however care should be taken to ensure the departure sequence is respected.

4.3.2 Arrivals

If RWY02 is in use, arrivals will vacate via H4. Tower will instruct to vacate via H4 and U4 prior to transferring to Ground.

In case of RWY20, arrivals will vacate via H1 or H3. Tower will instruct to continue either via L, G, U or F according to the assigned stand.

Destination Apron 40, 41, 42, 20, 22, 10, 11, 12 will continue via L.

Destination Apron 50, 60, 12, 14, 70, 80, Mil Apron will continue via G (or F if proceeding to stands connected to Taxilane F).

Destination Apron 30 will continue via U.

Stand 122 will be used as the cutaway point in deciding whether to taxi via G or via L. Stand 122, inclusive, to the north will be instructed to continue via G. Stand 117, inclusive, to the south will be instructed to continue via L.

If taxiway L or G is blocked by a pushback (coordinate with GND and look at the ground radar), Tower will instruct to continue via the other taxiway, or if both are blocked, via U. Tower may attempt to coordinate an arrival vacating via A6 or T. Main consideration to approve these requests is:

- RWY 02: A conflict hazard between an aircraft vacating via H4 and another via A6 at the intersection of taxiway A with U, or if you anticipate that this will increase the runway occupancy time, when that is a factor
- RWY 20: A head on conflict between an aircraft vacating via T or A and another taxiing to the runway via T or A

Helicopters should taxi via W and D to Apron 70, or W and C to Military Apron for Military and Hospital flights.

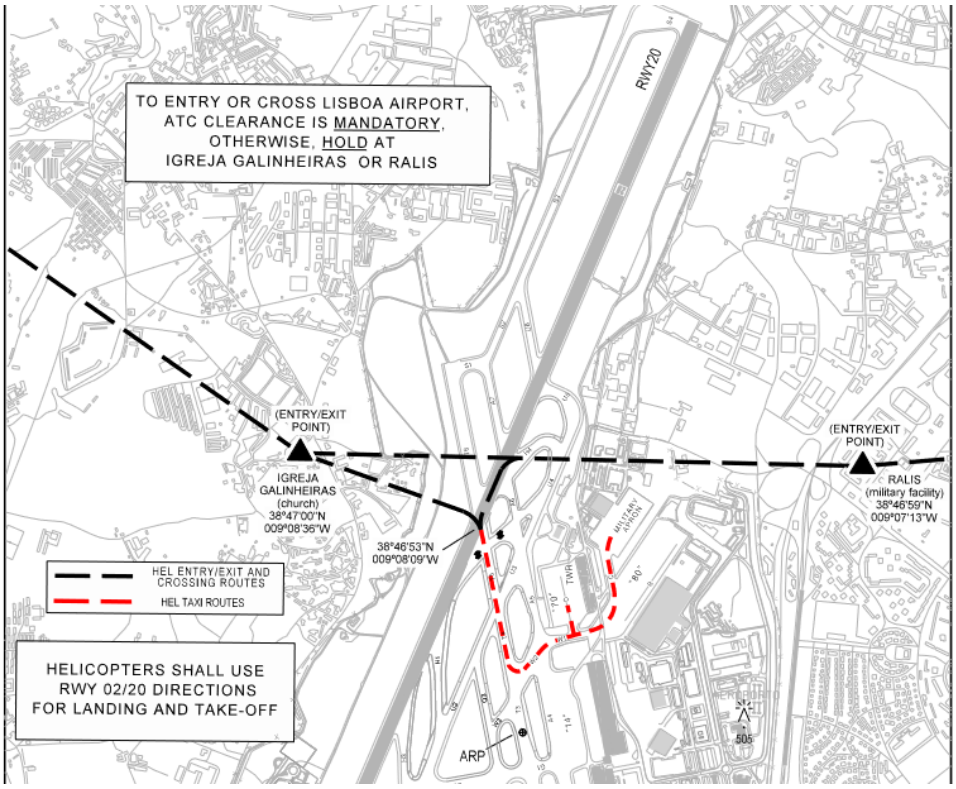


Figure 4.2: Helicopter Ground Routes

4.4 Stand assignment

For stand assignment, aircraft type, airline and origin of flight shall be taken into account.
Jetway stands are from 107 to 147 (excluding 108). Jetways for Non-Schengen flights are 126 until 147.

Jetway stands are typically used by Flag Carriers and easyJet. Stand 108 is mostly used by ATR aircraft.

All other stands are remote and can be given to both Schengen and Non-Schengen flights.

Apron 20 is for low cost companies (except easyJet), and occasionally Cargo aircraft.

Apron 22 is used both by all types of traffic, ranging from Low Costs to Flag Carriers, including Business Jets and diverted Single Engine Pistons.

Apron 70 is used by Embraer, ATR aircraft, Business Jets, private aircraft and helicopters.

Apron 80 is the main option for Cargo aircraft, but is also used as a normal remote apron. Care should be taken to respect the wingspan limitations of the apron. Stands 801 to 803 are limited to aircraft B763 and smaller. Stands 804 to 806 are limited to A321 and smaller. MD11 and larger do not fit anywhere in the apron, and should be assigned a remote stand elsewhere.

Military Apron is used by State and Military aircraft, emergency helicopters, and exceptionally Business Jets when parking elsewhere is not possible.

If the pilot requests another stand check stand availability and compatibility with aircraft type. If no problems are found, assign the requested stand. If you find a problem, inform the pilot and suggest another stand nearby.

4.5 Restrictions

The push-back/start-up procedure has to be initiated no later than 2:00 minutes after the start-up approval has been issued.

Power-back is not allowed in any position

4.5.1 Taxiways

G2 turning right into U2 forbidden for Heavy aircraft.

Aircraft taxiing northbound on TWY S2 forbidden to turn right and enter TWY U6.

Taxilanes A1, A2, A3, M1, K and Y restricted to aircraft wingspan up to 48 meters (B752 max).

Taxilanes B, C, and W1 restricted to aircraft wingspan up to 51 meters (B763 max).

Taxilanes E and F restricted to aircraft wingspan up to 36 meters(A320 family max).

Taxilane D restricted to aircraft wingspan up to 31 meters (E195 max).

Taxiways U4 and U5 restricted to aircraft up to Code C to taxi for takeoff, due to pavement restrictions.

4.5.1.1 A380

On the East side of the runway, A380 shall taxi via the taxiways depicted below. No restrictions apply on the West side of the runway.

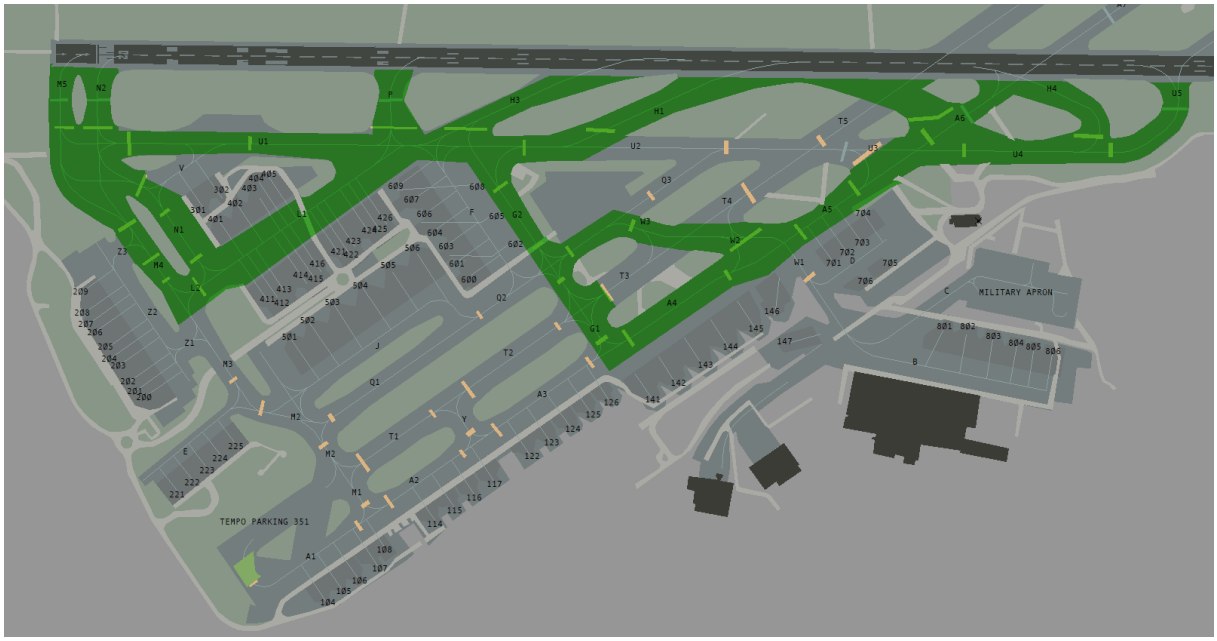


Figure 4.3: A380 capable areas

Stands 146, 412, 415 and 608 are designated as capable to receive an A380.

These restrictions take precendence over any standard taxi route, both in NVP and LVP.

4.5.2 Aprons

4.5.2.1 APRON 70

On 701, 702, and 703 positions (nose out) aircraft will enter through taxiway A5 and depart through Taxilane D and via Taxilane W1.

On position 704, 705 and 706 (nose-in) the aircraft will enter by Taxilane W1 and Taxilane D. The departing maneuver will be done with push-back and pull-ahead to the breakaway zone of Taxilane D with the nose facing South.

4.5.2.2 APRON 14

Aircraft pushing back from Stand 146 shall be pushed along the full length of the Stand maintain alignment with the lead-in line of the Stand until reaching TWY A5 and Taxilane W1 intersection. From here a Pull-ahead manoeuvre shall be executed placing the aircraft over A4 TWY centreline.

4.5.2.3 APRON 60

Apron Taxilane F restricted to aircraft with wingspan maximum 36M (A320 family). Larger aircraft shall use TWY G2 for taxi.

4.5.2.4 APRON 50

When B744 aircraft and larger are parked on this Apron, they should always enter and exit through Taxiway M2.

4.5.2.5 APRON 30

Normal Visibility Operations (NVO) Traffic for all Runways:

- From Stand 301 the push-back manoeuvre must be nose faced South
- From Stand 302 the push-back manoeuvre must be nose faced North

Low Visibility Operations (LVO) Traffic for Runway 20:

- All push-back must be nose faced South.

4.5.2.6 APRON 40

Pushback from Stands 425 and 426 must be nose faced North, to avoid infringing taxiway U.

4.5.3 Engine runups

Preflight engine runups may only take place on taxiway U2 or T6.

4.6 Phraseology

4.6.1 Startup request

ATC	Aircraft
[callsign] information [ATIS letter] QNH [QNH], startup approved. *Whitejet 401, information Quebec QNH 1018, startup approved.*	

4.6.2 Push and start request

ATC	Aircraft
[callsign] push and start approved facing [direction] OR [callsign] hold position, traffic in the apron OR [callsign] when clear of [company] [aircraft type], push and start approved facing [direction] OR [callsign] TSAT [time], call you back according to TSAT. *Whitejet 401, push and start approved facing south.* *Whitejet 401, when clear of British Airways A320, push and start approved facing west.* *Whitejet 401, TSAT 1821, call you back according to TSAT*	

4.6.3 Taxi out

ATC	Aircraft
[callsign] taxi via [route] to [clearance limit], (conditional clearances) *Iberia 3208, taxi via M to M holding point runway 02, give way to SATA A320 taxiing on L.* *Iberia 3208, taxi via L and M, hold short of Q.* *Iberia 3208, taxi via A and U to CAT TWO/THREE holding point runway 20 .*	

4.6.4 Taxi in

ATC	Aircraft
[callsign] taxi via [route] to stand/apron [stand], (conditional clearances) *KLM1769, taxi via M and E to stand 224.* *Air France 241, taxi via M, hold short of J.* *Medic27, taxi via A, W and C to Military Apron.*	

4.6.5 Departure handoff

ATC	Aircraft
[callsign] contact Tower 118.1 OR [callsign] standby for Tower 118.1	

Chapter 5

Tower (TWR)

5.1 General

In a constant flow of traffic, the normal sequence will be a departure, a landing, a departure, a landing and so on. Tower will be the final element to tweak the departure sequence and will work on a more immediate time frame, compared to the more tactical time frame of Delivery for example.

5.2 Area of Responsibility

Lisboa Tower is responsible for runway 02/20, the taxiways West of the runway, and the CTR airspace as defined in AIP. It is also responsible for any Heliport located within the CTR. Vertical limits are defined as surface up to 2000ft.

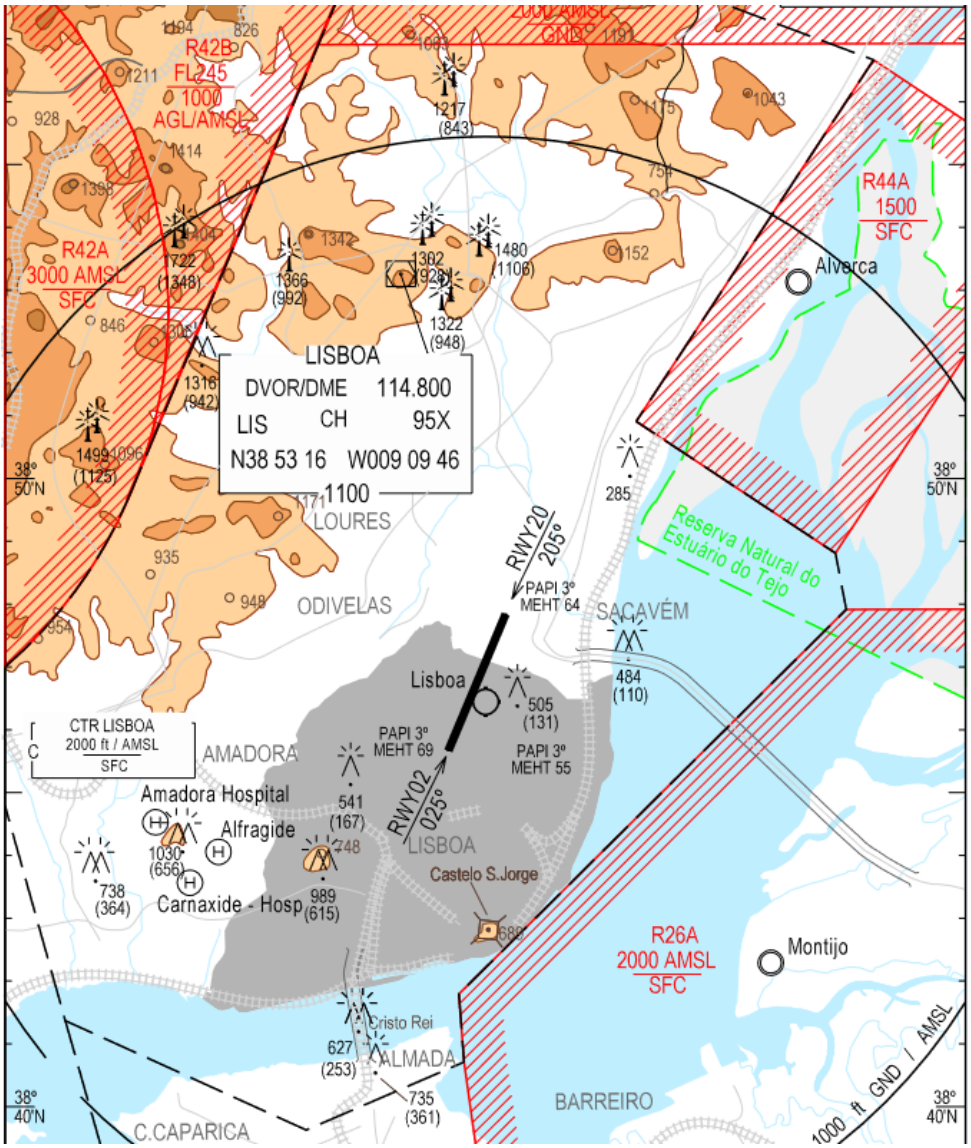


Figure 5.1: Lisboa CTR

Lisboa CTR is neighboured by Cascais CTR to the Southwest, Sintra MCTR and MCTA to the West, Alverca MCTR to the Northeast and Montijo MCTR to the Southeast.

Lisboa Approach sits on top of Lisboa CTR, starting at 1000ft within 9NM of LPPT, and 1500ft beyond 9NM

TWRLIS may use without any coordination the airspace within Lisboa CTR at or below 1500 FT. Above 1500 FT TWRLIS shall coordinate an Approval Request with the relevant Lisboa Approach

sector, detailing the route and altitude requested.

5.3 Procedures

5.3.1 Departures

5.3.1.1 Separation

When not limited by Wake Turbulence Separation, minimum separation between consecutive departures, with or without landings in between, shall be (Jet aircraft are considered faster than any other type):

- 1 minute if previous departure is faster;
- 2 minutes if same performance;
  - May be reduced to 1m30s, with prior agreement between TWR and APP.
- 3 minutes if previous departure is slower;

For the purposes of Wake Turbulence Separation Minima, position M and N are the same and no additional separation is required.

5.3.1.2 Clearance Deadline

If a departing aircraft has not yet begun its take off run by the time an arrival crosses the 2 NM line, TWR should, in the following order:

- Not issue, or cancel, take off clearance;
- Instruct the arrival to go around.

This procedure assumes similar aircraft performance. It should be adapted when large performance differences exist.

5.3.1.3 Aircraft Readiness

Aircraft at the runway holding point should be considered as able to commence line-up and take-off roll immediately after clearance is issued. When cleared for take-off, aircraft may take up to 10 seconds to start moving.

5.3.1.4 Other Traffic in the CTR

In the presence of VFR traffic within Lisboa CTR in the vicinity of IFR departures, TWRLIS becomes responsible for identification and separation of departing IFR traffic, until Separation based on ATS Surveillance exists. See *section 5.6 ATS Surveillance Systems* for specific procedures.

Before an IFR departure is cleared to take off:

- Traffic information shall be provided;
- IFR departure shall be instructed to remain on TWR frequency;
- VFR flight shall be deconflicted from IFR paths.

VFR can be deconflicted from departures and arrivals by instructing to:

- Remain East or West of the Runway Extended Centerline, or;
- Instructing to not interfere with departures/arrivals, or;
- Holding over Igreja das Galinheiras or RALIS.

Both the IFR departure and VFR flight shall remain on TWR frequency until vertically separated.

5.3.1.5 Different Departure Frequency

When TME is not online the pilot should be informed of the applicable departure frequency before issuing takeoff clearance.

5.3.1.6 Annotations

Annotations shall be removed before initiating a transfer to any unit other than TWRLIS.

5.3.2 Arrivals

Remember you can issue speed restrictions for traffic on ILS, but avoid asking them to reduce to minimum approach speed too early, unless necessary.
If you feel that the separation on final is too short, inform the APP controller and ask for a bigger separation.

Inbound VFR traffic from TWRCAS is subject to Approval Request coordination with TWRCAS. Coordination is effected before startup clearance. Route, altitude, time and transfer conditions shall be defined in the Approval Request reply.
Traffic should maintain the coordinated level. Route should be done in reference to one of the following Coordination Points:

- 1000 FT Estádio Nacional (ENACI), joining Tejo Route;
- 1500 FT to Belas (BELAS), destination LPPT or joining Salemas Route;
- 500 FT to Caxias (CAXIA).

Traffic via Caxias only for helicopters to land within Lisboa CTR.
Restrictions should be applied to ensure that only two VFR flights will be simultaneously accepted concerning any activity in Lisboa CTR, except for flights from / to LPPT.

After the arrival has decelerated close to taxi speed, instruct to vacate via the Rapid Exit Taxiway and an ensuing taxiway, and order to contact Ground. See Ground *Arrivals* to determine the ensuing taxiway
Arrivals may request to vacate via taxiway A6 or T on initial contact with Tower. Coordinate with Ground and if successful, after the arrival has decelerated close to taxi speed instruct to vacate via the taxiway requested. If not, instruct to vacate via the Rapid Exit Taxiway.

Note	Main consideration to approve these requests on Ground *Arrivals*

5.3.3 Go arounds

In case of a go around, the published missed approach is the following:

Runway	Route	Climb
02/20	Runway Heading	FL60

In case of a go around:

- Immediately advise TME, via the most expeditious channel;
- Set CFL to FL060;
- Set Missed Approach, via Callsign menu;
- Transfer to TME.

Go around shall not be modified, unless previously coordinated with APP.

Departures are suspended following a missed approach, until a release is obtained from TME.
A release is not required if the missed approach aircraft is of equal, or faster, performance than the departure, and:

- The departure is recleared to climb to 4000 FT, and;
- The missed approach has crossed the Departure End of Runway, and;
- The missed approach is above 2500 FT and climbing.

5.3.4 Reduced Runway Separation Minima

RRSM is available during daytime, from 30 minutes after local sunrise to 30 minutes before local sunset, for use to clear an arrival while a departure is still occupying the runway, provided:

- The tail wind component is not greater than 5 KT;
- Ground visibility is at least 5 KM and the ceiling is not less than 1000 FT;
- Runway is dry;
- The arriving aircraft receives traffic information as follows: (call sign) traffic information, (Aircraft Type) departing Runway (Designator).
- When the arrival crosses the threshold, the following distances will exist:
  - RWY02: departure is beyond intersection U6
  - RWY20: departure is beyond intersection P
- Following phraseology is used: (call sign) after the departing (Aircraft Type) cleared to land Runway (Designator).

The above mentioned distances are about 1.3NM. If the distance between the arrival and the departure approaches or reduces below it, instruct a go-around before the arrival crosses the runway threshold.

5.4 VFR Helicopters

Several VFR heliports exist and are under responsibility of Lisboa Tower, with a mix of civilian, military, SAR and Hospital flights.

An effort should be made to clear SAR and Hospital flights as direct and expeditiously as possible to minimize their delays.
Hospital and Medical Evacuation Flights departures are typically cleared direct to the first point of the flight plan route and climb to the requested altitude, pending successful coordination with Approach.

VFR Helicopter Routes are published in AIP and VFR Manual, and should be used for flights entering, leaving or crossing Lisboa CTR. VFR Helicopter Routes do not interfere with traffic on Instrument Approaches or Departures to Lisboa.

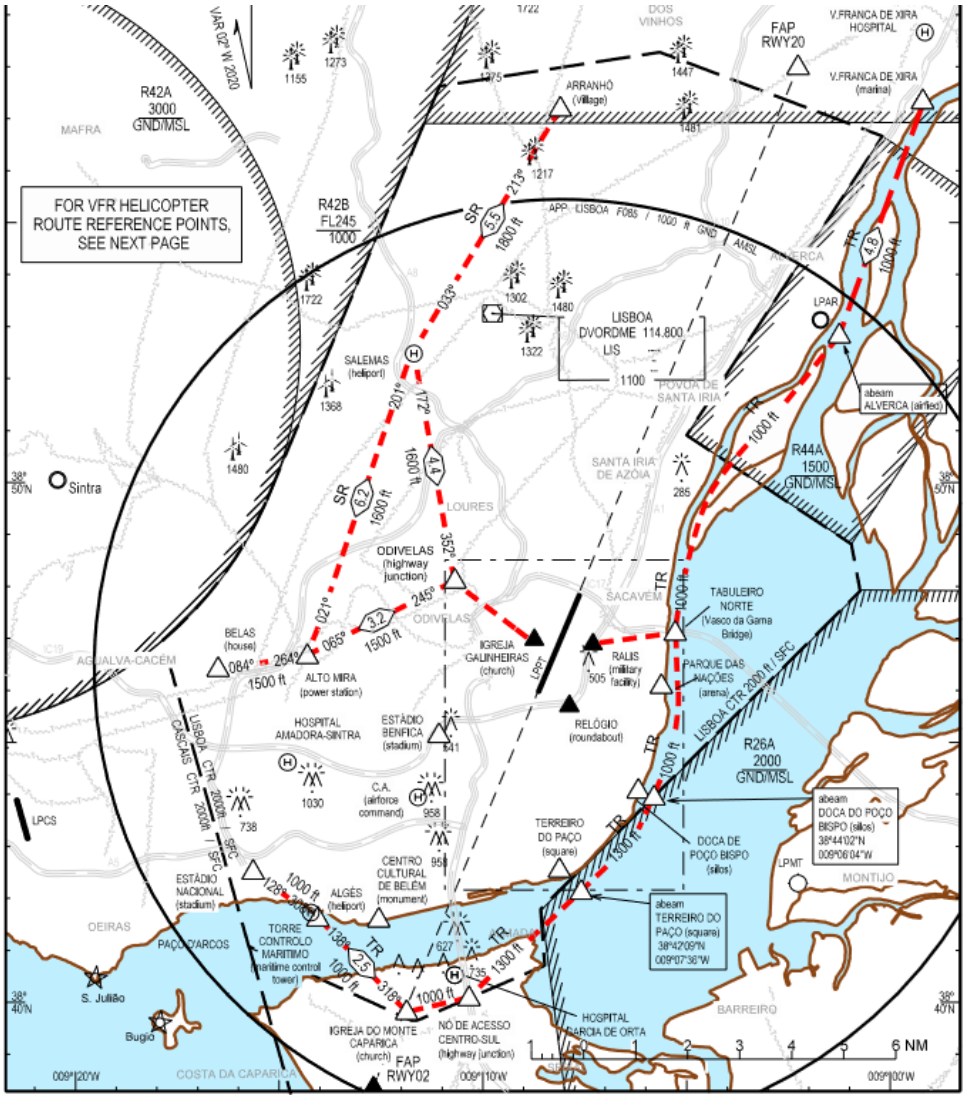


Figure 5.2: Lisboa CTR Helicopter Routes

If necessary, helicopters may remain stanionary over Queluz if operating in conditions of visibility equal or greater than 10KM and with the ceiling scattered at or above 3000FT (conditions forecast to the next hour), until further clearance is possible.

Local VFR is not obliged to fly the published routes, and sometimes are even unable, such is the case of sightseeing helicopter tours operating out of Algés.

In the 25 de Abril Bridge area, north of TR Helicopter Route, climbing up to 500ft maximum over the river will not interfere with LPPT 02 arrivals or 20 departures.

Take off will be issued from the intersection of taxiway T with runway 02/20.

Traffic proceeding to Cascais CTR is released for turns proceeding via:

- Belas 1500 FT;
- Estádio Nacional 1000 FT;
- Caxias 500 FT.

Transfer of Communications to TWRCAS is to be made approaching the CTR boundary.

Arrivals should follow VFR Helicopter Routes to Igreja das Galinheiras or RALIS, at which point they will hold and await clearance to continue.
When appropriate, clear to land on runway 02/20 intersection with taxiway T. Helicopters unable do so shall be cleared to land on runway 02/20.

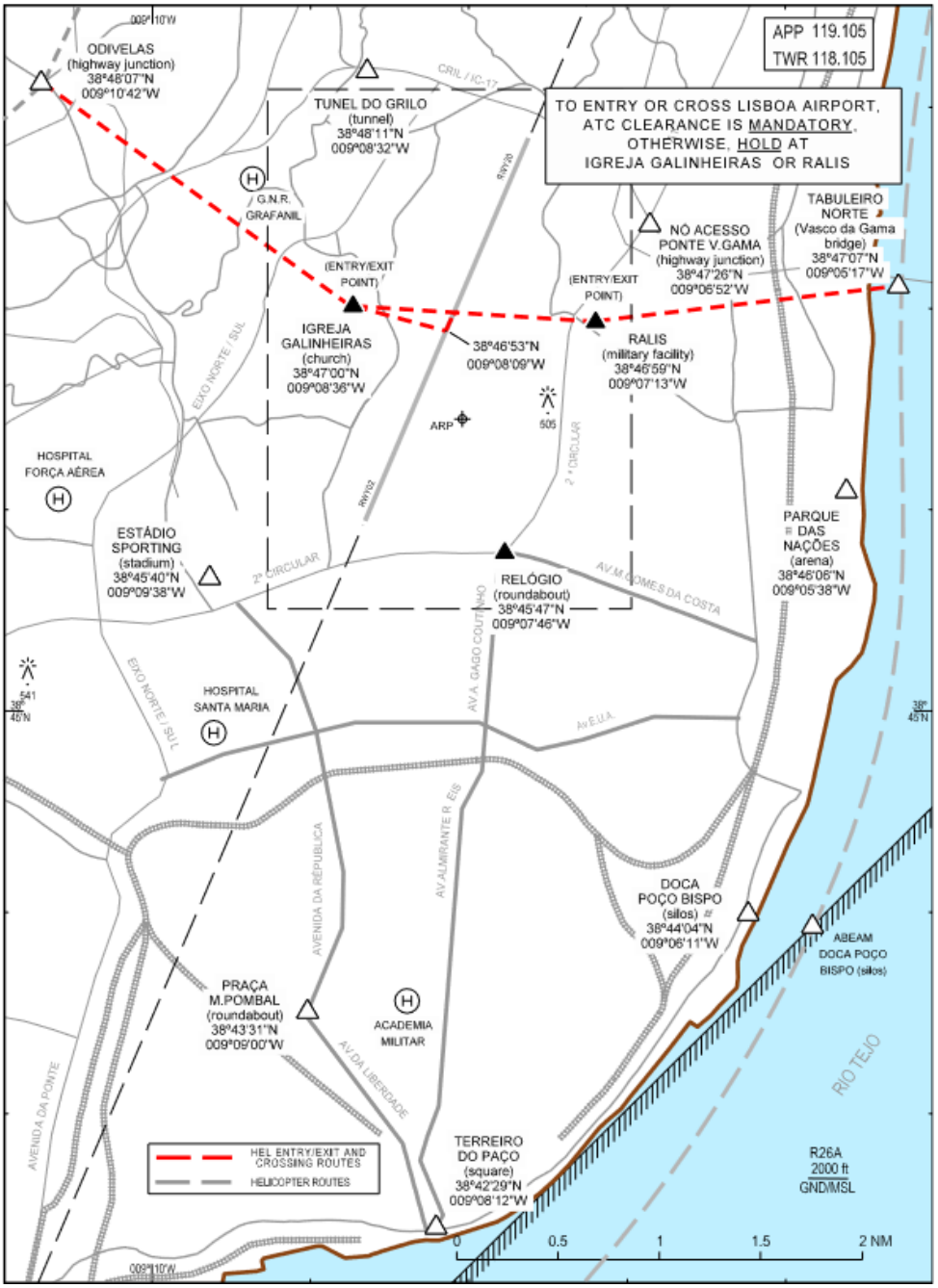


Figure 5.3: Helicopter Departure Arrival and Crossing Routes

VFR helicopters intending to overfly and cross the airport shall proceed to Igreja das Galinheiras or RALIS, where they will wait for further clearance to continue to RALIS or Igreja das Galinheiras accordingly.

5.4.1 Heliports

Helicopters on the ground at the various Heliports inside Lisboa CTR may be unable to contact Tower due to VHF propagation characteristics and will arrange alternative methods to contact Tower such

as via private message to obtain departure clearance or to report on the ground after arrival.

5.4.1.1 ALFRAGIDE LPAF

VFR Private Heliport. Take off and approach direction 087º/267º.

Instruct to remain clear of extended runway centerline for simultaneous operations with runway 02/20 at LPPT.

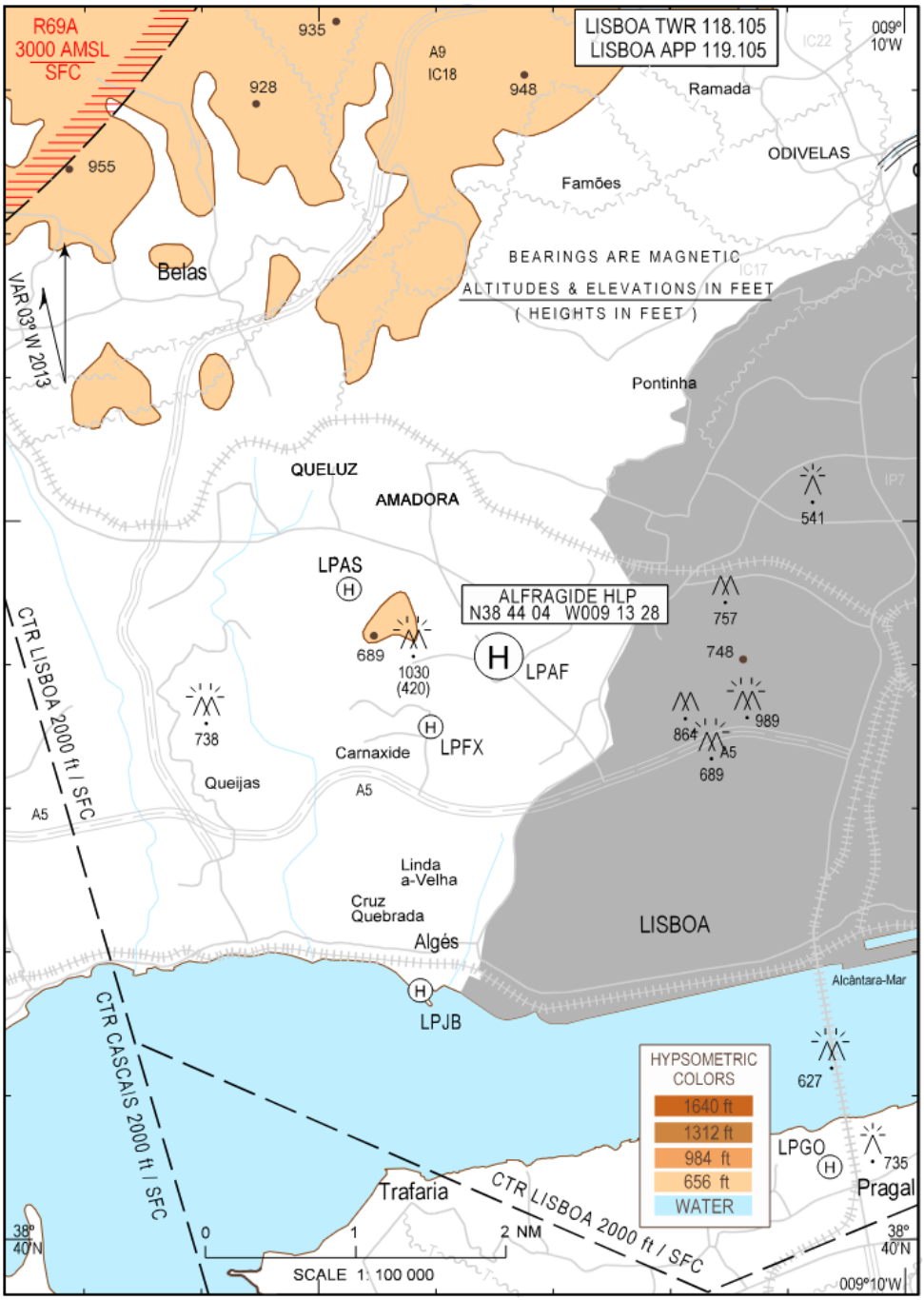


Figure 5.4: Visual Approach Chart LPAF

5.4.1.2 ALGÉS LPJB

VFR non scheduled. Approach direction: 344º / Take off direction: 314º.

For departure clearance instruct to remain between the heliport and Cruz Quebrada at 500 FT over Tejo River, reporting airborne.
Arrivals are asked to report final at Algés. After this, request to report on the ground.

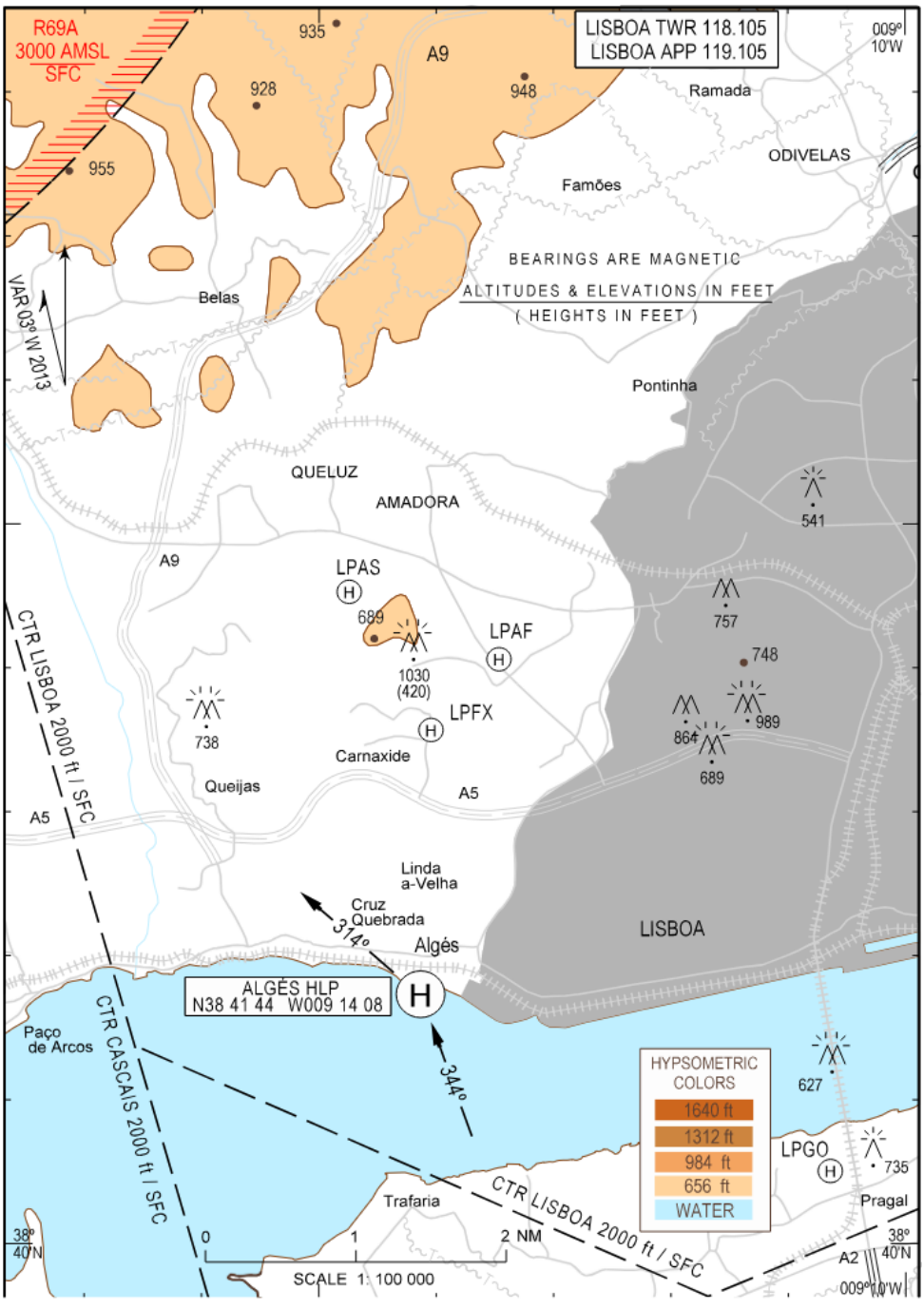


Figure 5.5: Visual Approach Chart LPJB

5.4.1.3 ALMADA HOSP LPGO

VFR Medical emergency flights.
Approach Directions: 071º / 304º
Take Off Directions: 124º / 251º

Request arrivals to report final

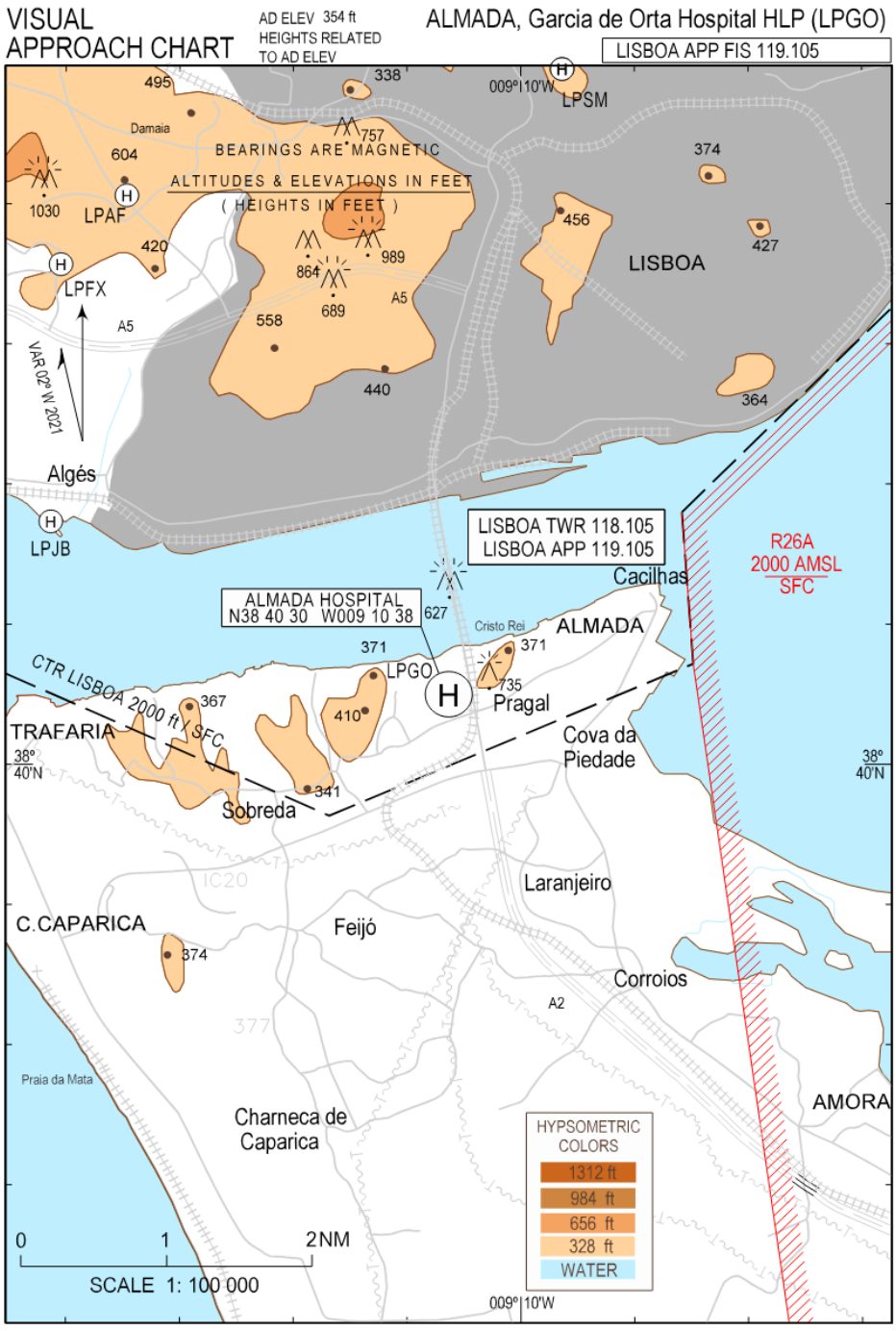


Figure 5.6: Visual Approach Chart LPGO

5.4.1.4 AMADORA HOSP LPAS

VFR for Medical Emergency. Approach direction: 081º / Take Off direction: 261º

Instruct to remain clear of extended runway centerline for simultaneous operations with runway 02/20 at LPPT.
Request to report final.

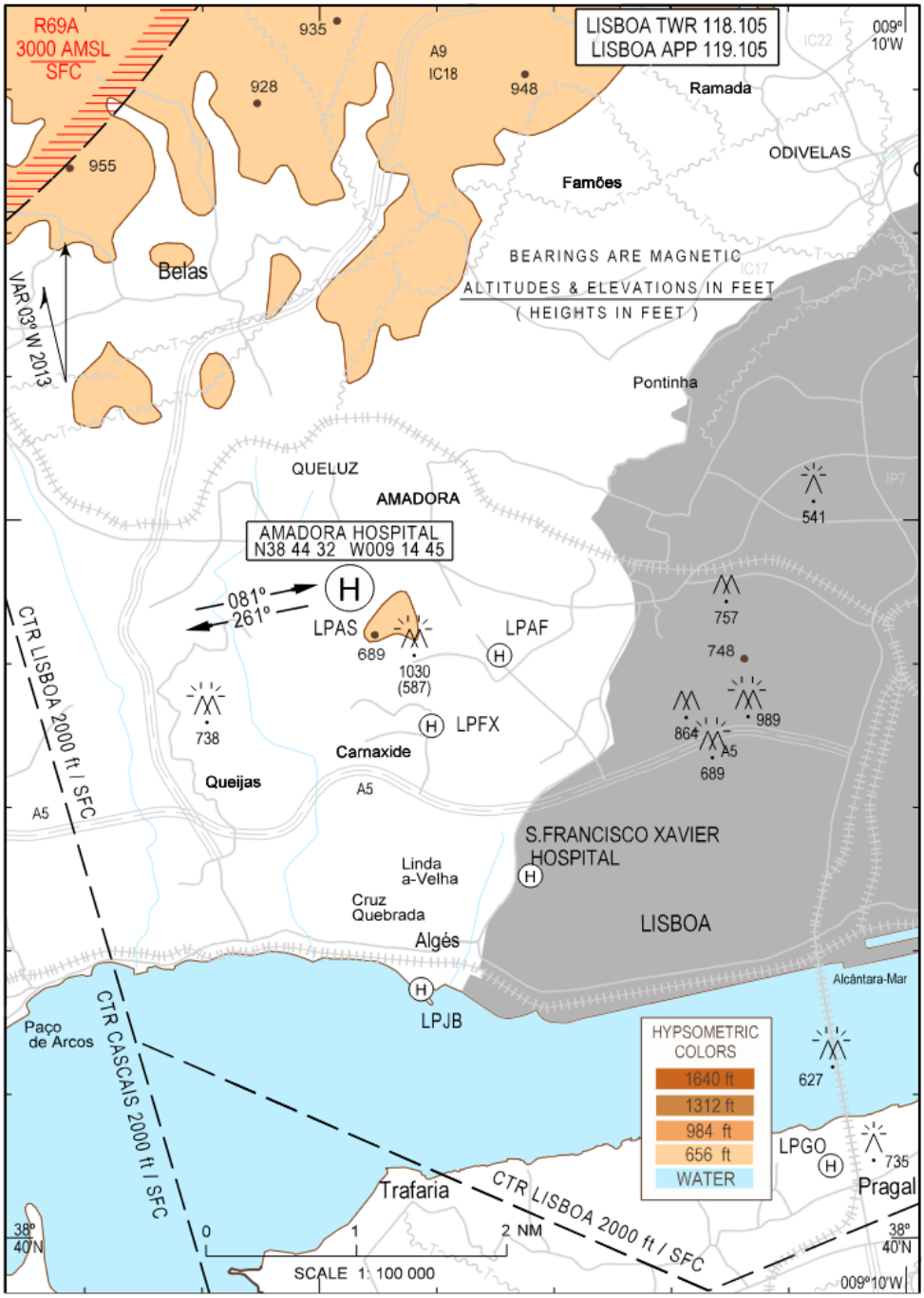


Figure 5.7: Visual Approach Chart LPAS

5.4.1.5 CARNAXIDE HOSP LPFX

VFR for Medical Emergency.
Approach directions: 004º / 274º
Take Off directions: 094º / 184º

Instruct to remain clear of extended runway centerline for simultaneous operations with runway 02/20 at LPPT.
If the flight path crosses the runway extended centerline, coordinate with Approach to suspend:

- Runway 02:
  - Arrivals approximately 4 minutes before the helicopter crosses the centerline.
  - Resume arrivals after the helicopter crosses the runway extended centerline.
- Runway 20:
  - Arrivals and departures approximately 4 minutes before the helicopter crosses the centerline.
  - Resume arrivals and departures after the helicopter crosses the runway extended centerline.

Request to report final.

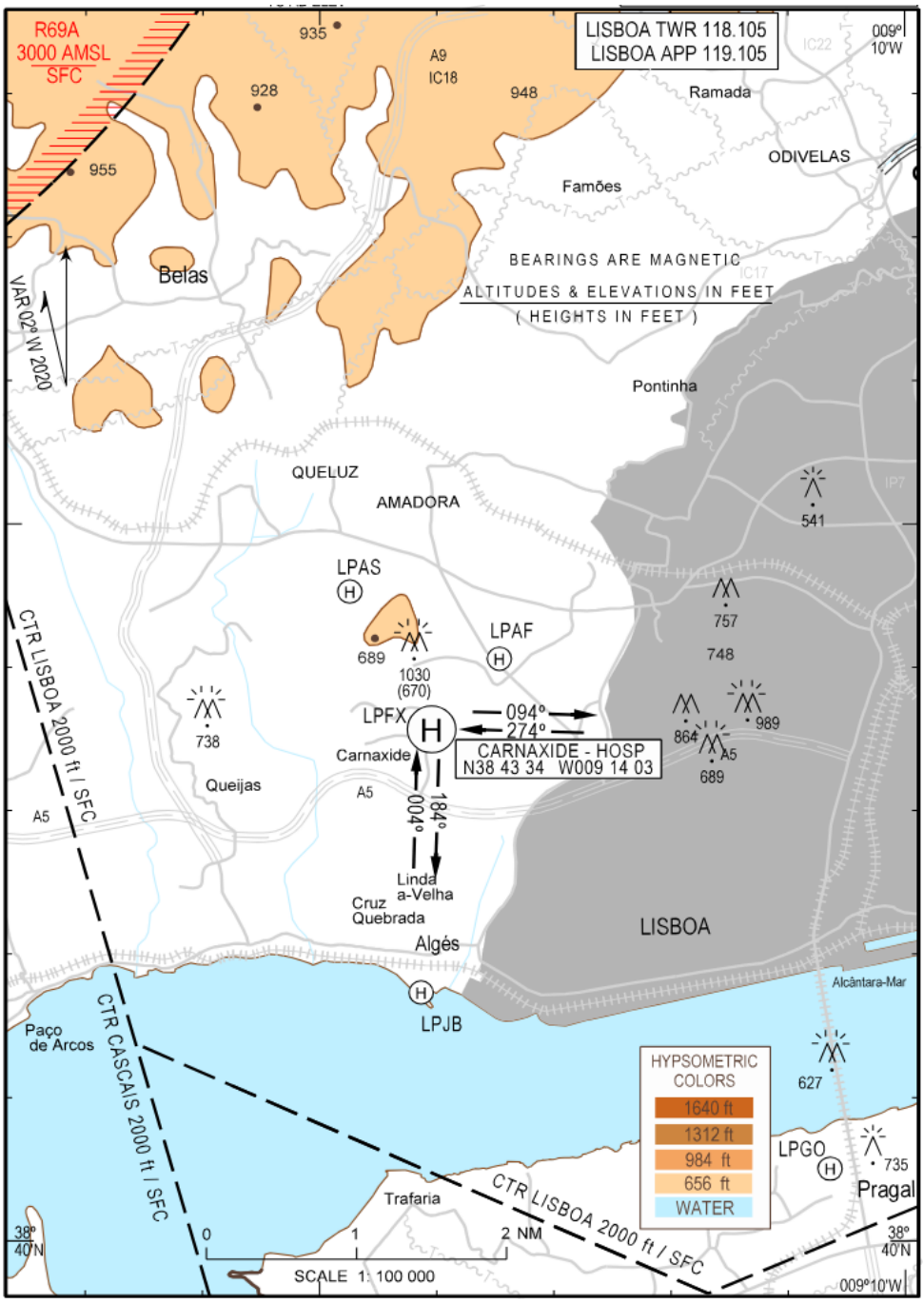


Figure 5.8: Visual Approach Chart LPFX

5.4.1.6 SALEMAS LPSA

VFR Restricted for helicopters equipped with two-ways radio communications and transponder. Take Off and

Take Off direction:138º / 318º
Local frequency 122.380.

Request arrivals to report final. When reporting final, instruct to contact local frequency.

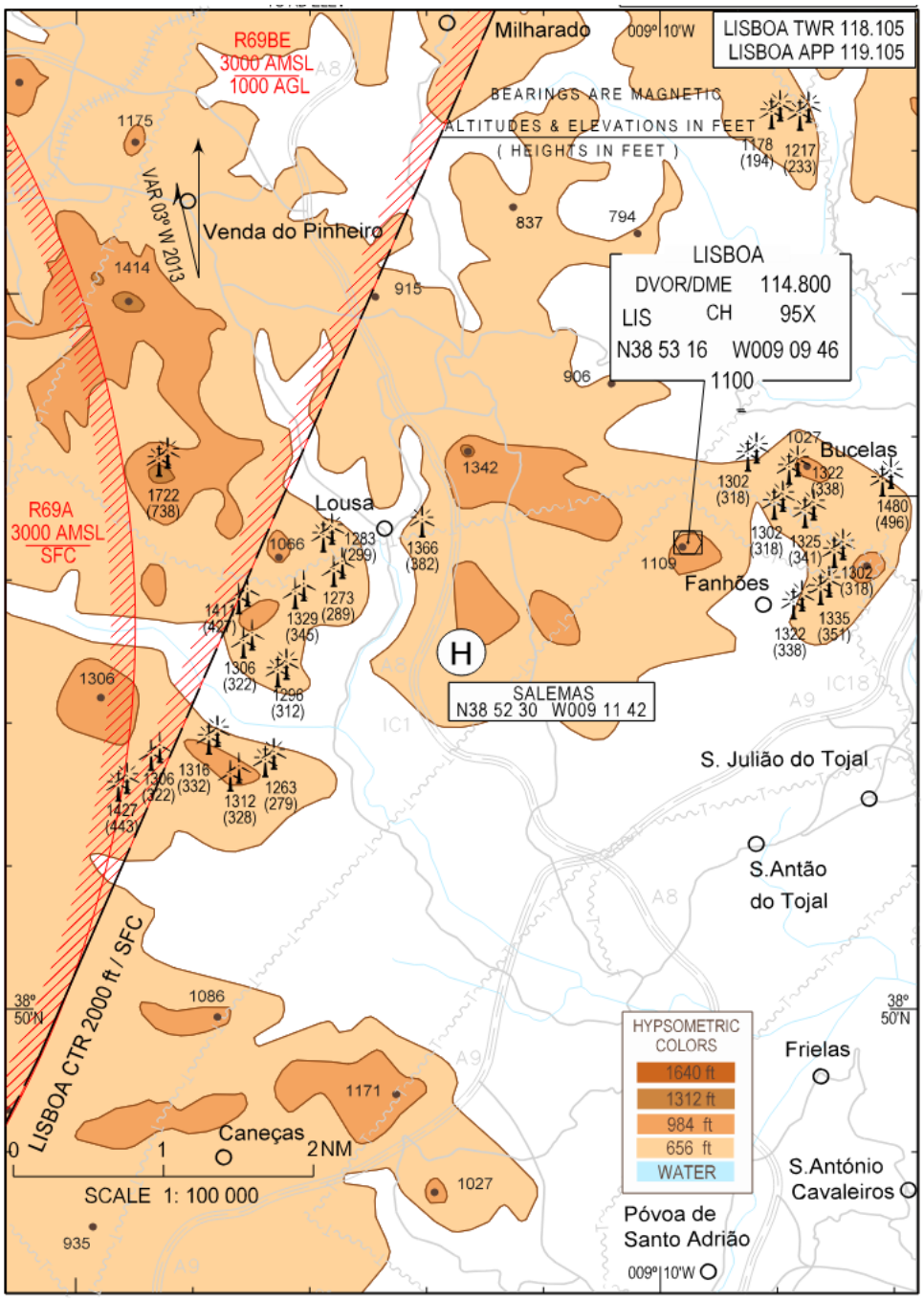


Figure 5.9: Visual Approach Chart LPSA

5.4.1.7 LISBOA STA MARIA HOSP LPSM

VFR Medical Emergency flights. Approach direction: 184º / Take Off direction: 004º(MAG)

The heliport lies underneath the extended runway centerline which makes it incompatible with simultaneous operation of runway 02/20 at LPPT.

Coordinate with Approach to suspend:

- Runway 02:
  - Arrivals approximately 4 minutes before the helicopter crosses the centerline.
  - Resume arrivals after the helicopter crosses the runway extended centerline.
- Runway 20:
  - Arrivals and departures approximately 4 minutes before the helicopter crosses the centerline.
  - Resume arrivals and departures after the helicopter crosses the runway extended centerline.

Request arrivals to report final. When reporting final, instruct to report on the ground, and to report again before departure.

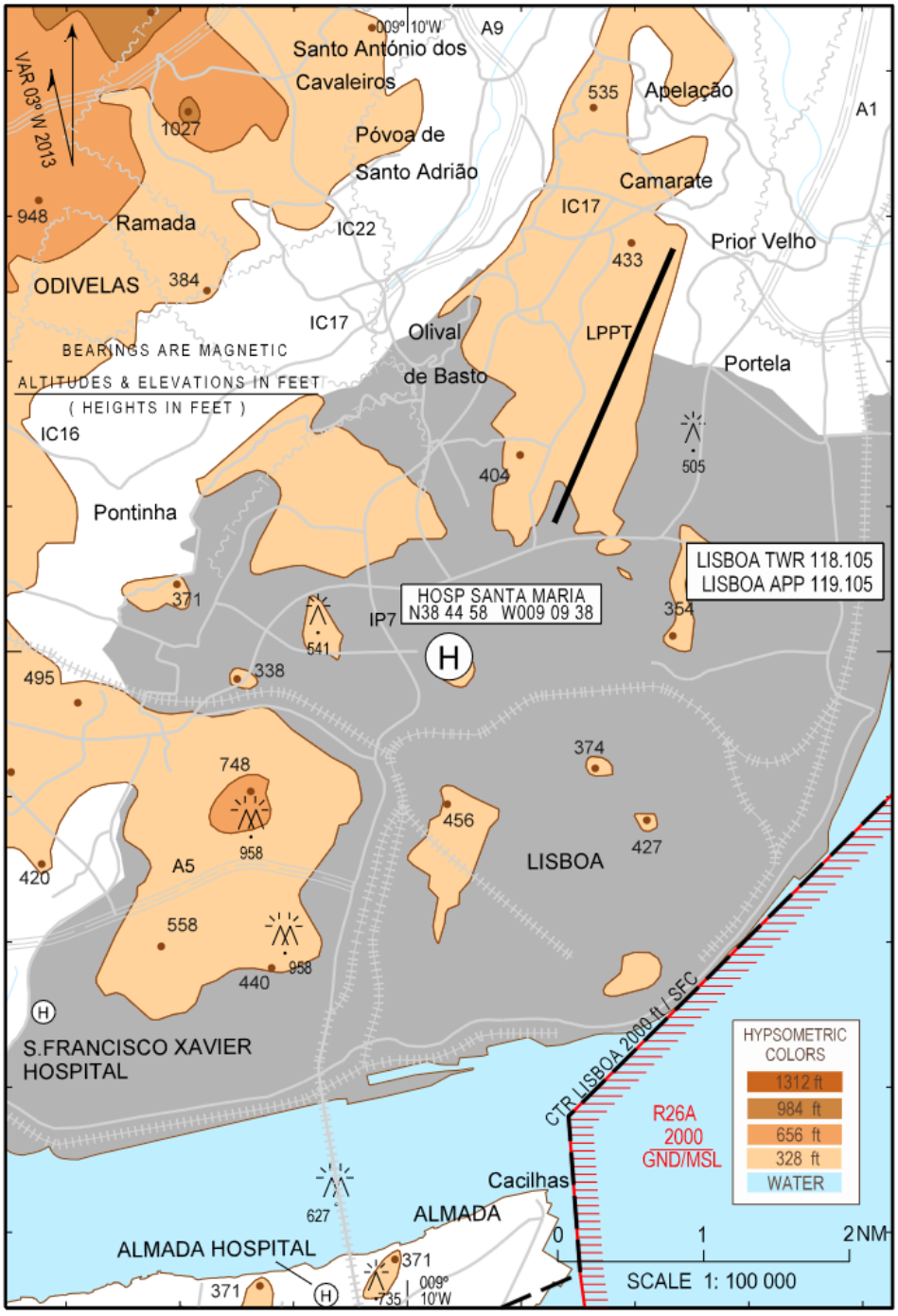


Figure 5.10: Visual Approach Chart LPSM

5.5 Low Visibility Procedures (LVP)

Take-off and landing clearance will only be issued when the ILS protection areas are clear of known traffic.
Landing clearance must be issued before 2DME. Instruct a go-around if an arrival reaches 2DME without landing clearance.
Report RVR when METAR includes it. Report Cloud Base Height if less than 400ft AAL.

5.6 ATS Surveillance Systems

Note	Control of aerodrome traffic is in the main based on visual observation of the manoeuvring area and the vicinity of the aerodrome by the aerodrome controller.

ATS surveillance systems may be used in the provision of aerodrome control service to perform the following functions:

- flight path monitoring of aircraft on final approach;
- flight path monitoring of other aircraft in the vicinity of the aerodrome;
- establishing separation between succeeding departing aircraft; and
- providing navigation assistance to VFR flights.

Vectoring is not possible, due to ATC surveillance minimum altitudes higher than the Lisboa CTR.

5.6.1 Identification

All flights shall operate on a discrete SSR code.

Departures subject to automatic handoff to Lisboa Approach will be identified by Lisboa Approach.

Departures that remain in contact with TWRLIS shall be identified by TWRLIS, and set to Assume, if IFR, or On Contact, if VFR.
At Transfer of Communications:

- IFR flights entering Lisboa Approach shall be transfered using the Transfer function;
- VFR flights shall be set to Free;
- All flights to Alverca, Montijo or Sintra MCTR shall be set to Free.

Identification is not transferred to Alverca, Montijo or Sintra. These flights shall be advised that identification has been terminated at Transfer of Communications.

Lisboa Approach and TWRCAS transfer identification of flights entering Cascais CTR.
Inbound aircraft from Alverca, Montijo or Sintra shall be identified on first contact with TWRLIS.

5.6.2 Navigation Assistance to VFR

Navigation assistance to VFR flights shall be accomplished by providing position information relative to a known point, preferably the next of the intended route, or broad cardinal directions to return to route.

5.7 Phraseology

5.7.1 Take-off Clearance

ATC	Aircraft
[callsign] wind [wind], runway [runway] cleared for take-off, boa tarde. Air Portugal 2970, wind 320 degrees 15 knots, runway 02 cleared for take-off, boa tarde.	

5.7.2 Landing Clearance

ATC	Aircraft
[callsign] wind [wind], runway [runway] cleared to land. Air Portugal 297H, wind 320 degrees 15 knots maximum 23, runway 02 cleared to land.	
	[readback] Cleared to land runway 02, Air Portugal 297H.
[callsign] vacate via [Exit Taxiway] [ensuing taxiway], contact Ground 121.755 Air Portugal 297H, vacate via H4, right U4, contact Ground 121.755. Air Portugal 297H, vacate via H3, left on G, contact Ground 121.755. Air Portugal 297H, vacate via H3, continue via L, contact Ground 121.755.	

5.7.3 Lineup behind

ATC	Aircraft
[callsign] behind landing traffic, via [entry taxiway] lineup and wait, behind Alpine 47JB, behind landing A319, via M5 lineup and wait, behind.	

Note	Should there be any doubt that the departure has the correct arrival in sight, give traffic information and confirm if the departure has traffic in sight

5.7.4 Different departure frequency

ATC	Aircraft
[callsign], after departure contact [Unit callsign] [Unit frequency] [callsign], after departure monitor Unicom 122.8. Alpine 47JB, after departure contact Lisboa Control 132.850. Alpine 47JB, after departure monitor 122.8.	

5.7.5 RRSM landing

ATC	Aircraft
[callsign] traffic information, [aircraft type] departing [runway] KLM1693 traffic, information, Airbus A330 departing runway 02.	
	[readback] Traffic in sight, KLM1693
[callsign], [wind], after the departing [aircraft type], cleared to land [runway] , runway [runway] KLM1693, wind 350 degrees 15 knots gust 32 variable between 320 degrees and 080 degrees, after the departing Airbus A330, cleared to land Runway 02.	

5.7.6 Modification of Clearance

ATC	Aircraft
[callsign] [modification] Air Azores 129, after departure climb on runway heading to Flight Level 60. Air Portugal 1693, after departure remain on this frequency	
	[readback] After departure climb on runway heading to Flight Level 60, Air Azores 129 After departure remain on this frequency, Air Portugal 1693
[callsign] readback correct, wind [wind], runway [runway] cleared for take-off, boa tarde. Air Azores 129, readback correct, wind 320 degrees 15 knots, runway 02 cleared for take-off, boa tarde. Air Portugal 1693, readback correct, wind 320 degrees 15 knots, runway 02 cleared for take-off, boa tarde.	

5.7.7 Helicopter Arrival

ATC	Aircraft
	[callsign] [initial contact] Lisboa Tower, CSHFU, 1000ft over Vila Franca de Xira proceeding via Tejo Route for full stop at Lisboa
[callsign] [arrival instructions] CSHFU, roger, continue to RALIS hold at RALIS.	
[callsign] [wind] [location] cleared to land CSHFU, wind 320 degrees 15 knots maximum 23, runway 02 intersection with T cleared to land.	

5.7.8 Heliport Departure

ATC	Aircraft
	[callsign], [location] Helibravo 206 departed Algés 500ft
[callsign], [QNH] [instructions] Helibravo 206, QNH 1017 climb to 1000ft proceed via Tejo Route to Vila Franca de Xira.	

5.7.9 Heliport Arrival

ATC	Aircraft
	[callsign] wind [wind], runway [runway] cleared for take-off, boa tarde. Lisboa Tower, CSHFP, 1000ft over Vila Franca de Xira proceeding via Tejo Route to Algés
[callsign] [arrival instructions] CSHFP, roger, report final to Algés	
	CSHFP on final to Algés
CSHFP, report on the ground	

5.7.10 Low Visibility Take-off Clearance

ATC	Aircraft
[callsign] [wind] [RVR], runway [runway] cleared for take-off, boa tarde. Air Portugal 203, wind calm RVR runway 20 200 meters, runway 20 cleared for take-off, boa tarde.	

5.7.11 Low Visibility Landing Clearance

ATC	Aircraft
[callsign] [wind] [RVR] (Cloud Base height), [runway] cleared to land. Air Portugal 202, wind calm RVR touchdown 100 meters, runway 20 cleared to land Iberia 31FF, wind 220 degrees 14 knots, Cloud Base Height 400 feet, runway 20 cleared to land	

5.7.12 Navigation Assistance to VFR

ATC	Aircraft
	D-CD, unsure of my position, request heading to Caxias
(navigation suggestion), [position]. *D-CD, fly East, position 6 miles West of Caxias.*	

5.7.13 IFR Departure Release Coordination

Transferring Unit	Accepting Unit
Request Release of Fraction 37F	
	(callsign) RELEASED [AT (time)] [conditions/restrictions] *Fraction 37F released, clearance expires at 1530* *Fraction 37F released after landing Valair 211, clearance expires at 1530* *Fraction 37F released at 1527, clearance expires at 1530* *Unable, call you back*

5.7.14 Departure Approval Request Coordination

Transferring Unit	Accepting Unit
APPROVAL REQUEST (aircraft call sign) *Approval Request Helibravo 700*	

Transferring Unit	**Accepting Unit**
	Go ahead
APPROVAL REQUEST (aircraft call sign) ESTIMATED DEPARTURE FROM (significant point) AT (time) *Approval Request 9H-MPR Estimated Departure from Lisboa at 1527, direct Carvalhal*	
	(aircraft call sign) REQUEST APPROVED [(restriction if any)]; (aircraft call sign) UNABLE (alternative instructions). *9H-MPR request approved, direct Carvalhal at 1000 FT* *9H-MPR unable, cleared via Alcochete at 1000 FT*

Chapter 6

Approach

6.1 Area of Responsibility

Refer to PMS presentation

6.2 Departures

Initial climb will be FL100.

After departure, traffic shall contact TME. Westerly departures shall be climbed to FL100 and transferred to TMO when starting the turn or latest before the TME sector limit. TMO will issue climb to FL240, or as approppriate. All other departures shall be climbed to FL240, or as appropriate

The controller may coordinate a higher XFL with ACC (up to 4000 FT higher) than the published agreed level, when they are unable to initiate the transfer of control and communications in a timely manner, in order to support continuous climb operations and avoid a level-off.

Coordination is required, ideally accomplished by Automated Coordination Messages via TIP or HOP.

IXIDA1S may enter and exit TMA East and West several times. Approach transfers to TMA West when the flight starts turning at NETVO, TMA West transfers to TMA East when approaching the lateral limit of the area of responsibility.

6.3 SID Deviations/Directs

When issuing directs or deviations from the SID, whatever the reason, ensure that the traffic is already above the MRVA.

6.4 Arrivals

6.4.1 Initial contact

On first contact with APP, planes are to report callsign, cleared LVL and STAR, which should have already been assigned by enroute controller. In the absence of an enroute sector, assign the STAR yourself.

6.4.2 Routing

Generally, routing should be as direct as possible to the sequence leg entry point (MAZUK/EKLID or ORTUG/DEKKI). Resulting turn should be no more than 90º.
When the intention is to shorten the arrival beyond the PMS, clear direct to:

- An intermediate point of the sequence leg, to rejoin the sequence leg, or;
- Merge point, if the resulting trajectory is within the Point Merge System, or;
- The point before the Merge Point, if the resulting trajectory is outside the Point Merge System.

Arrival sector may at any time vector as appropriate, even before the arrival enters the Point Merge System.

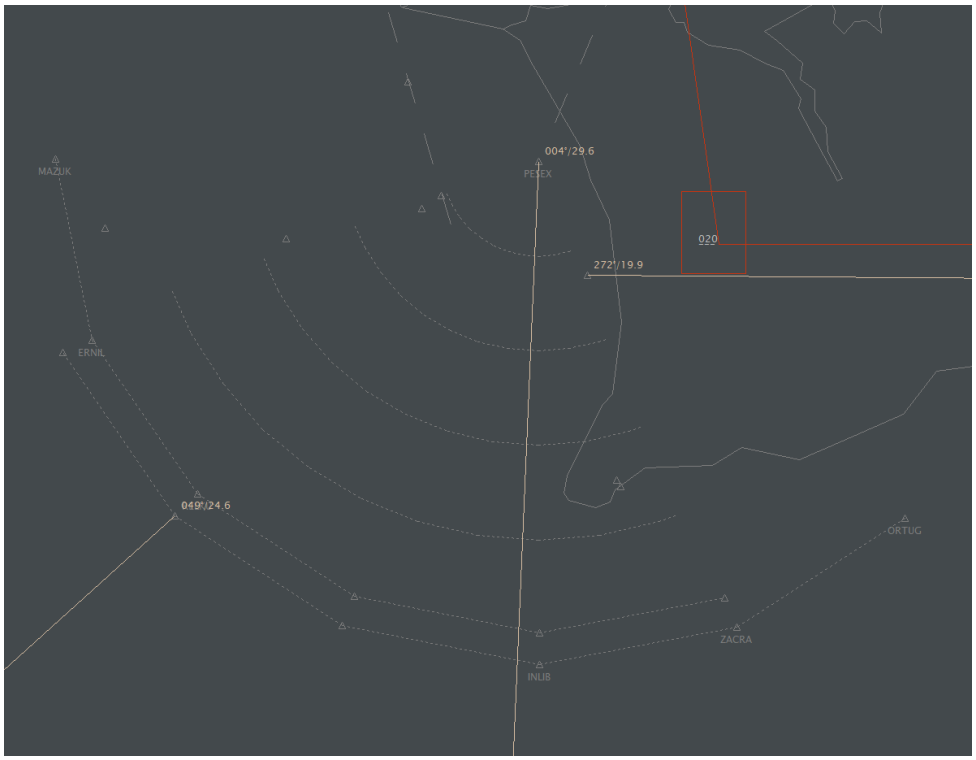


Figure 6.1: Arrival routing strategies

ESEBI2B STAR branches off of INBOM2B. It is meant to be used as a means of reducing load on TMA West and EKLID hold. TMA West shall coordinate with East, before clearing “Direct to ESEBI, join ESEBI2B arrival”.

Due to the potential for confusion, changing STAR for a flight already within the TMA should be avoided. As much as possible, relay the clearance to Lisboa North enroute sector, so that they can clear for the ESEBI STAR from the get-go.

Significant hotspot approaching PT816 and PT818. Conventional radar techniques should be used to deconflict and sequence traffic, such as for example shortcutting from NATID to EKLID, shortcutting INBOM2B to EKLID, extending XAMAX2B westbound on present heading, etc.

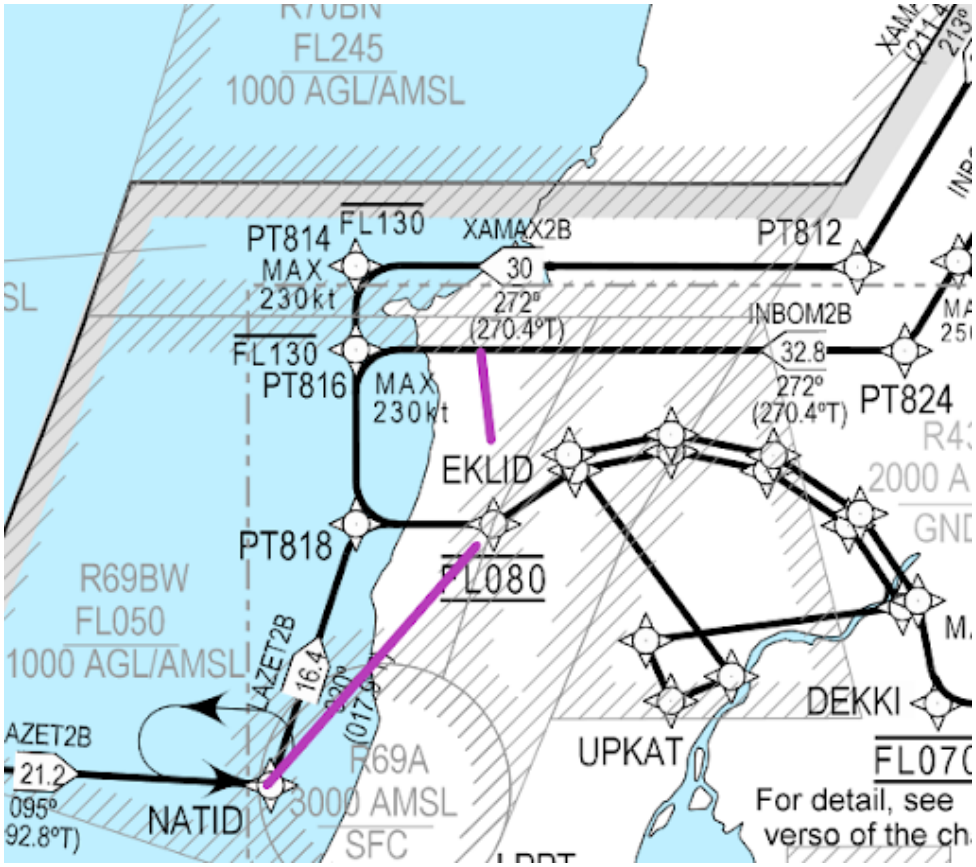


Figure 6.2: Deconfliction strategies runway 20

6.4.3 Delays

TME and TMO shall indepentently determine an expected approach time for an arriving aircraft that will be subjected to a delay of 10 minutes or more.
Calculation is done manually, by taking the estimated time over the holding fix for the PMS, and then assigning EATs separated by 3 minute intervals between arrivals at the holding fix they are responsible for. During LVO the interval shall be 6 minutes.

Annotate the Expected Approach Time to the OP_TEXT2 field. If the flight is not assumed by you or the upstream sector, transmit it via private message to the relevant sector.
Expected Approach Time shall be noted abiding the following convention:

EAT not yet transmitted	*mm or *HHmm
EAT transmitted	*mm* or *HHmm*
Revised EAT not yet transmitted	**mm or **HHmm
Revised EAT transmitted	**mm* or **HHmm*

Where "HH" is the hour and "mm" the minute of the EAT. The shorthand "mm" format may only be used for EAT contained within the current hour.

Holding should primarily be accomplished at the holdings at the entry of each sequence leg (MAZUK/EKLID or ORTUG/DEKKI). DEKKI hold is considered separated from D10. DEKKI hold should be used regardless of the activation of D10.
Other holds may be used to alleviate a downstream congestion situation.

Traffic in the hold stays with TMA, who gradually descends to sequencing leg level. Transfer communications when cleared to sequencing leg level.
To remove from the hold, Arrival instructs on the hold outbound leg direct to the first fix of the sequencing leg (ERNIL/ZACRA or ROTBU/ROMEP).

Maximum 4 flights in the sequencing legs (total of inner and outer sequencing legs).

6.4.4 TMA Sectors

Lisboa TMA may be split in West and East, TMO being responsible for TMA West, and TME for TMA East and the departure side of the approach sector.

Warning	Lisboa TMA shall never be split without Arrival sector open.

TMO shall:

- Descend arrivals to FL80 to MAZUK or EKLID;
- Arrivals that cross westbound departures shall first descend to FL110 until clear of departures;
- Manage the MAZUK or EKLID hold except the traffic lowest in the hold.

TME shall:

- Descend arrivals to FL70 to ORTUG or DEKKI;
- Arrivals that cross departures shall first descend to FL110 until clear of departures;
- Arrivals shall first descend to FL100, when so required in order to remain within controlled airspace;
- Manage the ORTUG or DEKKI hold except the traffic lowest in the hold;
- Manage traffic inbound LPCS when LPPT is on runway 20.

6.4.5 Arrival Sector

ARRLI will be responsible for:

- The lowest traffic in the PMS holding fix;
- Sequencing legs;
- Area between sequencing legs and merge point.

Keep traffic in the Sequencing leg until able to issue a DCT to the merge point. If the PMS arcs have more than 3 arrivals, initiate holding at the sequencing legs holding fixes (MAZUK and ORTUG or EKLID and DEKKI), and inform TME and TMO. Do not allow the PMS arc to become saturated as vectoring should be minimized.

Vectoring shall be confined to the area between the sequencing legs and the merge point. Vectoring beyond this area requires Approval Request with TME or TMO.

6.4.6 Separation Between Arrivals

Minimum separation between arrivals, measured at runway threshold:

- NVP:
  - 3NM without a departure in between;
  - 6NM with a departure in between.
- LVP:
  - 8NM without a departure in between;
  - 12NM with a departure in between.

Minimum separation shall be incremented by 4NM to allow two consecutive departures.

6NM (12NM in LVP) shall be used, unless otherwise coordinated between TWR and APP, except:

- 3NM (8NM in LVP), without prior coordination, if Approach observes via A-SMGCS there are no pending departures.

6.4.7 Speed Restrictions

Standard speeds as published on STAR procedures should be enforced.

Traffic is expected to maintain:

- 280 knots until slowed by the STAR;
- 220 knots during the sequencing legs;
- 180 knots at the merge point;
- 160 knots maximum at 8 DME.

Descending and arriving aircraft may be instructed to reduce to a speed not lower than:

Below	Minimum Assignable Speed
FL250	250kts
FL150	220kts/Minimum Clean Speed
FL70	180kts
4000FT/FAP	160kts/Minimum Approach Speed

6.4.8 Go Arounds

Published missed approach is a straight ahead climb to FL60. In case of missed approach, the flight should be vectored back to the intended approach, preferably via the east side of LPPT, towards ORTUG or DEKKI. Transfer of communications to Arrival should occur abeam LPPT.

6.4.9 Old AIRAC

Procedures applicable to aircraft with outdated AIRAC or non-RNAV capable:

- Departures shall be cleared to climb on runway heading to FL100.
- Arrivals should proceed and hold at:
  - ESP, for runway 02 (030 right turns, MHA FL90);
  - RINOR, for runway 20 (224 left turns, MHA FL90);
  - These arrivals shall hold at the designated point, and then be vectored or cleared direct to the merge point at the appropriate time.

The .hold02 .hold20 text alias may be used as a memory aid for the controller, or to help pilots, as the hold instruction is fairly lengthy.

6.5 Cascais

TME will be responsible for top down coverage of Cascais CTR.

The responsibility for arrivals and departures are as follows:

- ARRLI, if RWY in use at LPPT is 02
- TME, If RWY in use at LPPT is 20

TWRCAS shall request a Release for all IFR and Night VFR departures. Night VFR departures will proceed to Guincho climbing to 2000 FT. Arrivals shall be transferred proceeding to Guincho descending to 2500 FT. When appropriate, Release should be granted with a validity of 3 minutes. TWRCAS shall initiate an Approval Request for VFR fixed wing aircraft departures to LPPT. IFR traffic takes priority over VFR traffic, except priority flights. The arrival sequence should be modified as necessary to slot in the VFR arrival. Approval or restrictions should be applied accordingly. Approval may be denied according to the traffic situation.

TWRCAS will transfer RNAV departures climbing to FL60, or conventional departures climbing to 3000 FT.
If RWY in use at LPPT is 02, ARRLI will transfer departures to TMO at FL60 approaching the border of its area of responsibility and clear of traffic.
If RWY in use at LPPT is 20, TME will transfer departures to TMO at FL100 approaching the border of its area of responsibility and clear of traffic.

TMO shall transfer to ARRLI or TME, according to sector configuration, descending to FL80 before CASLU. If required, holding shall be done over CASLU. TMO will be responsible for all traffic in the hold, except the traffic lowest in the hold. ARRLI shall be responsible for the traffic lowest in the hold and traffic between CASLU and OXFIN.
IFR inbounds are to be cleared via the STAR for the RNP approach, or in alternative the VOR DME approach, RWY 35, with a circle to land RWY 17 if necessary.

IFR Inbounds:

- If traffic permits vector traffic to:
  - CEFOX at 3000 feet for RNP 35
  - OXFIN at 2000 feet for RNP 35
  - 11DME Radial 169 CAS at 2000ft for VORDME 35

Transfer IFR inbound traffic to Cascais Tower when established on the final approach track.
Westbound Traffic in VFR tunnels before Lagoa de Albufeira is considered separated from traffic on an IFR approach. Westbound traffic in VFR tunnels shall orbit over Lagoa de Albufeira, or East of, until being overtaken by the IFR arrival.
Westbound Traffic in VFR tunnels intending to perform a practice IFR approach should be cleared to continue Westbound after Lagoa de Albufeira and cleared for the approach.

Missed approaches will contact passing 2000 FT climbing to 3000 FT to hold at EKMAR. TWRCAS may keep the missed approach, if it is VFR, remains within the CAS 8 DME arc, at 2000 FT, and then performs a new VOR approach.

TWRCAS may initiate an Approval Request for traffic to orbit over Cabo Raso or Farol da Guia above 2000 FT.
TWRCAS may initiate an Approval Request for traffic East of CAS radial 168 above 1500 FT. This traffic is not separated from Visual Approaches to LPPT runway 02 from the North.

6.6 Alverca

Traffic to Alverca will normally perform an instrument approach to the runway in use at LPPT. When visual contact with LPAR is established, a visual approach will be flown.

Traffic departing Alverca will be instructed to intercept the appropriate SID from LPPT.

TME will be responsible for top down coverage of Alverca

6.7 Sintra

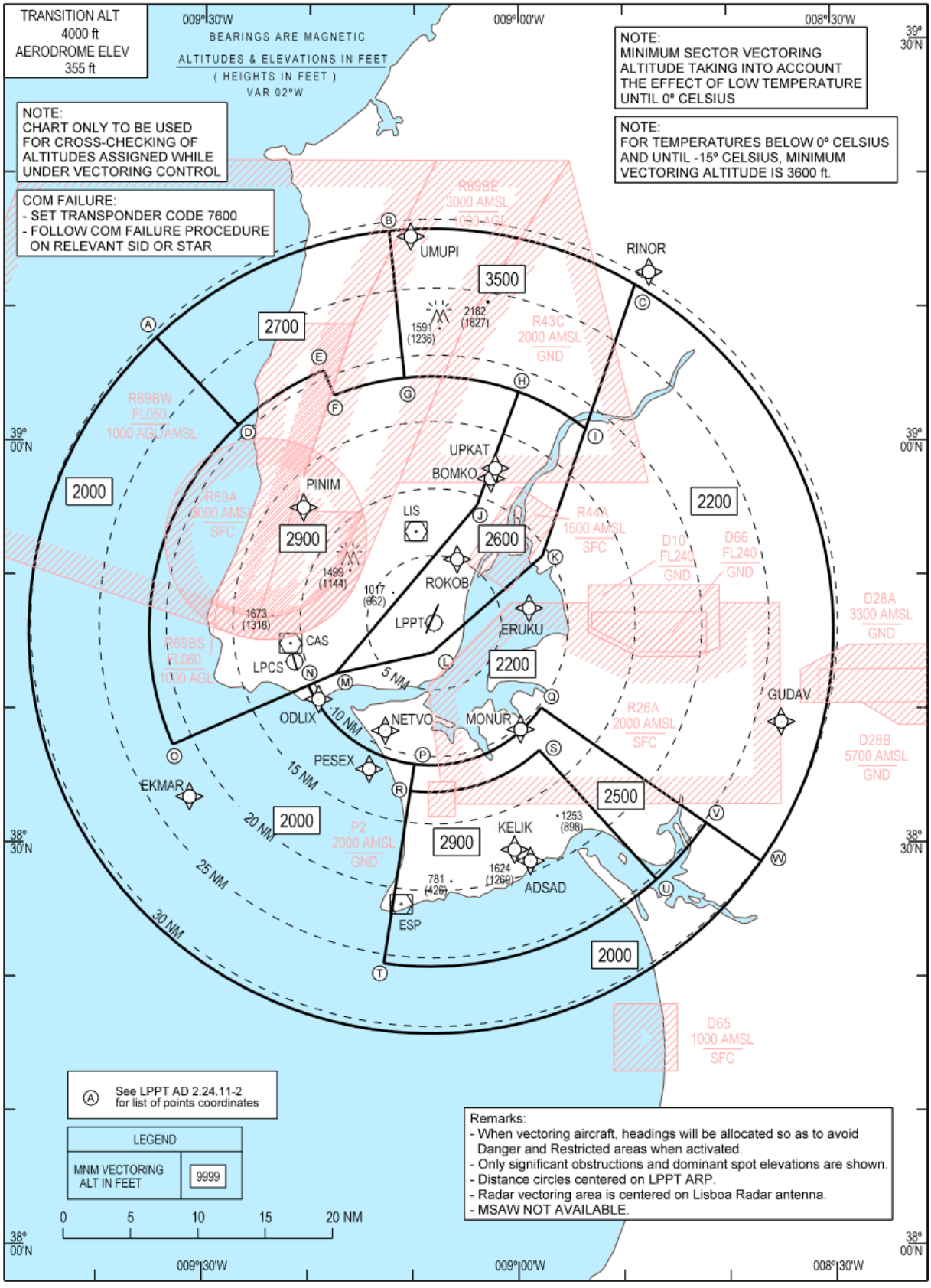
TME will be responsible for top down coverage of Sintra

6.8 Montijo

TME will be responsible for top down coverage of Montijo

Appendix A

Radar Vectoring Chart


TRANSITION ALT
4000 ft
AERODROME ELEV
355 ft
009°30'W
BEARINGS ARE MAGNETIC
ALTITUDES & ELEVATIONS IN FEET
(HEIGHTS IN FEET)
VAR 02°W
009°00'W
008°30'W
39° 30'N
NOTE:
MINIMUM SECTOR VECTORING ALTITUDE TAKING INTO ACCOUNT THE EFFECT OF LOW TEMPERATURE UNTIL 0° CELSIUS
NOTE:
FOR TEMPERATURES BELOW 0° CELSIUS AND UNTIL -15° CELSIUS, MINIMUM VECTORING ALTITUDE IS 3600 ft.
NOTE:
CHART ONLY TO BE USED FOR CROSS-CHECKING OF ALTITUDES ASSIGNED WHILE UNDER VECTORING CONTROL
COM FAILURE:
- SET TRANSPONDER CODE 7600
- FOLLOW COM FAILURE PROCEDURE ON RELEVANT SID OR STAR
R69BE
3000 AMSL
1000 AGL
UMUPI
RINOR
3500
2700
2182
(1827)
1591
(1236)
R43C
2000 AMSL
GND
R69BW
FL050
1000 AGL/AMSL
39° 00'N
UPKAT
BOMKO
PINIM
2000
R69A
3000 AMSL
SFC
LIS
2900
2600
2200
R44A
1500 AMSL
SFC
D10
FL240
GND
D66
FL240
GND
1499
(1144)
ROKOB
1017
(662)
1673
(1318)
LPPT
ERUKU
D28A
3300 AMSL
GND
R69BS
FL060
1000 AGL
CAS
LPCS
5 NM
2200
GUDAV
ODLIX
10 NM
NETVO
MONUR
R26A
2000 AMSL
SFC
D28B
5700 AMSL
GND
PESEX
15 NM
EKMAR
2500
20 NM
2000
P2
2000 AMSL
GND
2900
KELIK
1253
(898)
1624
(1269)
781
(426)
ADSAD
25 NM
ESP
30 NM
2000
D65
1000 AMSL
SFC
38° 30'N
38° 00'N
See LPPT AD 2.24.11-2
for list of points coordinates
LEGEND
MNM VECTORING ALT IN FEET
9999
0 5 10 15 20 NM
Remarks:
- When vectoring aircraft, headings will be allocated so as to avoid Danger and Restricted areas when activated.
- Only significant obstructions and dominant spot elevations are shown.
- Distance circles centered on LPPT ARP.
- Radar vectoring area is centered on Lisboa Radar antenna.
- MSAW NOT AVAILABLE.