

LONDON FIR (EGTT) VMATS PART 2

**LONDON AREA CONTROL, LONDON TERMINAL CONTROL &
MANCHESTER PRESTWICK CONTROL**

REVISION 2024/13 - EFFECTIVE 26 DECEMBER 2024

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PRE | PREFACE

Distribution and Scope

This manual is for controllers of London Area Control, London Terminal Control and Manchester Prestwick Control sectors and contains specific and local procedures relevant to these sectors. In addition, relevant information regarding the handling of traffic at airfields that may be covered top-down by VATSIM controllers is also included. Controllers **must** be familiar with controlling procedures in the UK; this manual should be read in conjunction with MATS Part 1¹ (CAP 493) and guidance on standard UK Radiotelephony phraseology, detailed in CAP 413².

Exclusion of Liability

This manual is for use on the VATSIM Network only and should never be adopted for real world use.

The information published by VATSIM UK within this document is made available without warranty of any kind; the Organisation accepts no responsibility or liability whether direct or indirect, as to the currency, accuracy, or quality of the information, nor for any consequence of its use.

Several procedures have been adapted or created using content published in the AIS (published and maintained by NATS). Any information in this document does not constitute as a real-world replacement for any official procedure / documentation set out on the AIS website, and any similar procedures set out here or influenced by NATS' content is written under the Limited License provided by the AIS.

Acknowledgements

This document is the product of the efforts of contributors over many years. Without these efforts, this document would not have been possible to produce. On behalf of all VATSIM UK's members, this acts as an acknowledgement and thanks for their work.

¹ The latest version is available at <https://caa.co.uk/CAP493>

² The latest version is available at <https://caa.co.uk/CAP413>

Marked Changes

Changes made since the last release are marked with a black bar, as indicated, in the left-hand margin. **New text is marked in red.** The changes are also described briefly in the table below.

Changes Incorporated

In addition to minor procedural and editorial changes, the following changes have been made since the last published edition:

Affected Section(s)	Affected LAG(s)	Description
LAC 3.4.4.1.2	South	Amended Reims bandbox (LFEE_CTR) frequency (as of AIRAC 2024/13)
LAC 5.4.2, 5.4.4	Central	Amended Amsterdam positions and frequencies (as of AIRAC 2024/13) and removed EUC-MW position from Maastricht sector ownership (as of AIRAC 2024/13)
LAC 7.4.3, 7.4.4	North	Updated Oxford (EGTK) IFR outbound routing via KENET (as of AIRAC 2024/07)
APT 14	Central	Updated Isle of Man Ronaldsway (EGNS) RAD position frequencies (as of AIRAC 2024/07)

Introduction and Structure

The London virtual Manual of Air Traffic Services (vMATS) Part 2 is complementary to the MATS Part 1 (CAP 493). Together, these two documents provide comprehensive instructions and information for ATS controllers within VATSIM UK.

Note: Letters of Agreement between VATSIM UK and adjacent FIRs/vACCs are published separately. Where there are conflicts between information, the LoA shall have precedence over this document, except where instructions are otherwise notified to the ATC Procedure Changes forum.

This vMATS has been divided into separate sections for ease of reference, each with its own three letter identification code:

Page Abbreviation	Section
PRE	Preface
GEN	Unit General Operating Procedures
LAC	London Area Control
LTC	London Terminal Control
MPC	Manchester Prestwick Control
APT	Airports
ANX	Annexes

Time References

All time references within this document are Coordinated Universal Time (UTC), or Zulu time, unless otherwise specified.

The UK observes daylight saving time in the summer months (British Summer Time, or BST), so the clocks shift forwards by one (1) hour. In summer therefore, UK local time is one hour ahead of UTC/Zulu time.

Understanding ‘VATSIMisms’

At various points in this document, text boxes have been added to help you, as a VATSIM controller, understand how and why real-world procedures might have been simplified, made redundant, or even more complex because of the nature of VATSIM.

Note that anything contained in these boxes is for **information** purposes **only** – procedures will always be in the main body of the text.

*Useful information or explanations will be contained in text boxes with the same format as this. Note that information contained within these boxes are **not** procedures.*

General Abbreviations

See the [Glossary](#) for a complete list of abbreviations and acronyms contained within this document.

Abbreviation	Meaning
AC	Area Control
ACC	Area Control Centre
APC	Approach Control
FIR	Flight Information Region
LAC	London Area Control
LAG	Local Area Group
LTC	London Terminal Control
LTMA	London TMA
lvl	Level By (in a Standing Agreement)
MPC	Manchester Prestwick Control
MTMA	Manchester TMA
MUAC	Maastricht Upper Area Control
PC	Prestwick (MTMA) Control
ScAC	Scottish Area Control
ScTMA	Scottish TMA
TC	Terminal Control
UAC	Upper Area Control
UIR	Upper Information Region
↑ ↓	Indicates the agreement does not have a “level by” restriction specified. The aircraft may still be climbing/descending to the agreement level on transfer/contact.

Interpretation of Words

To avoid any misunderstanding within this vMATS Part 2, certain words are to be interpreted as having specific meanings when they are the operative words in an instruction.

- ‘shall’, ‘is to’, ‘are to’ and ‘must’** means that compliance with the instruction or requirement by the controller/pilot is mandatory.
- ‘should’** means that it is strongly advisable that an instruction is carried out; it is recommended or discretionary. It is applied where the more positive ‘shall’ is unreasonable but nevertheless a controller would have to have good reason for not doing so.
- ‘may’** means that the instruction is permissive, optional, or alternative, e.g., ‘a controller may seek assistance...’ but would not if they did not need it.
- ‘will’** is used for informative or descriptive writing, e.g., ‘pilots will file...’, is not an instruction to the controller.

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Validity of Procedures

Amendments to vMATS Part 2

Amendments to existing procedures and the introduction of new procedures will be notified through the publication of an ATC Procedure Change forum post. Significant changes will also be highlighted to controllers via the UK Controller Plugin notifications window, but controllers should not rely solely on these notifications.

All published instructions in the [ATC Procedure Changes Forum](#) shall have precedence over procedures published in this document and controllers must refer to these on a regular basis.

AIP-Published Data

Certain information included in this vMATS is published in the UK AIP, e.g., the STAR listing in Annex A. Where there are differences, the information published in the AIP shall take precedence. The Operations Department aims to notify controllers of the differences between this document and the AIP by means of an ATC Procedure Changes forum post, as described above. Controllers are encouraged to report discrepancies to the Operations Department.

Temporary Instructions (TIs)

A TI is a mandatory ATC instruction which is a temporary change to local ATC procedures. These will most often be published in advance of events for the purpose of opening non-standard sector splits but may also be used in case of vRAF military activity, or to set out VATSIM UK's operational response to a temporary change to real world procedures.

All published instructions in the [ATC Temporary Instructions Forum](#) shall have precedence over procedures published in this document for the period of their validity.

Letters of Agreement (LoAs)

Letters of Agreement between VATSIM UK and adjacent FIRs/vACCs are [published separately](#). Where there are conflicts between information, the LoA shall have precedence over this document, except where instructions are otherwise notified to the ATC Procedure Changes forum. Controllers are encouraged to report discrepancies to the Operations Department.

GEN

UNIT GENERAL OPERATING PROCEDURES

GEN | UNIT GENERAL OPERATING PROCEDURES

Chapter 1 Operating Procedures

1.1 Initial Clearance

1.1.1 Departure Clearances

Traffic from airfields contained within the London ACC Area of Responsibility (AoR) may be departing on a Standard Instrument Departure, or to agreed levels as part of a Standing Agreement detailed within this document.

Elsewhere, clearances shall be issued in accordance with MATS Part 1 (CAP 493).

1.1.2 Arrival Clearances

Aircraft inbound to airfields within the London ACC AoR should be cleared for their route/STAR by the initial London/MPC sector, as applicable:

- To a specified holding facility if remaining within controlled airspace to its destination, which may be via a Standard Terminal Arrival Route (STAR).
- To leave controlled airspace at an appropriate point.

The responsibility for issuing said clearance varies depending on the sector(s) being controlled, according to the table below. MPC shall issue STARs to Scottish FIR inbounds (with RFL285 and below).

Sectors	Destinations
London AC (Notes 1 & 2)	London FIR, including Manchester TMA and EGNT
London TC	
Manchester PC	Scottish FIR, Manchester TMA, EGBB and EGNX
Jersey Control (Note 2)	Channel Islands

Note 1: When London AC North is covering MPC airspace top-down, they shall only issue Scottish FIR STARs to traffic with RFL285 and below.

Note 2: Since STARs for airfields in the Channel Islands TMA are runway dependent, only London controllers covering Jersey Control top-down shall issue STARs for these destinations.

1.1.2.1 Confirmation of STAR by Flight Crew

Aircraft may, on first contact with the initial London/MPC sector, report to the controller the STAR that they are flying. This does not permit pilots to route direct to the STAR start point, and they are expected to continue to fly their flight planned route.

Note: If the previous controller has instructed the aircraft to fly a heading, the pilot will report both the heading and expected STAR to the controller.

Where the reported STAR is **correct**, the controller does **not** need to reiterate the STAR to the pilot. Their report may be taken as confirmation that the pilot will follow the STAR, as reported.

Where the reported STAR is **incorrect**, the controller shall proceed as follows:

- If the routing and STAR need amending, the controller shall pass the routing and STAR instructions to the pilot in full and receive a full readback and confirmation that they are able to follow said route.
- If the STAR is from an outdated AIRAC cycle, the controller shall ascertain whether the pilot has the updated/correct STAR and if yes, re-clear them on this up-to-date STAR.

If the pilot does not report the correct STAR, the controller shall pass the route to the aircraft and obtain a readback of this.

1.2 Use of 'Expect Level' Clearances

Many published STAR charts advise pilots of levels that they should expect ATC to issue. Agreements between split sectors often require that certain climb/descent profiles be adhered to in order to maintain the correct sector coordination sequence.

If a clearance to an intermediate level is given during climb or descent but the controller feels it would be beneficial to emphasise a planned level, controllers should use the following phraseology and procedures:

- Normally use a single transmission where the cleared flight level is at the end of the transmission – for example, *"BAW123, expect FL150 level by SOPIT, when ready descend FL290"*
- The cleared flight level may be reinforced with the word "now" – for example, *"BAW123, expect FL160 level by SABER, descend now FL280"*.

If planned level information is given with no change to the cleared level, the controller must re-emphasise the cleared level. For example, *"BAW123, expect FL140 level by SIRIC, report ready for descent. Maintain FL330"*.

1.3 Confirmation of Cleared Level

Pilots are required to report their cleared level on first contact following a frequency change. Controllers shall request this information from pilots who do not report this before issuing further instructions to an aircraft unless the traffic has come from unstaffed airspace.

1.4 Holding Phraseology

To reduce instances of incorrect direction holding, controllers are to use the following phraseology when instructing aircraft to hold: *"(callsign) hold at (name), (left/right) hand turns, (as published)"*.

For example: *"EZY40LD hold at WILLO, left hand turns, as published"*.

If there is no published hold, or the direction given differs from the published hold, controllers shall also specify the inbound course and leg time/distance.

1.5 Assuming of Electronic Aircraft Tags

The following procedures apply to all transfers of aircraft tags (UK internal & external).

1.5.1 Between Radar-Equipped Controllers

Controllers shall only 'accept' the transfer of an aircraft tag from a sending controller when the aircraft has 'checked in' on the receiving controller's frequency.

The transfer of an aircraft tag from a UK radar-equipped unit to another UK radar-equipped unit shall indicate to the receiving controller that the aircraft has been identified, their Mode A code validated, and their Mode C readout verified. However, aircraft outside of controlled airspace received from APC units should be instructed to squawk IDENT in accordance with GEN 1.6.2 below.

1.5.2 Aircraft from Unstaffed Airspace

For aircraft coming from unstaffed airspace, controllers should assume the tag after sending a 'contact me' request. This signals to other controllers that they are trying to contact the aircraft.

1.5.3 Departures

Controllers should not assume aircraft tags for departures until they have checked in on the frequency. Additionally, tags of departing aircraft will not be assumed by APC controllers unless it is their responsibility to complete identification, validation and verification (IVV).

1.6 Surveillance Procedures

MATS Part 1 (CAP 493) details procedures for the use of radar and methods of identification and validation of Mode A codes. Verification of Mode C shall also be completed in accordance with MATS Part 1.

In general, the transfer of an aircraft’s tag from a UK radar-equipped unit to another UK radar-equipped unit shall indicate to the receiving controller that the aircraft has been identified, their Mode A code validated, and their Mode C readout verified.

1.6.1 SSR Code Allocation

Code allocation for non-local traffic is managed by the UK Controller Plugin. Departures joining the ATS route network transferred to LAC/LTC/MPC from units using local SSR codes should be allocated a new general code.

1.6.2 Validation of SSR Mode A Codes by LAC/LTC/MPC

The display of a DUPE error (indicating a non-discrete code) on any aircraft’s tag requires the controller to identify and validate the aircraft’s identity before issuing executive instructions, with the exception of an initial climb. If initially identified via IDENT or another method, the controller shall assign and validate a new, discrete Mode A code as soon as practicable and prior to transferring the aircraft to the next controller.

The table below sets out how identification and validation may be achieved in different scenarios:

Traffic	Identification and Validation
Aircraft from unstaffed airspace	Observation of successful code-callsign conversion following the allocation of a discrete Mode A code, unless already discrete
Departures handled ‘top-down’	May be identified via the Departure Method and Mode A validated through observation of the expected code-callsign conversion
Departures from airfields within CAS	Observation of the expected code-callsign conversion with no DUPE error shown, else squawk IDENT in accordance with the procedure above
Departures from airfields outside of CAS transferred by an adjacent unit	Aircraft may be instructed to squawk IDENT to confirm the observed code-callsign conversion on first contact with LAC/LTC/MPC

1.6.3 Verification of Mode C by Adjacent Units

When a controller receives an electronic tag transfer (including from external ACCs), this may be taken as confirmation that the Mode C readout has been verified. Aircraft from unstaffed airspace must have their Mode C readout verified, regardless of whether a radar unit may previously have controlled the traffic.

Verification of Mode C for departures will only be completed by APC units or controllers covering the function top-down. The table below (non-exhaustive) details where the verification of Mode C is completed by adjacent units for departing traffic.

Unit	Mode C Verified Departures
Birmingham APC	All EGBB departures
Cardiff and Bristol APC	All EGFF and EGGD departures
East Midlands APC	RWY 09 departures only
Farnborough APC	All EGLF departures
Newcastle APC	All EGNT and EGNV departures
Southampton and Bournemouth APC	All EGHI and EGHH departures
TC Luton	EGGW departures to TC NW from RWY 07
TC Stansted	EGSS departures to TC NW
TC Thames / Southend APC	All EGLC, EGMC and EGKB departures except those LC departures transferred directly to TC NE from RWY 09

1.7 Free Route Airspace (FRA)

Free Route Airspace (FRA) is a volume of airspace in which the ATS route structure has been removed allowing operators to flight plan any DCT route option of their choosing between specific FRA entry / exit / arrival / departure and published intermediate waypoints.

Within UK FRA there is no limit to the length of DCT segments that can be flight planned.

Within FRA, Significant Points (or ‘fixes’) are described as one (or a combination) of:

FRA Horizontal Entry Point I	A published Significant Point on the horizontal boundary of FRA from which DCT operations are allowed.
FRA Horizontal Exit Point (X)	A published Significant Point on the horizontal boundary of FRA to which DCT FRA operations are allowed.
FRA Departure Point (D)	A published Significant Point from which aircraft transition from the lower route network from a specific airfield to DCT FRA operations.
FRA Arrival Point (A)	A published Significant Point where aircraft transition from DCT FRA operations to the lower route network to a specific airfield.
FRA Intermediate Point (I)	A published Significant point via which DCT FRA operations are allowed. In the UK, the use of unpublished points or a bearing/range from a point may not be filed in a flight plan.

All airfields contained within or adjacent to FRA have specified Arrival (A) and Departure (D) points, as well as routings to these points as published in the UK Standard Route Document (SRD) and EUROCONTROL Route Availability Document (RAD).

Intermediate (I) points, especially those on or near to adjacent FIR boundaries have specified conditions of use in the RAD. Those that are relevant to Letters of Agreement with adjacent units are specified in the respective co-ordination sections in this vMATS.

The extent of FRA in the UK is charted in **AIP ENR 6-70**.

Other than for meeting the terms of LoAs with adjacent units, we do **not** mandate that aircraft route via any specified Intermediate (I) points that would ensure aircraft avoid Flight Plan Buffer Zones (FBZs) in the real world.

This is due to a lack of both mandatory flight plan validation and a uniform policy for the treatment of danger areas as either permanently (or temporarily) active/inactive.

Chapter 2 Provision of Air Traffic Service

2.1 Roles and Responsibilities

- Provide the appropriate ATS within their stated AoR to ensure a safe, orderly, and expeditious flow of air traffic.
- Provide UK FIS where appropriate.
- Verify flight data including updating and managing the flight progress strip (data block).
- Maintain a listening watch and conduct standard radiotelephony communication with aircraft.
- Provide ATS to aircraft using radar within airspace of the relevant AoR and UK FIS, as appropriate, in accordance with local procedures.
- Where appropriate, identify aircraft, validate, and verify SSR data on first contact or as soon as possible thereafter.
- Assist aircraft in emergency (except where the simulation of the emergency is denied in accordance with VATSIM Code of Conduct B6³).
- Coordinate with Military ATC as required.
- Individually coordinate the movement of aircraft into and out of the sector unless said aircraft are operating under the terms of a Standing Agreement.
- Issue releases to airfields as appropriate.
- Allocate or obtain levels at holding stacks.
- When necessary, initiate a suspension of local Standing Agreements.
- Issue clearances to aircraft to join, leave or cross regulated/controlled airspace.
- Ensure that aircraft which do not have a serviceable transponder are the subject of notification and radar handover to the next ATS unit prior to the aircraft leaving the sector.
- When aircraft are accepted into the sector, ensure separation exists in accordance with this vMATS Part 2.
- Confirm all data transfer, revisions and estimates have been effected as required in local instructions.

³ See <https://vatsim.net/docs/policy/code-of-conduct/>

2.2 Types of ATS Surveillance Service

The provision of an Air Traffic Service is dependent upon specific types of airspace. Details of the services provided are stated in the table below:

Airspace	Type of Service	ATC action with regard to Unknown Aircraft that may be in Unsafe Proximity to the Aircraft in Receipt of an ATS
Class A (<i>IFR only</i>)	Radar Control	Flights shall be given traffic avoidance advice and traffic information shall be passed.
Class C and D	Radar Control	IFR flights shall be given traffic avoidance advice and traffic information shall be passed. VFR flights shall be given traffic information and, if requested or deemed appropriate, traffic avoidance advice shall be suggested.
Class E (<i>CAS where VFR flight without ATC clearance is permitted</i>)	Radar Control (IFR)	Pass traffic information unless the controller’s primary function of sequencing and separating IFR flights is likely to be compromised. IFR flights shall be given traffic avoidance advice against other IFR flights.
	Traffic, or Basic	VFR flights shall be given traffic information in accordance with CAP 774 (see below).
Class G	Deconfliction (IFR)	Flights shall be given traffic information and deconfliction advice in accordance with CAP 774. If deemed required, traffic avoidance advice may be passed by ATC before traffic information.
	Traffic, or Basic	Flights shall be given traffic information in accordance with CAP 774 (see below).

2.3 UK Flight Information Services

Controllers shall provide UK FIS in accordance with MATS Part 1 and CAP 774⁴.

2.3.1 General

The UK Flight Information Services are:

- Basic Service (IFR and VFR traffic)
- Traffic Service (IFR and VFR traffic)
- Deconfliction Service (**IFR traffic only**)
- Procedural Service (**IFR traffic only**) – *not included in this document and not used in the London FIR*

All these services can be offered in **any** meteorological conditions. However, as pilots are expected to accept advice given under the service, they should not request a service which is not suitable to their qualification/ability/situation and should select the most appropriate to their conditions.

If a Deconfliction Service or Traffic Service is being provided, there may be circumstances that prevent the controller from passing timely advice or traffic information, such as high workload, traffic intensity etc. In these situations, the controller is to inform the pilot of the limitation of service.

⁴ The latest version is available at <https://caa.co.uk/CAP774/>

To remind the controller of the service they are providing, and to indicate to adjacent controllers, the UK Controller Plugin tag item may be used to record the service, else the following abbreviations should be marked in the 'Scratchpad':

- Basic Service - /BS
- Traffic Service - /TS
- Deconfliction Service - /DS
- Procedural Service - /PS

2.3.1.1 Class E Airspace

Class E airspace is controlled airspace. Significantly there is no requirement for VFR flights to gain clearance to enter or to communicate with ATC. VFR flights operating in Class E airspace who contact ATC and request a service are to be provided with one of the Flight Information Services (Basic Service or Traffic Service), not a 'Control Service'. IFR flights in Class E airspace (on a Radar Control Service) are to be provided with traffic information on all known VFR flights. Traffic avoidance will be given only if requested.

2.3.2 Basic Service (BS)

A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

Basic Service	Remarks
Type	Non-surveillance-based service.
Provision	Controllers and FISOs may provide a Basic Service.
Flight Rules	IFR and VFR.
Identification	The controller may identify an aircraft.
Traffic Information	Generic traffic information.
Deconfliction	Deconfliction is not provided under a Basic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested.
Terrain	Basic Service is available at all levels, and the pilots remain responsible for terrain clearance at all times.
Headings	Unless the pilot has entered into an agreement with a controller to maintain a specific course of action, a pilot may change heading or routing without advising the controller.
Levels	Unless the pilot has entered into an agreement with a controller to maintain a specific level or level band, a pilot may change level without advising the controller/FISO.

2.3.3 Traffic Service (TS)

A Traffic Service is a surveillance based ATS, where the controller provides specific surveillance-derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the pilot remains responsible for collision avoidance.

Traffic Service	Remarks
Type	Surveillance-Based service.
Provision	Only provided by a controller with access to an ATS surveillance system.
Flight Rules	IFR and VFR.
Identification	The controller shall identify the aircraft, inform the pilot that they are identified, and maintain identity.

Traffic Information	Traffic is normally considered to be relevant when, in the judgement of the controller, the conflicting aircraft’s observed flight profile indicates that it will pass within 3 NM and, where level information is available, 3000 ft of the aircraft in receipt of the Traffic Service or its level-band if manoeuvring within a level block. However, controllers may also use their judgement to decide on occasions when such traffic is not relevant, e.g., passing behind or within the parameters but diverging. Controllers shall aim to pass information on relevant traffic before the conflicting aircraft is within 5 NM (<i>CAP 774, Chapter 3, Paragraph 3.5</i>).
Deconfliction	Deconfliction is not provided under a Traffic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested.
Terrain	Traffic Service may be provided below MSA; however, pilots remain responsible for terrain clearance.
Headings	A pilot may operate under their own navigation, or a controller may provide headings for the purpose of positioning, sequencing, or as navigational assistance.
Levels	Pilots may select their own operating levels or may be provided with level allocations by the controller for the positioning and/or sequencing of traffic or for navigational assistance.

2.3.4 Deconfliction Service (DS)

A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima, or for positioning and/or sequencing. However, the avoidance of other traffic is ultimately the pilot’s responsibility.

Deconfliction Service	Remarks
Type	Surveillance-Based service.
Provision	Only provided by a controller with access to an ATS surveillance system.
Flight Rules	IFR only .
Identification	The controller shall identify the aircraft, inform the pilot that they are identified, and maintain identity.
Traffic Information	The controller may, subject to workload, pass traffic information on deconflicted traffic in order to improve the pilot’s situational awareness
Deconfliction	<p><u>The deconfliction minima against un-coordinated or unknown traffic are:</u></p> <ul style="list-style-type: none"> - 5 NM laterally; or - 3000 ft vertically unless Mode-C has been verified. <p><u>The deconfliction minima against aircraft under a service from the same controller or have been previously coordinated:</u></p> <ul style="list-style-type: none"> - 3 NM laterally; or - 1000 ft vertically
Terrain	A Deconfliction Service shall only be provided to aircraft operating at or above the MSA. If a pilot requests descent below MSA, controllers shall no longer provide a Deconfliction Service, but should instead, subject to surveillance and RTF coverage, apply a Traffic Service and inform the pilot.
Headings	A pilot may operate under their own navigation, or a controller may provide headings for the purpose of positioning, sequencing, or as navigational assistance.
Levels	Controllers will normally provide level allocations for positioning, sequencing, navigational assistance, or to achieve deconfliction minima.

2.3.5 Provision, Upgrade and Downgrade of Service

When a pilot is provided with a service, the controller is to inform them of the service they will receive. Should the service subsequently change, the pilot must be informed so that they are aware of what information they can expect to receive.

2.4 Area Control Service

Within airspace Classes A to D and IFR aircraft in Class E, an Air Traffic Control Service, with or without the use of radar is provided.

In Class G airspace, any of the UK FISs, as detailed above, are provided.

Airspace	Service Provided	Remarks
Class A, C and D (CAS)	Air traffic control services with or without surveillance	Aircraft are required to comply with ATC instructions
Class E	Air Traffic Control Service with or without surveillance to IFR flights; and UK FIS to participating VFR flights	Participating VFR flights shall not be provided with an Air Traffic Control Service, but one of the following types of UK FIS in accordance with CAP 774 (UK FIS): Basic Service; or Traffic Service
Class G	UK FIS: - Basic Service; - Traffic Service; - Deconfliction Service; - Procedural Service.	Instructions issued by controllers to pilots operating outside controlled airspace are not mandatory. However, the services rely upon pilot compliance with the specified terms and conditions to promote a safer operating environment for all airspace users.

There are a variety of objectives of an Air Traffic Control Service, which include:

1. preventing collisions between aircraft;
2. preventing collisions between aircraft on the manoeuvring area or between aircraft and obstructions in that area;
3. expedite and maintain an orderly flow of air traffic;
4. provide advice and information useful for the safe and efficient conduct of flights.

Note: *ATS personnel are not solely responsible for the prevention of collisions. Pilots must also fulfil their own responsibilities in accordance with the Rules of the Air.*

2.5 Prioritisation of Services

Area Controllers shall prioritise service provision as follows:

- Provision of a Radar Control Service to IFR flights within CAS.
- Provision of a Radar Control Service to VFR flights within CAS. While inside CAS, these flights have an equal priority to IFR flight with respect to provision of service, however a clearance into CAS may be withheld should this detrimentally affect the provision of service to IFR flights within CAS.
- Provision of a Deconfliction Service/Traffic Service to aircraft operating between airfields where there is no available route within CAS.
- Provision of a clearance to IFR aircraft joining or leaving CAS from airfields outside controlled airspace by the appropriate direct route.
- Provision of a Deconfliction Service/Traffic Service to other aircraft. Such services should only be offered to pilots where workload permits, otherwise a Basic Service may be provided.
- Provision of a Basic Service.

2.5.1 Top-Down Service Provision

In the absence of local ATC, Area Controllers shall provide a top-down service at aerodromes within their AoR where an Air Traffic Control service would normally be provided (see [GEN 6](#)). Provision of ATS to airborne traffic should generally take priority over top-down service provision.

Where necessary, controllers may reduce the extent of the top-down service by permitting aircraft to self-manoeuvre or depart at their discretion (especially at airfields outside CAS). Aircraft should be instructed to maintain a listening watch on the frequency and must not be transferred to Unicom.

While some top-down service degradation is permitted, when the overall traffic workload (En Route and top-down) is such that safety, efficiency or the experience of pilots is compromised, Area Controllers are to reduce their coverage area. It is recognised that during events reducing coverage may not be possible.

Chapter 3 Local Separation Standards

3.1 General

Separation shall be applied in accordance with MATS Part 1 (CAP 493) Section 1, Chapter 3, Separation Standards.

Separation on VATSIM is subject to some simplification, especially due to the fact of continuous uninterrupted radar coverage limiting the necessary use of procedural separation. As such, an understanding of the separation requirements in this document will be sufficient for the purpose of area control on VATSIM.

Standard vertical or horizontal separation shall be provided between:

- All flights in Class A airspace;
- IFR flights and VFR flights in Class C airspace;
- IFR flights and other IFR flights in in Class C, D and E airspace;
- IFR flights and Special VFR flights in any classification of airspace;
- Special VFR flights and other Special VFR flights.

3.2 Vertical Separation

Vertical separation exists when the vertical distance between aircraft is never less than the prescribed minimum. The vertical separation minima are:

- Between aircraft flying subsonic:
 - a. Up to FL410 apply 1000 ft;
 - b. Above FL410 apply 2000 ft.
- Where at least one of the aircraft is flying supersonic:
 - a. Up to FL450 apply 2000 ft;
 - b. Above FL450 apply 4000 ft.

On VATSIM, all aircraft with an RFL above FL290 are assumed to be RVSM approved. Therefore, we apply 1000 ft separation between FL290 and FL410 inclusive (RVSM airspace).

See MATS Part 1 (CAP 493), Section 1, Chapter 3, 5. Vertical Separation.

3.3 Separation Based on ATS Surveillance System Information

3.3.1 Radar Separation Minima

The standard minimum horizontal radar separation to be applied across all London sectors is **5 NM**, except where the use of 3 NM has been approved as stipulated in the following sections.

Where there is a requirement for an increase in separation or spacing between aircraft prior to transfer, this shall be noted in the relevant section(s) of this document.

3.3.2 Ensuring Radar Separation

The minimum radar separation is an absolute minimum. Therefore, aircraft should not be permitted to fly on their own navigation where the minimum separation is not ensured. As a guide, it is recommended that where planned separation is less than 10 NM, aircraft should be on assigned radar headings to ensure separation. This may be reduced to 7 NM where the use of 3 NM lateral separation has been approved.

It should be noted that due to the nature of VATSIM, radar headings may need to be assigned where planned separation is greater than required where there is the possibility of differing aircraft performance. When operating at or close to the radar separation or surveillance monitored separation minima, controllers shall monitor the flights for any unforeseen discrepancy.

Greater separation may be required for wake turbulence separation purposes.

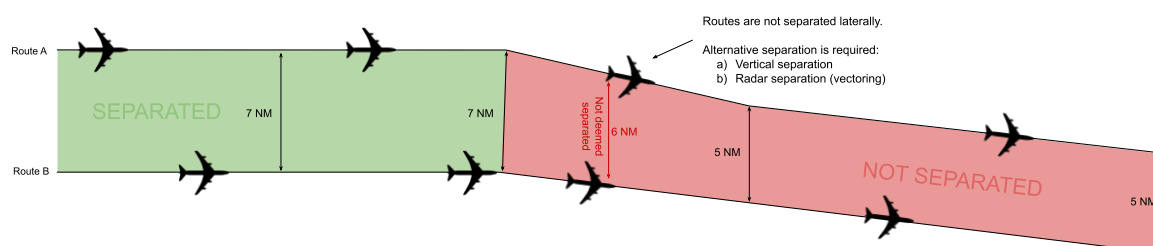
The use of adequate speed control may be used in place of radar headings for aircraft flying in trail.

3.3.3 Surveillance Monitored Separation

Radar monitoring of traffic on ATS routes (including SIDs, STARs and associated holds) or FRA directs is permitted, subject to the following conditions:

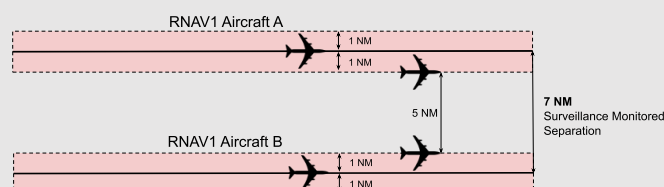
- Traffic must be established on the route centreline, or following radar vectoring / within FRA, more than **7 NM** (or 5 NM where 3 NM radar separation is approved) from the adjacent route and cleared to a navigational fix.
- Aircraft must be radar vectored if any significant route deviations are observed by the controller.
- Where turbulence or weather systems are reported, the controller must consider re-establishing positive radar control to counter track deviation.
- Controllers should, where possible, ensure that the routes' centrelines or the associated navigational fix's symbols are displayed when radar monitoring is in use.

Figure GEN-1 – 7 NM Surveillance Monitored Separation



We assume all aircraft filed via ATS routes, (RNAV) SID/STARs and FRA directs to be RNAV1 certified for the purposes of Surveillance Monitored Separation. If a pilot states that this is not the case, or the controller has any doubt as to the navigation capability of an aircraft, then aircraft must be radar vectored to ensure separation.

The 7 NM separation standard is derived from the 5 NM minimum radar separation, allowing for a +/- 1 NM track deviation, as shown in the diagram.



3.3.4 Use of 3 NM Radar Separation

There are varying limits to the extent to which 3 NM radar separation can be applied within each LAG.

In areas of known bad weather, for example, CBs, thunderstorms, reported turbulence, 3 NM radar separation should **not** be used.

If 3 NM separation is applied against an aircraft under the control of another agency, direct voice communication must be available between the controllers, and the other agency must also be approved to apply reduced radar separation.

Note: All UK Approach Control units are authorised to apply 3 NM radar separation inside Class A/D/E airspace.

3.3.4.1 Within South and Central LAGs

All South and Central LAG controllers are authorised to apply a minimum of 3 NM, subject to the following conditions. Aircraft must be:

1. Under the control of the same controller, or controllers with a means of effecting direct voice coordination;
2. Identified and operating below **FL245**;
3. Within the airspace contained by the sectors of the South and Central LAGs (TC or AC);
4. Separated by prescribed wake turbulence separation standards when these are greater than radar separation.

3.3.4.2 Within North LAG

MPC controllers are authorised to apply a minimum of 3 NM radar separation, subject to the following conditions. Aircraft must be:

1. Under the control of the same controller, or controllers with a means of effecting direct voice coordination;
2. Identified and operating below **FL245**;
3. Within the airspace contained by the MPC sectors;
4. Separated by prescribed wake turbulence separation standards when these are greater than radar separation.

3.3.4.3 Within West LAG

Cardiff and Bristol APC (and thus West LAG controllers when covering the APC positions top-down) may use 3 NM radar separation subject to the following conditions. Aircraft must be:

1. Under the control of the same controller, or controllers with a means of effecting direct voice coordination;
2. Identified and operating below **FL165**;
3. Within the lateral limits of the Cardiff and Bristol CTAs, and/or the delegated airspace to such approach units; see *Figure APT-20 – Airspace Delegated to Cardiff and Bristol ATC*;
4. Separated by prescribed wake turbulence separation standards when these are greater than radar separation.

3.4 Wake Turbulence Separation Requirements

In accordance with *MATS Part 1 (CAP 493), Section 1, Chapter 3, 9C. En-route*, the following surveillance-based separation minima shall be applied:

- minimum of 5 NM between a HEAVY (including a SUPER) and a MEDIUM (UPPER and LOWER), SMALL or LIGHT aircraft following or crossing behind at the same level or less than 1,000 ft below.

3.5 Minimum Separation Between Sectors

Controllers shall not route or vector unknown traffic closer than 2.5 NM from a sector boundary without prior coordination with the adjacent sector controller.

3.6 Separation Requirements Against Holding Aircraft

A minimum of 5 NM radar separation shall be applied between holding aircraft and en-route aircraft/aircraft approaching the holding facility. This may be reduced to 3 NM radar separation, provided that all conditions relating to its use are met.

Note: *Controllers should use caution when applying radar separation to aircraft approaching/passing other holding aircraft, considering factors such as variable rates of climb/descent, hold entry patterns, hold protected areas, and weather conditions (particularly prevailing wind).*

Chapter 4 Altimeter Setting Procedures and Meteorology

4.1 Altimeter Setting Procedures

4.1.1 Transition Altitude

Area	Transition Altitude
London TMA	6000 ft
Daventry CTA	
Birmingham CTR/CTA	
East Midlands CTR/CTA	
Solent CTA	
Belfast TMA	
Teesside CTR/CTA	
Newcastle CTR/CTA	
Bristol CTR/CTA	
Cardiff CTR/CTA	
Channel Islands CTR	5000 ft
Leeds Bradford CTR/CTA	
Manchester TMA	
Liverpool CTR/CTA	
(Default)	3000 ft

4.1.2 Transition Level and Minimum Stack Level

The transition level is to be determined from the table below, taken from MATS Part 1 (CAP 493). Within CAS, the QNH to be used in conjunction with the relevant table will be as follows:

QNH (hPa)	Transition Altitude					
	3000 ft		5000 ft		6000 ft	
	TL	MSL	TL	MSL	TL	MSL
1060	FL30	FL40	FL50	FL60	FL60	FL70
1050						
1049	FL35	FL40	FL55	FL60	FL65	FL70
1032						
1031	FL40	FL40	FL60	FL60	FL70	FL70
1014						
1013	FL45	FL50	FL65	FL70	FL75	FL80
995						
994	FL50	FL50	FL70	FL70	FL80	FL80
977						
976	FL55	FL60	FL75	FL80	FL85	FL90
959						
958	FL60	FL60	FL80	FL80	FL90	FL90
940						

Area	Transition Level / MSL based on
Cardiff and Bristol CTR/CTAs	Cardiff/Bristol Aerodrome QNH, whichever is lower
Manchester TMA	Manchester Aerodrome QNH
London TMA	Heathrow Aerodrome QNH

4.1.2.1 Change to MSL Procedure

When the pressure changes across an MSL boundary:

- The first APC/Enroute controller to notice the change shall notify all affected units who also refer to the MSL.
- The first controller shall coordinate the agreement of an effective time that is at least 5 minutes from the time the pressure change was noticed.

Aircraft operating at the old MSL are deemed separated from aircraft operating at the Transition Altitude until the new MSL is agreed to be in effect.

Chapter 5 General Coordination Regulation

5.1 Standing Agreements

Note: This section only applies to UK Internal Standing Agreements. For transfers to/from external neighbouring ACCs, see GEN 5.5 Transfer of Control and Communication – External ACCs.

A Standing Agreement is a procedure specifying conditions (and restrictions, as required) under which an aircraft may enter another sector/controller's airspace without individual coordination.

Aircraft must be individually coordinated when they cannot be transferred in accordance with a Standing Agreement and are not deemed coordinated (see GEN 5.2). Controllers may agree temporary (amendments to) Standing Agreements.

5.1.1 Conditions

An aircraft operating under a Standing Agreement shall be:

- cleared to, or at, an agreed level before transfer of communication; and
- on an agreed route or heading.

5.1.2 Transfer of Control and Communication

Unless specific restrictions are specified in the agreement, transfer of control of aircraft under the terms of a Standing Agreement is coincident with transfer of communication.

The **offering controller** must ensure that any potential conflict with aircraft either in or entering their own airspace is resolved before transfer of communication.

The **receiving controller** must continue the flight in the same general direction, not climb a descending aircraft or descend a climbing aircraft, nor stop the aircraft at an intermediate level while it remains in the offering controller's airspace.

If traffic on a Standing Agreement will pass through an intermediate controller's airspace without communication (e.g., EGKK inbounds from TC Midlands to TC SW), transfer of control is effective at the receiving controller's AoR boundary. In these instances, any turns or climb/descent must be coordinated with all controllers concerned.

5.1.3 Release for Climb or Descent

When transferred under a Standing Agreement, traffic is released for climb/descent (never both) to the top/bottom of the offering controller's airspace, unless the agreement specifies otherwise. On VATSIM, this allows climb/descent into banded sectors, but not for the traffic to enter another controller's airspace.

Note: Traffic that has entered the receiving controller's airspace must not then re-enter the offering controller's airspace during further climb or descent. This is more likely in banded scenarios.

5.1.4 Release for Turn

When transferred under a Standing Agreement, traffic is released for turn in the **same general direction** against known traffic, including if transferred on a heading and unless the agreement specifies otherwise. The receiving controller must be informed if an aircraft is transferred on a heading against traffic unknown to them. Any turn must not take the aircraft into a third controller's airspace without prior coordination.

Same general direction means that traffic should continue towards the receiving controller's airspace and should be turned with due consideration given to the distance from the common AoR boundary and surrounding traffic situation, usually by no more than 30°.

If a release for turn is individually or electronically coordinated for an aircraft, the turn must **not** be greater than 45°, unless a specific direct is agreed.

5.1.5 Level By Instructions

If no “level by” point is specified, the level must be reached prior to the aircraft entering the receiving sector. However, the traffic does not have to be level at the time of transfer of communication.

A climbing/descending agreement is indicated by an arrow. This means the aircraft does not need to be level by the sector boundary and may continue to climb/descend to that level within the next sector’s airspace.

↑ ↓ Indicates a climbing/descending agreement.

Where specified in an agreement, the “level by” point should be included in the descent clearance to ensure the correct sector sequence. If the level specified cannot be achieved by the aircraft, the pilot in command shall inform ATC immediately. ATC is responsible for further coordination with the appropriate sector(s).

Where an agreement for climbing outbounds specifies a level by point, controllers shall monitor the climb rate and intervene/coordinate as required. Optionally, the “level by” point may be specified in the clearance.

5.1.6 Additional Coordination Requirements

If an aircraft which would normally be transferred to a sector on a Standing Agreement is routed to avoid that sector entirely, controllers should notify the original sector that the traffic has been ‘skipped’.

Aircraft following a route for which an inbound Standing Agreement exists, but at a level higher than the aircraft’s RFL, must be individually coordinated.

On VATSIM, electronic coordination via EuroScope may be used to notify the next sector of an RFL below the Standing Agreement level, or to coordinate a different level. The receiving controller must acknowledge the coordination request for it to be deemed as coordinated.

5.2 Deemed Coordination of En-Route Traffic

Traffic which has reached the RFL indicated on the flight plan by the sector boundary is deemed to have been coordinated and may be transferred by silent handover (see GEN 5.6), provided that:

- the aircraft is at a correct level for the direction of flight;
- the RFL has not been changed within 30 NM of the AoR boundary; and
- no objection has been raised by the receiving controller.

Where the RFL is unusually low for the flight planned route, controllers should notify these flights to the next sector individually.

Transfer of Control is at the receiving sector boundary, unless otherwise stated in this document.

5.3 Individual Coordination

Flights not deemed coordinated (GEN 5.2) or subject to a Standing Agreement (GEN 5.1) must be individually coordinated between sector controllers. An exit flight level should be offered, and other conditions may optionally be applied.

Departures from aerodromes not covered by Standing Agreements must also be allocated a level for acceptance from the aerodrome/approach controller by the receiving sector.

Coordination Request	Phrase
Radar Release	<i>“Request release (message)”</i>
Level Revision	<i>“Level Revision (level request)”</i>
Request Coordination	<i>“Request Coordination (aircraft)”</i>

Allow the receiving sector to identify the traffic before presenting the coordination request.

5.4 Transfer of Control and Communication – UK Internal

*Note: This section does **not** apply to UK internal Standing Agreements – see GEN 5.1.*

Unless otherwise stated in this document:

- **transfer of control** is effective at the common AoR boundary between the offering and receiving controllers
- **transfer of communication** shall take place no later than the sector boundary.

Aircraft **must not enter** a third controller's airspace without coordination. This applies to all climb / descent and turn procedures detailed below and in sector instructions.

5.4.1 Release for Climb or Descent

Aircraft that are climbing/descending are released for climb/descent to the top/bottom of the transferring controller's airspace.

5.4.2 Release for Turn

Traffic transferred on its own navigation is released for turn in the **same general direction**.

If an aircraft **not** operating under the terms of a Standing Agreement is transferred on a radar heading, **any change of heading, before entering the receiving controller's airspace, must be coordinated** unless otherwise specified in sector procedures.

It is the responsibility of the receiving controller to ascertain if an aircraft is on a heading, and it should be noted that aircraft may be transferred on a heading against traffic unknown to the receiving sector.

If a release for turn is individually or electronically coordinated for an aircraft, the turn must **not** be greater than **45°**, unless a specific direct is agreed.

5.4.3 Full Release

A full release is an authorisation for the accepting unit to climb, descend and/or turn a specific aircraft according to the instructions above.

5.4.4 Conditions of Transfer

Aircraft transferred on a radar heading or with a speed restriction should have this recorded in the tag, with the pilot instructed to report their assigned heading and/or speed upon transfer of communication.

5.5 Transfer of Control and Communication – External ACCs

Unless otherwise stated in this document, the transfer of control is effective at the Coordination Point (COP) otherwise the FIR/AoR boundary.

Transfer of communication shall take place no later than the COP/FIR/AoR boundary. Note that some traffic will have an earlier transfer of communication point specified in sector instructions.

5.5.1 Release for Climb/Descent or Turn

Unless specified in sector specific instructions or individually coordinated, aircraft are not released for turn or climb/descent while within the offering ACC's airspace.

Unless otherwise specified, traffic transferred on a radar heading must **not** be turned until within the receiving controller's airspace.

If a release for turn is individually coordinated for an aircraft, the turn must **not** be greater than **45°**, unless a specific direct is agreed.

5.5.2 Conditions of Transfer

Aircraft transferred on a radar heading or with a speed restriction should have this recorded in the tag, with the pilot instructed to report their assigned heading and/or speed upon transfer of communication.

5.6 Silent Handover

5.6.1 UK Internal

Unless otherwise stated in this document, transfer of control between UK enroute controllers may be effected without radar handover provided that:

- The aircraft is covered by Standing Agreement (*GEN 5.1*) or is deemed coordinated (*GEN 5.2*).
- The aircraft has a discrete SSR identity.
- The aircraft is within the anticipated radar cover of the receiving controller.

5.6.2 External ACCs

Unless otherwise stated in this document, transfer of control between a UK enroute controller and an external ACC may take place by means of a Silent Handover (that is, without prior coordination) provided that:

- If the aircraft concerned are following the **same route**, they are spaced by a minimum of 10 NM, constant or increasing. (See *Note*).
- If the aircraft concerned are on **crossing tracks**, the conditions detailed under (Reduced) Longitudinal Separation for the relevant ACC are met.
- The transferring controller places any speed control or vectoring instructions (within the terms of the agreement) in the tag and instructs aircraft to report these on first contact with the receiving controller.
- The receiving controller is informed – by means of XFL electronic coordination or otherwise – of any level restriction other than an aircraft's requested flight level or those covered by Standing Agreement prior to transfer of communications.

Note: *The 10 NM here is not a separation standard. It is the minimum spacing required for a silent transfer of control.*

5.7 Radar Handover

Where the conditions for Silent Handover are not met, transfer of control by radar handover, as described in MATS Part 1, may be effected. The transferring controller must retain the aircraft on frequency until it is coordinated with the receiving controller.

Controllers should note that adjacent ACCs use the ICAO phrase "transfer of radar control", as opposed to the UK "radar handover".

5.8 Coordination of Direct Routings

There is no requirement to coordinate a direct routing for an aircraft, provided that the direct issued:

- Is entered in the data block label and/or EuroScope sector list;
- Ensures the aircraft will enter the receiving sector at the boundary with the offering sector, **not** through an intermediate sector; and
- Will not take the aircraft off route by more than 5 NM in the next or any subsequent sectors, or contravene any positioning requirements specified in a Standing Agreement.

If any of the above conditions cannot be met, coordination shall be effected by the offering sector with the receiving sector, the original receiving sector if that has changed, and any intermediate sectors through which the aircraft will transit.

Example: *An aircraft routing via LAM with a sector sequence of Clacton → Dover → Daventry (e.g., inbound EGCC entering the FIR via RAPIX) may be routed to avoid Dover's sector if traffic permits. Clacton must coordinate the direct routing with Daventry and inform Dover that the expected aircraft will therefore not enter their sector.*

Directs may be given into adjacent ACC sectors in accordance with the procedures above, provided the direct point is less than 30 NM beyond the common boundary.

5.9 Electronic Coordination

Electronic coordination requires less time to perform (usually a few seconds) and generally lower controller workload.

Releases between UK controllers may be specified via the UK Controller Plugin Enroute Release tag item. Additionally, some neighbouring ACCs use TopSky which has release functionality.

The main limitation of EuroScope electronic coordination is that they are only applicable to pre-defined scenarios and can only be initiated to one adjacent controller. Also, it is not suitable for time critical situations where a timely response is essential.

Controllers should be aware that accepting coordination of a direct routing only appears in the aircraft tag for the coordinating and receiving controllers. It is therefore advisable for the current controller to re-enter/re-type any direct into the scratchpad/tag after it has been agreed via electronic coordination.

Where electronic coordination is used to agree a transfer level, this level is always assumed to be level by the coordination point (or sector boundary if no defined point).

5.10 Transfer of Aircraft to APC

AC / TC shall not initiate transfer of communication of arriving aircraft to APC until the aircraft is indicating below FL195.

5.10.1 Silent Handover Inbound to a Holding Facility

A silent handover is a radar handover without the need for individual coordination. These can be used to facilitate the transfer of control from Area Control to Approach Control between certain units in order to reduce the amount of coordination required.

Specific local procedures for the silent handover will include an agreed level and typically a minimum distance in trail for successive inbounds. Some agreements permit multiple aircraft to be transferred at or descending to the same agreed level and it is the responsibility of APC to inform ACC whenever holding is likely to be initiated, suspend the silent handover procedure, and agree another course of action.

It is the responsibility of APC to inform ACC of traffic transiting the CTR at any level conflicting with the silent handover procedure and agree an alternative course of action. Area Control must transfer traffic clean of all traffic which is unknown to APC.

Transfer of control is effective according to specific local restrictions. Approach Control may not climb the aircraft or stop its descent above the agreed/cleared level; however, may add or remove speed control or instruct aircraft to disregard any 'level by' restrictions imposed.

Some examples of where these Silent Handover agreements are in place are Birmingham GROVE arrivals (see [APT 7.3](#)) and East Midlands ROKUP arrivals (see [APT 8.3.3](#)).

5.10.2 Abbreviated Releases

An abbreviated release to APC is a method of reducing coordination between APC and ACC, compared to a full release, as only the release level must be stated. Abbreviated releases may only be used at specified holding facilities and procedures for transfer of control are defined for each case.

Upon transfer of communication, APC may:

- apply or remove speed control;
- turn and descend the aircraft after reaching the release point (which may or may not be the holding fix) in accordance with RMA procedures;
- descend the aircraft to a lower level as specified in local procedures.

Approach Control may not climb the aircraft or stop its descent above the release level; however, the approach controller may instruct aircraft to disregard any 'level by' restrictions imposed.

It is the responsibility of the Approach Controller to ensure that aircraft under their control are descended in a timely manner to leave higher holding levels vacant.

Aircraft transferred on an abbreviated release must be vertically separated from other traffic and following its own navigation to the holding facility.

Aircraft should not be instructed to operate at a high speed by one controller and, on transfer to the next sector, be instructed to reduce speed significantly. Aircraft with an ATC speed restriction should be transferred to Approach control in the speed range of 250 – 300 kts IAS; speeds outside this band should be coordinated with the receiving sector. Allocated speeds should take into account the time remaining to reduce to holding speed, speed limit points and target levels where published.

Aircraft must be cleared to the release level upon transfer of communication – the highest and lowest release level is specified in the local documentation for each holding facility (and in the relevant sections of this document). Aircraft holding above the highest release level must be retained by Area Control until lower levels can be allocated.

Provided the correct cleared level is displayed in the aircraft TAG, it is not, on VATSIM, necessary to coordinate an abbreviated release verbally with the relevant APC sector. It is, however **recommended** that verbal abbreviated releases are used while holding is taking place and workload allows, or where it might be deemed useful for clarity.

Note that this everyday omission of verbal abbreviated releases does not equate to a 'Silent Handover' as defined below. We use the terminology "electronic abbreviated release" and "verbal abbreviated release" when necessary to specify the difference.

5.11 Airfield Groups

References to, and agreements for, certain groups of airfields have been simplified as follows:

5.11.1 UK

Group	Aerodromes	
Belfast Group	Belfast/Aldergrove (EGAA)	Newtownards (EGAD)
	Belfast/City (EGAC)	Londonderry/Eglinton (EGAE)
Brize Group	Brize Norton (EGVN)	Gloucester (EGBJ)
	Fairford (EGVA)	Kemble (EGBP)
Essex Group	London Stansted (EGSS)	Cambridge (EGSC)
	London Luton (EGGW)	
Heathrow Group	London Heathrow (EGLL)	Northolt (EGWU)
Jersey Group	Alderney (EGJA)	Jersey (EGJJ)
	Guernsey (EGJB)	
London TMA Group	<u>Essex Group</u>	Denham (EGLD) Gatwick (EGKK)
	<u>Heathrow Group</u>	
	<u>Thames Group</u>	
Manchester TMA Group	Manchester (EGCC)	Barton (EGCB)
	Liverpool (EGGP)	Hawarden (EGNR)
Midlands Group	Birmingham (EGBB)	East Midlands (EGNX)
	Coventry (EGBE)	
Scottish TMA Group	Edinburgh (EGPH)	Dundee (EGPN) Cumbernauld (EGPG)
	Glasgow (EGPF)	
	Prestwick (EGPK)	
Severn Group	Cardiff (EGFF)	Swansea (EGFH)
	Bristol (EGGD)	St Athan (EGSY)
Solent Group	Southampton (EGHI)	Bournemouth (EGHH)
Thames Group	London/City (EGLC)	Southend (EGMC)
	Biggin Hill (EGKB)	Rochester (EGTO)
Wessex Group	Blackbushe (EGLK)	Lasham (EGHL)
	Fairoaks (EGTF)	Dunsfold (EGTD)
	Odiham (EGVO)	

5.11.2 Non-UK

Group	Aerodromes	
Dublin Group	Dublin (EIDW)	Weston (EIWT)
	Casement (EIME)	
Haamstede Group	Weert (EHBD)	Rotterdam (EHRD)
	Eindhoven (EHEH)	Hoeven (EHSE)
	Breda (EHGR)	Uden (EHVK)
	Middleburg (EHMZ)	Bergen Op Zoom (EHWO)

5.12 Handing Over/Taking Over an Operational Position

It is essential that a Controller taking over a position is fully aware of all relevant information before they accept responsibility for the operational position.

Controllers are recommended to use one of the following checklists as an aide-memoir when handing and taking over sectors. These recommendations are not exhaustive and should be read in conjunction with MATS Part 1 requirements for sector hand-over.

5.12.1 WEST

W E S T	Weather	Turbulence CB Activity SIGMETs Winds Pressure Settings (High/Low) and Minimum Stack Level Runway(s) in Use
	Equipment	RT/Intercom systems ATIS
	Situation	Military Activity Holding Minimum Departure Intervals (MDIs) Staffing/Adjacent ATC
	Traffic	Traffic on frequency Pending Traffic Potential Traffic Conflicts

5.12.2 PRAWNS

P R A W N S	Pressure	Pressure Settings (High/Low) and Minimum Stack Level
	Roles	Area Sectors – bandboxed? Splits? Frequencies? Top-down responsibilities
	Airports	Runways
	Weather	Turbulence, CB Activity, SIGMETs Avoidance Winds
	Non-Standard Info	Holding and EATs Flow restrictions (e.g., MDIs, departure checks) Amended or cancelled standing coordination Military Activity
Situation	Transfer of TAGs Coordinated traffic	

Chapter 6 Top-Down Coverage

In the absence of the local ADC and APC sector covering the below aerodrome(s), the responsibility for top-down control is determined as follows:

ID	Sector/Position	ID	Sector/Position	ID	Sector/Position
LS	AC Worthing (<i>South</i>)	LSC	AC South-Central	TC NW	TC North West
LD	AC Dover	L	AC Bandbox	TC NE	TC North East
LC	AC Central			TC N	TC North
LM	AC Daventry	PC	PC Bandbox	TC SW	TC South West
LE	AC Clacton	PC W	PC West	TC SE	TC South East
LW	AC West	PC E	PC East	TC S	TC South
LN	AC North	PC NE	PC Northeast	TC	TC Bandbox
LNE	AC North Sea	PC SE	PC Southeast		
LNW	AC Lakes			TC E	TC East
				TC M	TC Midlands

Aerodromes		Top-Down Priority
London Luton (EGGW)		TC NW – TC N – TC – LM – LC – LSC – L
London Stansted (EGSS)	Cambridge (EGSC) ★	TC NE – TC N – TC – TC E – LE – LC – LSC – L
London City (EGLC)	Biggin Hill (EGKB) ★	TC SE – TC S – TC – LD – LS – LSC – L
London Heathrow (EGLL)	Lydd (EGMD) ★	
Southend (EGMC)		
Farnborough (EGLF)	Redhill (EGKR) ★	TC SW – TC S – TC – LD – LS – LSC – L
London Gatwick (EGKK)	Shoreham (EGKA) ★	
Southampton (EGHI)		LS – LSC – L
Bournemouth (EGHH)		
Birmingham (EGBB)	Cranfield (EGTC) ★	TC M – LM – LC – LSC – L
East Midlands (EGNX)	Oxford (EGTK) ★	
Isle of Man (EGNS)	Blackpool (EGNH) ★	PC W – PC – LNW – LN – L
Liverpool (EGGP)	Hawarden (EGNR) ★	
	Walney (EGNL) ☆	
Newcastle (EGNT)		PC NE – PC E – PC – LNE – LN – L
Leeds Bradford (EGNM)	Humberside (EGNJ) ★	
Teesside (EGNV)		
Manchester (EGCC)		PC SE – PC E – PC – LN – LNW – L
Alderney (EGJA)	Exeter (EGTE) ★	LW – L
Bristol (EGGD)	Gloucestershire (EGBJ) ★	
Cardiff (EGFF)	Kemble (EGBP) ☆	
Guernsey (EGJB)	Land's End (EGHC) ★	
Jersey (EGJJ)	Newquay (EGHQ) ★	
St Athan (EGSY)	Scilly Isles/St Mary's (EGHE) ★	
	Yeovil/Westland (EGHG) ★	

★ Airfield is outside of controlled airspace but has either a Tower or Approach position, so top-down shall be provided.

☆ Airfield is always AFIS-only but has published Instrument Approach Procedures (IAP). No top-down of the airfield shall be provided however, London/MPC may opt to provide a service to the aircraft.

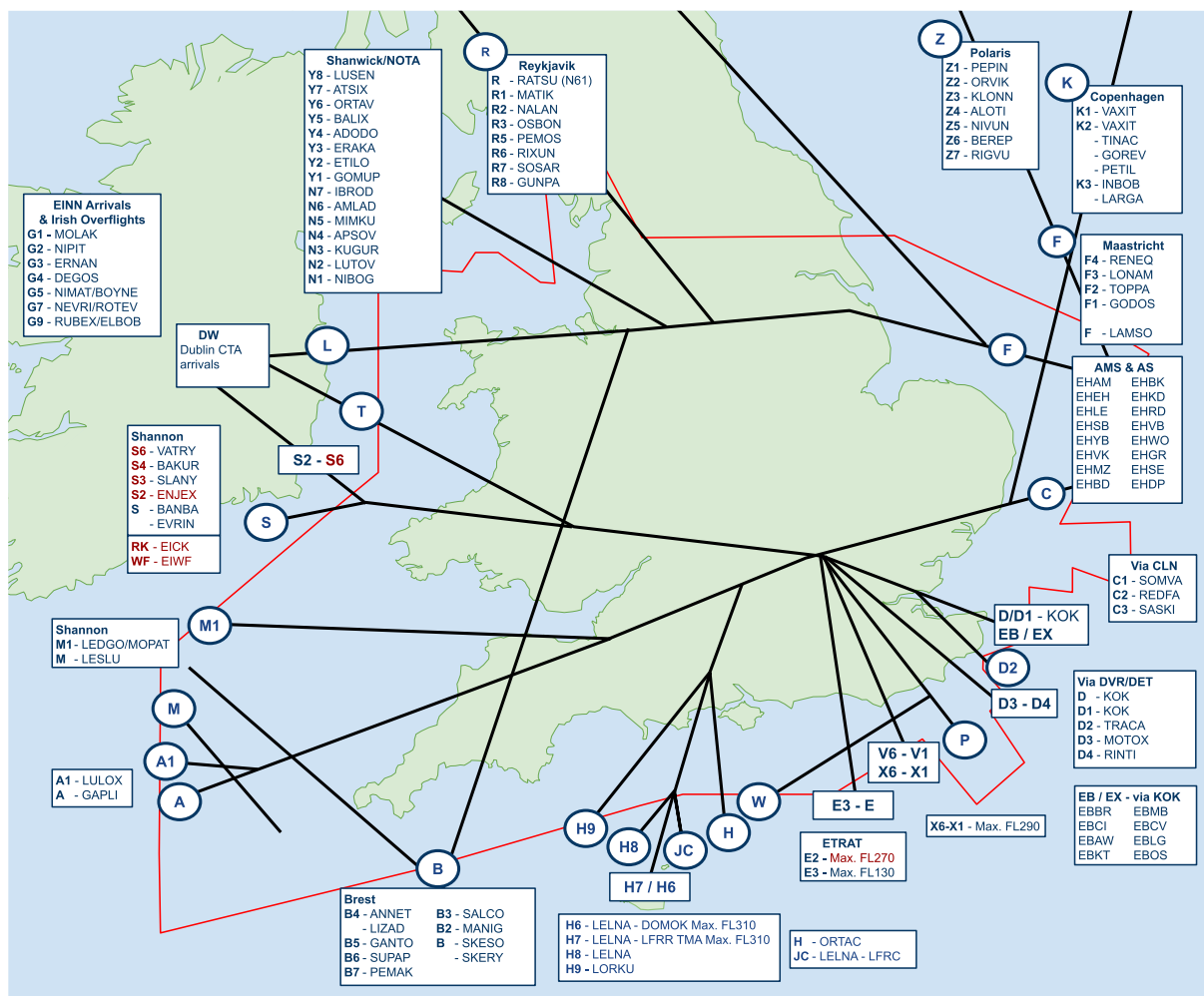
Chapter 7 UK Intention Codes

The UK Controller Plugin assigns a series of letter codes to indicate the point at which an aircraft is planned to leave UK airspace. These codes are shown in the aircraft tag label as an indication of the routing of a flight.

For a flight landing within the UK, the intention code is the last two letters of the ICAO destination indicator (e.g. EGLL becomes “LL”). In addition, the following intention codes are used for arrivals at aerodrome groups outside the UK:

AM & AS	-	Amsterdam Area
EB	-	Brussels TMA
DW	-	Dublin CTA

Figure GEN-2 – UK Intention Codes



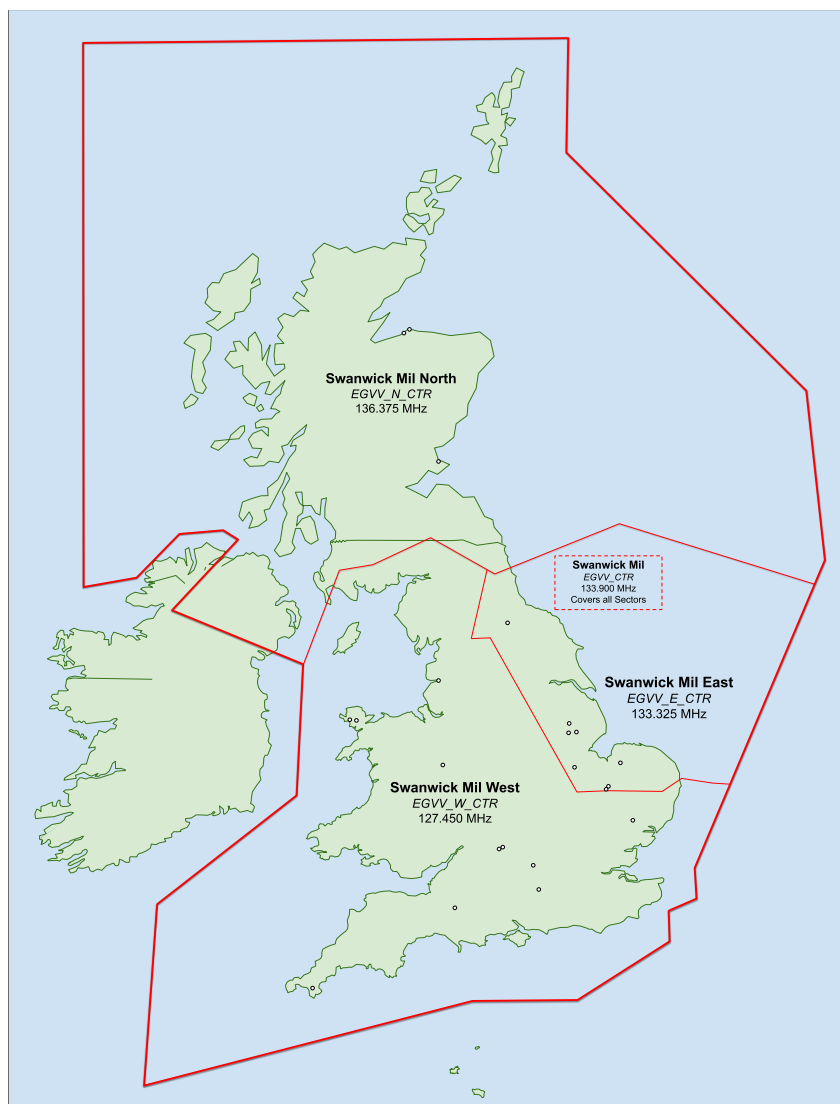
Chapter 8 Civil/Military Procedures

Procedures relevant to multiple sectors are contained in this Chapter.

8.1 Swanwick Mil Controllers

Figure GEN-3 shows the extent of the Swanwick Mil sectors (West, East, and North). Further splits may be notified via a Temporary Instruction.

Figure GEN-3 – Swanwick Mil Sectors



Swanwick Mil – Bandboxing/Splitting Procedures

EGVV_CTR "Swanwick Mil" 133.900 MHz	EGVV_E_CTR "Swanwick Mil East" 133.325 MHz
	EGVV_W_CTR "Swanwick Mil West" 127.450 MHz
	EGVV_N_CTR "Swanwick Mil North" 136.375 MHz

8.2 Military Radar Corridors

8.2.1 General Procedures

Radar Corridors are established to enable transits of the ATS route structure by Military traffic.

8.2.1.1 Swanwick Mil Online

When Swanwick Mil is online, they will co-ordinate with the relevant LAC/LTC/MPC controller to request a corridor transit at least 5 minutes prior to entry in the following format:

“Request FLxxx for a (direction) transit of the (name) Radar Corridor by (callsign/formation), ETA (mins)”

When it is safe to do so, civil ATS shall delegate the corridor to Swanwick Mil for the transit, who is responsible for maintaining standard radar separation between aircraft under their control in the corridor. Swanwick Mil will advise when the traffic is clear of the corridor.

Traffic will wear a Swanwick Mil squawk for the duration of the transit and the Mode C readout is assumed to be verified.

Note: *On VATSIM, no Radar Corridor is permanently delegated to Swanwick Mil. However, by agreement, controllers may agree a temporary delegation to reduce coordination.*

8.2.1.2 Swanwick Mil Offline

When Swanwick Mil is offline, aircraft/formations wishing to transit a corridor will call London at least 5 minutes prior. Traffic should be identified, and Mode C verified and may be offered a service outside of controlled airspace, workload permitting.

Clearance should be in the following format:

“(callsign/formation) cleared to transit the (name) Radar Corridor at FLxxx”

8.2.2 Daventry Radar Corridor

See Figure GEN-4.

Swanwick Mil Sector	West
Civil Sector	TC Midlands
Transit Area	In the vicinity of the DTY VOR
Centreline	DTY VOR Radial 246°/066°
Width	8 NM
Level(s)	FL100 and FL110

8.2.3 Lichfield Radar Corridor

See Figure GEN-4.

Swanwick Mil Sector	West
Civil Sector	PC Southeast
Transit Area	Daventry CTA in the vicinity of PEDIG
Centreline	Coningsby (CGY) TACAN radial 252°
Width	12 NM
Level(s)	FL140 (FL150 as an alternate/tactical level)

Note: *The Lichfield Radar Corridor at FL140 (see Figure GEN-4) is wholly contained within PC Southeast airspace. However, in the absence of PC SE or a controller covering top-down, either AC Daventry or TC*

Midlands may provide a service to transiting aircraft for deconfliction against traffic being worked in the vicinity of the corridor.

8.2.4 Swindon Radar Corridor

See Figure GEN-4.

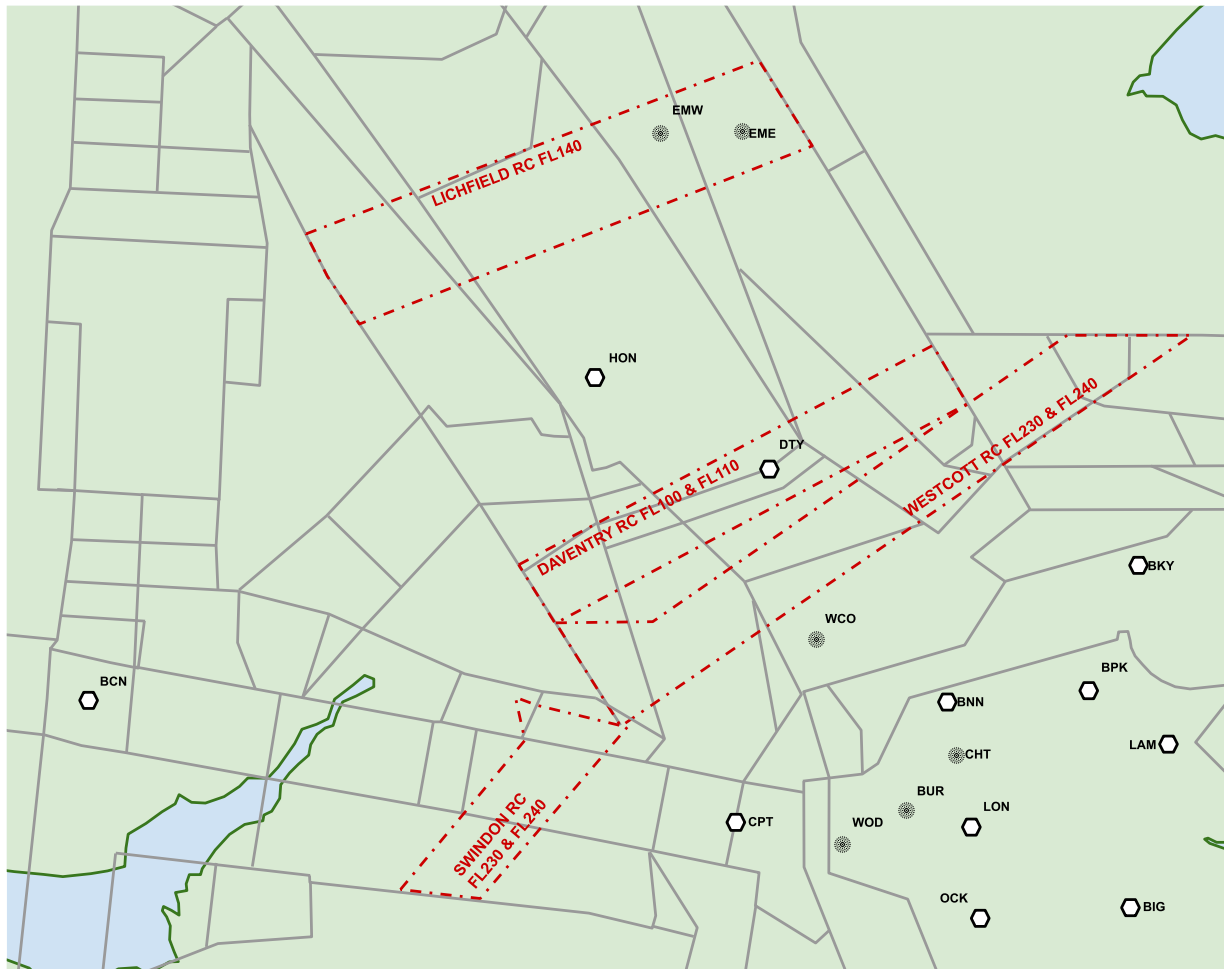
Swanwick Mil Sector	West
Civil Sector	AC West
Transit Area	Cotswold CTA
Centreline	Between the BZN (Brize Norton) and VLN (Yeovilton) TACANs
Width	8 NM
Level(s)	FL230 and FL240

8.2.5 Westcott Radar Corridor

See Figure GEN-4.

Swanwick Mil Sector	West
Civil Sector	AC Worthing, Dover and Daventry (west to east)
Transit Area	In the vicinity of the WCO NDB / London TMA
Centreline	Between the BZN and MAM TACANs
Width	8 NM
Level(s)	FL230 and FL240

Figure GEN-4 – Military Radar Corridors (Daventry, Lichfield, Swindon, Westcott)



8.2.6 LYNAS Radar Corridor

See Figure GEN-5.

Swanwick Mil Sector	West
Civil Sector	PC West
Transit Area	Holyhead CTA in the vicinity of PEDIG
Width	12 NM
Level(s)	DB-FL190 (see Note)

Note: If required, Swanwick Mil shall specify the desired vertical profile in coordination with PC West.

8.2.7 Gamston Radar Corridor

See Figure GEN-5.

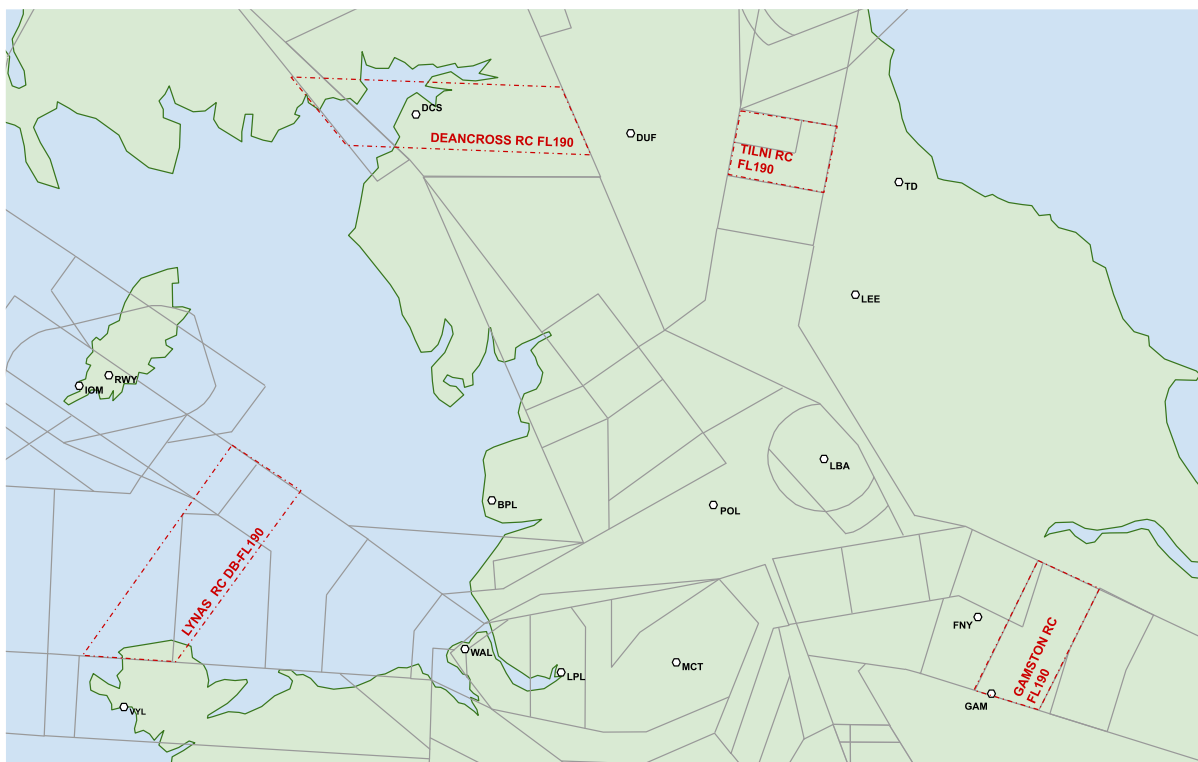
Swanwick Mil Sector	East
Civil Sector	PC Northeast
Transit Area	Lincolnshire CTA in the vicinity of GAM VOR
Width	10 NM
Level(s)	FL190

8.2.8 TILNI Radar Corridor

See Figure GEN-5.

Swanwick Mil Sector	East
Civil Sector	PC Northeast
Transit Area	Yorkshire CTA between TILNI and GIRLI
Width	10 NM
Level(s)	FL190

Figure GEN-5 – Military Radar Corridors (Gamston, LYNAS, TILNI)



LAC

LONDON AREA CONTROL

LAC | LONDON AREA CONTROL

Chapter 1 General Operating Procedures

1.1 Sectors and Sector Groups

London Area Control (LAC) manages en-route traffic in the London FIR. This includes en-route airspace over England and Wales, and up to the Scottish FIR boundary.

The London airspace is split into four Local Area Groups (LAG) according to their geographical position:

- **South LAG:** Worthing and Dover
- **Central LAG:** Daventry and Clacton
- **North LAG:** Lakes and North Sea
- **West LAG:** West

All positions use the radiotelephony callsign “London Control”.

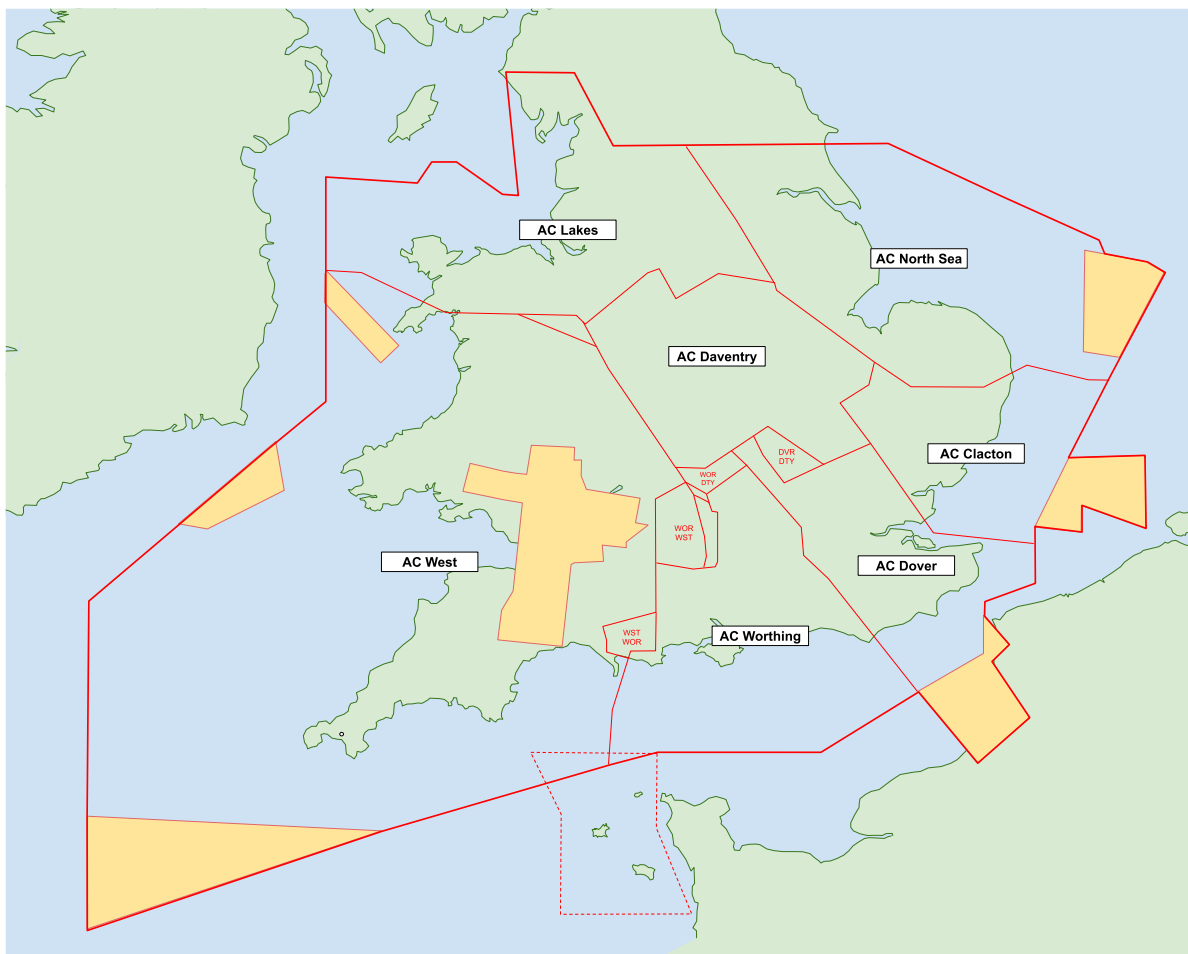
VATSIM Callsign	LAG	Coordination Name		Frequency
LON_CTR	-	AC Bandbox	<i>BBX</i>	127.830 MHz
LON_SC_CTR	-	AC South Central	<i>LSC</i>	132.605 MHz
LON_S_CTR	South LAG	Worthing	<i>WOR</i>	129.430 MHz
LON_D_CTR	South LAG	Dover	<i>DVR</i>	134.905 MHz
LON_C_CTR	Central LAG	AC Central	<i>CEN</i>	127.105 MHz
LON_M_CTR	Central LAG	Daventry	<i>DTY</i>	120.025 MHz
LON_E_CTR	Central LAG	Clacton	<i>CLN</i>	118.480 MHz
LON_N_CTR	North LAG	AC North	<i>NTH</i>	133.705 MHz
LON_NW_CTR	North LAG	Lakes	<i>LKS</i>	135.580 MHz
LON_NE_CTR	North LAG	North Sea	<i>NOR</i>	128.130 MHz
LON_W_CTR	West LAG	AC West	<i>WST</i>	126.080 MHz

Note: Relief callsigns shall be determined by the addition of a **second** underscore between the middle identifier (or prefix in the case of the Bandbox callsign) and the suffix (CTR).

For example:

LON_CTR → LON__CTR
LON_NE_CTR → LON_NE__CTR

Figure LAC-1 – LAC Sectors Overview



1.2 LAC Bandboxing/Splitting Procedures

The first table below shows the four LAC ‘primary positions’ and the South Central and LAC Bandboxes. The following tables show the LAG Bandboxing/Splitting procedures, including ownership of LTC/MPC sectors.

LAC Primary Positions

LON_CTR AC Bandbox 127.830 MHz	LON_SC_CTR AC South Central 132.605 MHz	LON_S_CTR AC South 129.430 MHz
		LON_C_CTR AC Central 127.105 MHz
	LON_N_CTR AC North 133.705 MHz	
	LON_W_CTR AC West 126.080 MHz	

AC South LAG Bandboxing/Splitting Procedures

LON_S_CTR AC South 129.430 MHz	LON_S_CTR Worthing 129.430 MHz	LON_S_CTR	
	LON_D_CTR Dover 134.905 MHz	LTC_S_CTR TC South 134.125 MHz	LTC_SW_CTR TC South West 133.180 MHz
		LTC_SE_CTR TC South East 120.530 MHz	
	LON_D_CTR		

Note: The coordination name for LON_S_CTR changes depending on whether the Dover sector is split.

AC Central LAG Bandboxing/Splitting Procedures

LON_C_CTR AC Central 127.105 MHz	LON_M_CTR Daventry 120.025 MHz	LON_M_CTR		
	LON_E_CTR Clacton 118.480 MHz	LTC_M_CTR TC Midlands 121.030 MHz	LTC_N_CTR TC North 119.780 MHz	LTC_NW_CTR TC North West 121.280 MHz
		LTC_E_CTR TC East 121.230 MHz		LTC_NE_CTR TC North East 118.825 MHz
		LTC_E_CTR		
LON_E_CTR				

Note: If AC Central is already open and Daventry or Clacton then subsequently log on, the coordination name of LON_C_CTR becomes Clacton or Daventry, respectively.

AC North LAG Bandboxing/Splitting Procedures

LON_N_CTR AC North 133.705 MHz	LON_NW_CTR Lakes 135.580 MHz	LON_NW_CTR		
		MAN_CTR PC Bandbox 133.200 MHz	MAN_W_CTR PC West 128.055 MHz	
	MAN_E_CTR PC East 133.800 MHz		MAN_SE_CTR PC Southeast 134.430 MHz	
			MAN_NE_CTR PC Northeast 135.715 MHz	
LON_NE_CTR North Sea 128.130 MHz				

Note 1: If AC North is already open and Lakes or North Sea then subsequently log on, the coordination name of LON_N_CTR becomes North Sea or Lakes, respectively.

Note 2: PC Southeast has a different ownership order to PC Northeast reflected in the last row of the table above.

AC West LAG

LON_W_CTR AC West 126.080 MHz
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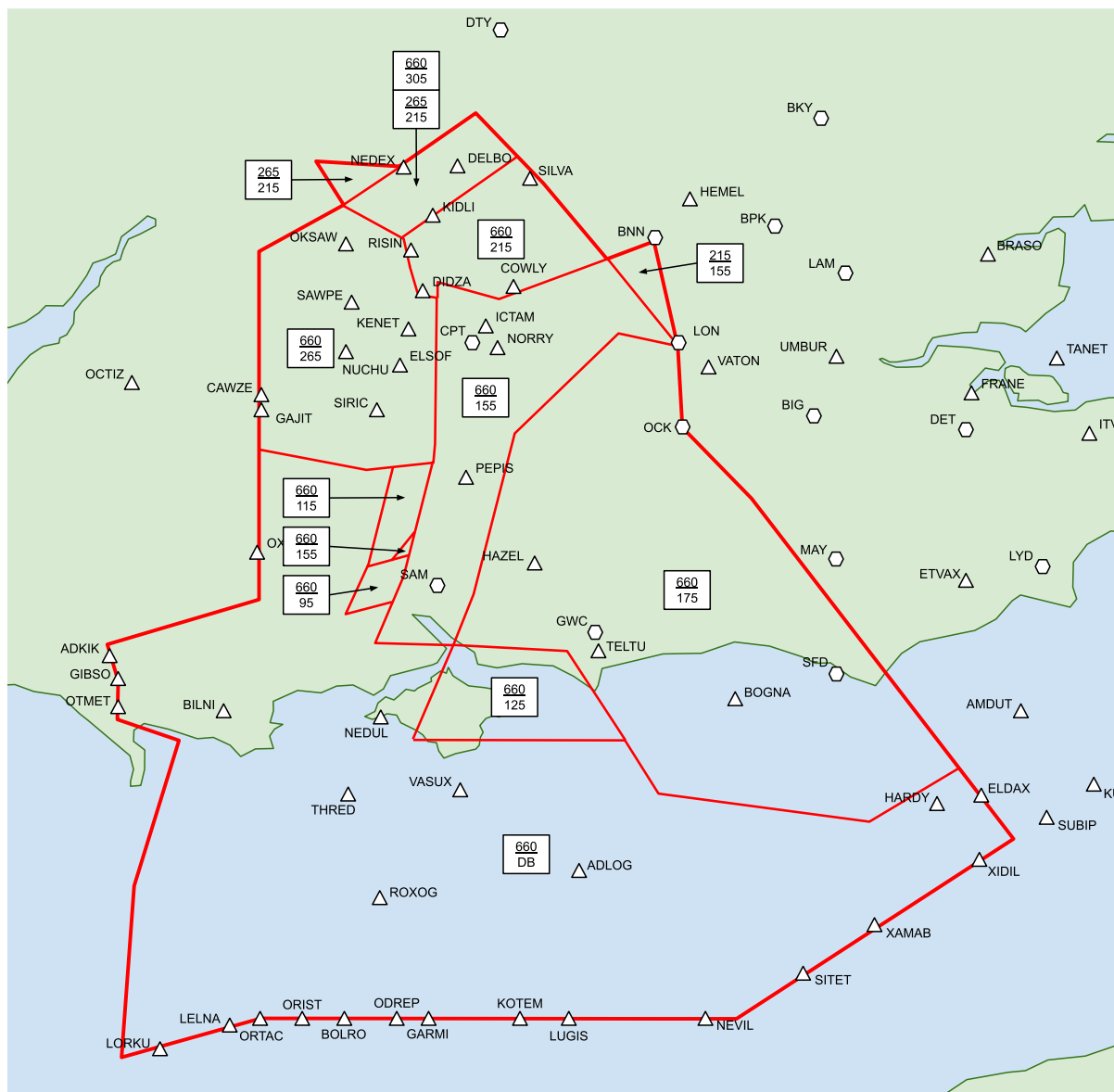
Chapter 2 South LAG | AC Worthing

2.1 Area of Responsibility

AC Worthing (LON_S_CTR) is one of the South LAG sectors, covering the area over Sussex, west Hampshire, and the English Channel towards the Channel Islands. It extends from the declared base of controlled airspace, or the upper extent of TC airspace, up to FL660, except for the areas that overlap with AC West and Daventry.

The AC Worthing position is the ‘parent’ of the South LAG sector splits. The coordination name for the combined Worthing & Dover sectors is “AC South”.

Figure LAC-2 – London AC Worthing Area of Responsibility



2.1.1 Sector Frequency

AC Worthing operates on frequency 129.430 MHz.

2.2 General Operating Procedures

2.2.1 Northbound Route Structure

Northbound traffic via ORIST, BOLRO, ODREP, GARMi, KOTEM and LUGIS is subject to the following route orientation scheme:

ORIST	BOLRO	ODREP	GARMi	KOTEM	LUGIS
Inbounds to: - Solent Group	Inbounds to: - Heathrow Group - EGKK (RNAV5) - EGLF - Wessex Group - Brize Group	Inbounds to: - EGKK only (RNAV1)	Inbounds to: - Thames Group - EGMD - MTMA Group - Scottish TMA Group - London FIR Overflights	Inbounds to: - Essex Group - Midlands Group - EGTC	Inbounds to: - Essex Group - EGTC

Due to a lack of mandatory flight plan validation, some aircraft will file – and be cleared – by routes that are typically used only in certain conditions real world. For example, alternative non-RNAV routes may be used by RNAV-equipped aircraft, and/or conditional routes used only when the preferred alternative is unavailable may be filed. Where these routes are valid, there is no obligation on the controller to re-route them.

2.2.2 Route Restrictions

Channel Islands departures with RFL195- will route via ORIST. Flights from the Channel Islands to the Solent Group may also route via ORTAC with RFL135-.

2.2.3 Initial Route Clearance

AC Worthing shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

2.3 Standing Agreements

2.3.1 LAC Standing Agreements

2.3.1.1 AC Daventry

From AC Daventry to AC Worthing

From	Agreement	Conditions
MTMA Group	↑ FL310	

2.3.1.2 AC West

From AC West to AC Worthing

To	Agreement	Conditions
(Essex Group, Thames Group)	(FL180 lvl SIRIC)	'Skipped' to AC Dover. (Notes 1, 2, 3 & 4)
EGLF, Wessex Group	FL270 lvl 10 NM before GIBSO / FL270 lvl 10 NM before OTMET	
LTMA Group (excl. Essex Group)	FL270 lvl GIBSO / OTMET	

From	Agreement	Conditions
EGGD, Brize Group	FL180 lvl ELSOF	Not RFT until passing ELSOF. Then released for right turns only. (Note 1)
EGFF, EGSY	FL250 lvl ELSOF	Released for right turns only until passing ELSOF. (Note 1)

Note 1: Coincident traffic via ELSOF and SIRIC shall be transferred on a heading to ensure separation inside Worthing airspace.

Note 2: AC West shall endeavour to stream inbounds at least 10 NM in trail, constant or increasing.

Note 3: Not RFD in AC West airspace. When AC Dover/TC SW is split from AC Worthing, this traffic is also **not** RFD until within AC Dover's airspace.

Note 4: Not RFT until passing SIRIC. Then released for right turns only except when AC Dover is split from AC Worthing, when traffic is not RFT inside Worthing airspace.

From AC Worthing to AC West

To	Agreement	Conditions
Brize Group	↓ FL160	(See Note)
EGGD	FL220 lvl ICTAM	
EGFF, EGSY	FL260 lvl ICTAM	RFD to FL220

From	Agreement	Via
LTMA Group (excl. EGSS), Wessex Group	↑ FL260	GIBSO/ADKIK
EGSS	↑ FL260	OKSAW
EGSC	↑ FL210	OKSAW/SAWPE (See Note)
EGBB	↑ FL210	SAWPE (See Note)

Note: Worthing should endeavour to transfer this traffic on own navigation to SAWPE.

2.3.1.3 AC Dover

From AC Dover to AC Worthing

To	Agreement	Conditions
Severn Group	FL300	

From AC Worthing to AC Dover

From	To	Agreement	Conditions
EGBB, EGGD, EGVN	-	↑ FL230	Via BIG
EGFF, EGSY	-	↑ FL290	
EGGD, Brize Group	-	↑ FL230	Via BPK
-	Essex Group, EGLC, EGKB	FL190 lvl AVANT/TELTU	Not RFD. (Notes 1 & 2)
-	EGBB, EGNX	FL250	Via AVANT – HEMEL

Note 1: AC Worthing shall endeavour to present Essex/EGLC/EGKB inbound traffic to AC Dover at least 10 NM in trail, constant or increasing.

Note 2: This traffic is **not** RFD until within AC Dover’s airspace, unless otherwise coordinated. If the traffic is **not** on a radar heading, it is released for right turns only within AC Worthing’s airspace.

2.3.1.4 Jersey Control

From Jersey Control to AC Worthing

From	To	Agreement	Conditions
Jersey CTA	Solent Group	↑ FL130	Via ORTAC
Jersey CTA	-	↑ FL190	Via ORIST

From AC Worthing to Jersey Control

From	To	Agreement	Conditions
-	Jersey Group	FL200 lvl LELNA	
Solent Group	Jersey Group	FL180 lvl ORTAC	

2.3.2 LTC Standing Agreements

2.3.2.1 TC NW

From TC NW to AC Worthing

From	Agreement	Conditions
EGSS	FL160 lvl 11 NM before CPT	(Notes 1, 2 & 3)

Note 1: Aircraft are to be positioned between BUR and CPT.

Note 2: When TC NW and AC Daventry are different controllers, AC Worthing shall coordinate climb – if necessary – within AC Daventry’s airspace.

Note 3: TC NW is responsible for ensuring separation between this traffic and potentially conflicting Solent/Farnborough and Wessex Group/LTMA departures to AC Daventry within all TC NW airspace. If the departures via CPT are observed to have vacated FL160, then AC Daventry are subsequently responsible for ensuring separation from potentially conflicting northbound departures transferred from TC NW.

2.3.2.2 TC SW

From TC SW to AC Worthing

From	Agreement	Conditions
Heathrow Group, EGKK, EGGW, EGLF, Wessex Group	↑ FL150	Via SAM. (See Note)
Heathrow Group, EGKK, EGGW, EGLF, Wessex Group, Solent Group	↑ FL170	Via SITET, XAMAB, XIDIL. (Notes 1 & 2)

Note 1: TC SW shall endeavour to position traffic according to their Intention Code.

Note 2: AC Worthing is responsible for separation between this traffic and GODLU/GEGMU arrivals via NETVU.

From AC Worthing to TC SW

To	Agreement	Conditions
Heathrow Group	FL130 lvl HAZEL	
EGKK	FL130 lvl GWC/TELTU	
Essex Group	↓ FL130	Via SILVA (FL170-)
EGLF, Wessex Group	FL110 lvl ABSAV / 10 NM before RUDMO	
Thames Group	FL130 lvl BIDVA	

2.3.2.3 TC SE

From TC SE to AC Worthing

From	Level	Conditions
Thames Group, EGSS	FL190 lvl WOR/DVR boundary	Via LYD/HASTY. (See Note)

Note: Released for right turns only.

From AC Worthing to TC SE

To	Level	Conditions
Thames Group	FL140 lvl NETVU	
EGKK	FL140 lvl NETVU	

2.3.2.4 TC Midlands

From TC Midlands to AC Worthing

To	Level	Conditions
EGNX	↑ FL220	
EGBB, EGBE, EGTK and EGSC	FL190 lvl COWLY / 10 NM before CPT	

2.3.3 External Standing Agreements

2.3.3.1 Brest East Low Sector (FL295-FL355)

From AC Worthing to Brest East Low Sector

From	Agreement	Condition
London TMA (excl. EGSS)	Maximum FL290	Via SITET/XAMAB. (Notes 1 & 2)

Note 1: When Paris North (LFFF) and Brest East (LFRR) are split, flights with RFL295+ must cross – or be transferred in good time to be able to cross – the FIR boundary above FL295, otherwise Worthing must coordinate with Paris North to determine whether they wish to work the traffic.

Note 2: Provided the conditions for silent handover are met, aircraft via **XAMAB** may be transferred to Paris/Brest on parallel headings as long as:

- The aircraft have different intention codes (i.e. different routes/Vx codes after RESMI);
- the aircraft are positioned correctly according to their intention code;
- both aircraft will enter the same Paris/Brest sector;
- the aircraft will remain at least 8 NM laterally separated.

2.3.3.2 Brest J Sector (FL255+)

From Brest J Sector to AC Worthing

To	Agreement	Conditions
Essex Group, EGTC	Maximum FL380 lvl KOTEM/LUGIS	
Essex Group, EGKK, Thames Group, Heathrow Group	Maximum FL340 lvl ORIST/BOLRO/ODREP/GARMI	
EGLF, Wessex Group	Maximum FL280 lvl BOLRO	

2.3.3.3 Brest V Sector (FL255+)

From AC Worthing to Brest V Sector

From	To	Agreement	Conditions
London TMA (excl. EGSS, EGLC, EGMC)	-	Maximum FL350	Via LELNA/LORKU. (Notes 1 & 2)
-	All	Maximum FL310	Via LELNA-UPALO. Intention code H6 (Note 2)
-	LFRR FIR (excl. LFRC)	Maximum FL310	Intention code H7 (Note 2)

Note 1: Coordination is not required for LTMA departures via LELNA/LORKU that are climbing. Traffic below its RFL is RFC, subject to known traffic.

Note 2: LELNA and LORKU are treated as a single transfer point for the purposes of level planning and planned longitudinal separation. Worthing can plan to transfer aircraft cleared to the same level when using parallel headings, as long as one aircraft is via LELNA and the other is exiting via LORKU. The aircraft must remain at least 8 NM laterally separated, and the headings must position the aircraft within the confines of the receiving sector and west of DOMOK.

2.3.3.4 Brest FIR Sector (FL255-)**From AC Worthing to Brest FIR Sector**

To	Agreement	Conditions
LFRD	Maximum FL250	Via LELNA

From Brest FIR Sector to AC Worthing

To	Agreement	Conditions
Thames Group, EGMD	Maximum FL220 lvl NEVIL	
EGKA	Maximum FL210 lvl NEVIL	RFD to FL200
Solent Group	Maximum FL220 lvl REVU	Via ORIST

2.3.3.5 Paris North (FL295-)**From AC Worthing to Paris North**

To	Agreement	Conditions
LFPG, LFPB, LFPT	FL240 – FL260 lvl XIDIL	Jet traffic. (Note 1)
LFPG, LFPB, LFPT	Maximum FL220 lvl XIDIL	Non-jet traffic. (Note 1)
LFOB, LFOP	Maximum FL190 lvl XIDIL	(Note 2)
LFBH, LFBI, LFBL, LFBU, LFBX, LFLA, LFLX, LFPO, LFPV, LFPN, LFPM, LFJR, LFRM, LFO* (except OE, OH, OP)	Maximum FL270 lvl SITET	(Note 3)
LFRG, LFRK, LFOH, LFOE	Maximum FL130 lvl SITET	Individually co-ordinated (Notes 4 & 5)

Note 1: In case of simultaneous inbounds, traffic to LFPB shall be transferred below LFPG inbounds.

Note 2: In case of simultaneous inbounds, traffic to LFOB/OP shall be transferred below LFPG/PB inbounds.

Note 3: To assist with identification of this traffic, aircraft with these destinations will show intention code **E2**. EuroScope will also display an XFL of 270 for traffic to these destinations.

Note 4: To assist with identification of this traffic, aircraft with these destinations will show intention code **E3**.

Note 5: EuroScope will display an XFL of 130 for traffic to these destinations, but AC Worthing must individually co-ordinate this traffic with Paris Lower North. AC Worthing shall 'offer' a level no higher than FL130.

2.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

2.4.1 Coordination with AC Daventry

2.4.1.1 AC Worthing to AC Daventry

MTMA Group and EGNM/NH/NO/NJ inbound traffic from AC Worthing to Daventry that has flight planned VASUX DCT ELVOS or has been coordinated by Worthing to ‘skip’ Dover is released for descent within the confines of Worthing airspace, subject to known traffic.

2.4.2 Paris & Brest ACCs

The French ACCs Paris and Brest both border London AC Worthing. The division of airspace where they overlap (from SITET to XAMAB) is at FL295.

West of NEVIL, the division between Brest Upper and Lower sectors is at FL255.

2.4.2.1 Sectorisation

2.4.2.1.1 Paris ACC

The coverage priority (left to right) for Paris ACC (FL295-) at the interface with London ACC is as follows:

Paris North (FL295-) Sector

LFFF_N_CTR 128.875 MHz	LFFF_CTR 128.105 MHz
----------------------------------	--------------------------------

2.4.2.1.2 Brest ACC

The coverage priority (left to right) for Brest ACC sectors at the interface with London ACC is as follows:

Brest East Low (FL295-FL355) Sector

LFRR_E_CTR 136.000 MHz	LFRR_CTR 125.500 MHz	LFFF_W_CTR 122.575 MHz	Paris North Sector	EUC-WN_CTR 135.125 MHz
----------------------------------	--------------------------------	----------------------------------	---------------------------	----------------------------------

Brest East High (FL355+) Sector

LFRR_UE_CTR 130.235 MHz	Brest East Low Sector
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Brest J (FL255+) Sector

LFRR_J_CTR 132.510 MHz	LFRR_W_CTR 127.860 MHz	LFRR_CTR 125.500 MHz	EUC-WN_CTR 135.125 MHz
----------------------------------	----------------------------------	--------------------------------	----------------------------------

Brest FIR (SFC-FL255) Sector

LFRR_CTR 125.500 MHz

2.4.2.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

2.4.2.3 Transfer of Control and Communication

Transfer of control shall occur at the point specified in the table below, else at the FIR/AoR boundary.

Unless otherwise specified in the table below, transfer of communication shall occur at or before the relevant COP on the AoR boundary. Except where approved elsewhere in the vMATS, the use of vectors requires coordination before the transfer of communication takes place.

2.4.2.3.1 From Brest ACC to London ACC

Coordination Point	Transfer of Control	Transfer of Communications
NEVIL	NEVIL	At or before ANGLO
DIKRO	KOTEM	At or before DIKRO
AKIKI	GARMI	At or before AKIKI
REVTU	ODREP	At or before REVTU

2.4.2.4 Level Planning

For Standing Agreements, see LAC 2.3.3.

Except where a specific level by point is detailed in an agreement, the aircraft may be at or climbing/descending to a level within the specified range on transfer of communications, to cross the FIR/AoR boundary at the assigned level. Traffic at its RFL is deemed coordinated, subject to the conditions in GEN 5.1.

Both London ACC and Brest ACC shall endeavour to stream successive inbounds to the same destination at least 7 NM in trail. This does not affect the conditions for silent handover.

2.4.2.4.1 North-South Rule in French Airspace

Due to the nature of traffic flow over France, ICAO standard cruising levels are not applicable. Instead, the North-South rule is applicable where no level parity is defined on an ATS route, or where traffic is not following an ATS route. Up to FL410, traffic with a general heading between 271° and 089° shall cruise at an even flight level. Traffic with a general heading between 090° and 270° shall cruise at an odd flight level.

Should a parity change be needed, it shall be performed by the sending unit before the border or coordinated point of transfer to the receiving unit.

2.4.2.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of **3 minutes** and exemption from radar handover may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is **no less than 20 NM**.

2.4.2.6 Separation between COPs

Traffic via COPs spaced less than 10 NM apart are to be considered the same for the purposes of Longitudinal Separation.

If any doubt exists regarding lateral separation, then vertical separation must be provided.

2.4.2.7 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2.

2.4.2.8 La Manche Release Area

An area has been designated in the London FIR, as shown in Figure LAC-3 below, and described as:

- South of and parallel to a line 20 NM north of the FIR boundary;
- West of the boundary between London Worthing and Dover sectors;
- East of the boundary of UN859 and 20° right when south of danger area EG D040.

Traffic transferred from London ACC to Paris and Brest ACCs is RFC and limited turns:

- Within the defined area, traffic is released for climb;
- Traffic south of the release line and at or above FL265 is released for turns of up to a maximum of 20°. Traffic given a turn may not leave the defined area within the London FIR.

London AC Worthing shall ensure that all cruising traffic with RFL310+ is level at the RFL by the La Manche Release Area. If the traffic is not level, it must be co-ordinated with the appropriate Brest sector. All such XAMAB/SITET traffic at its RFL by the Release Area is considered known to Brest sectors.

2.4.2.9 DIKRO Box

An area has been designated as shown in Figure LAC-4, within which traffic transferred from Brest Sectors to London AC Worthing is RFC to FL250/RFD to FL260. All traffic is released for turn by up to a maximum of 20°, remaining within the confines of the DIKRO Box.

Figure LAC-3 – La Manche Release Area

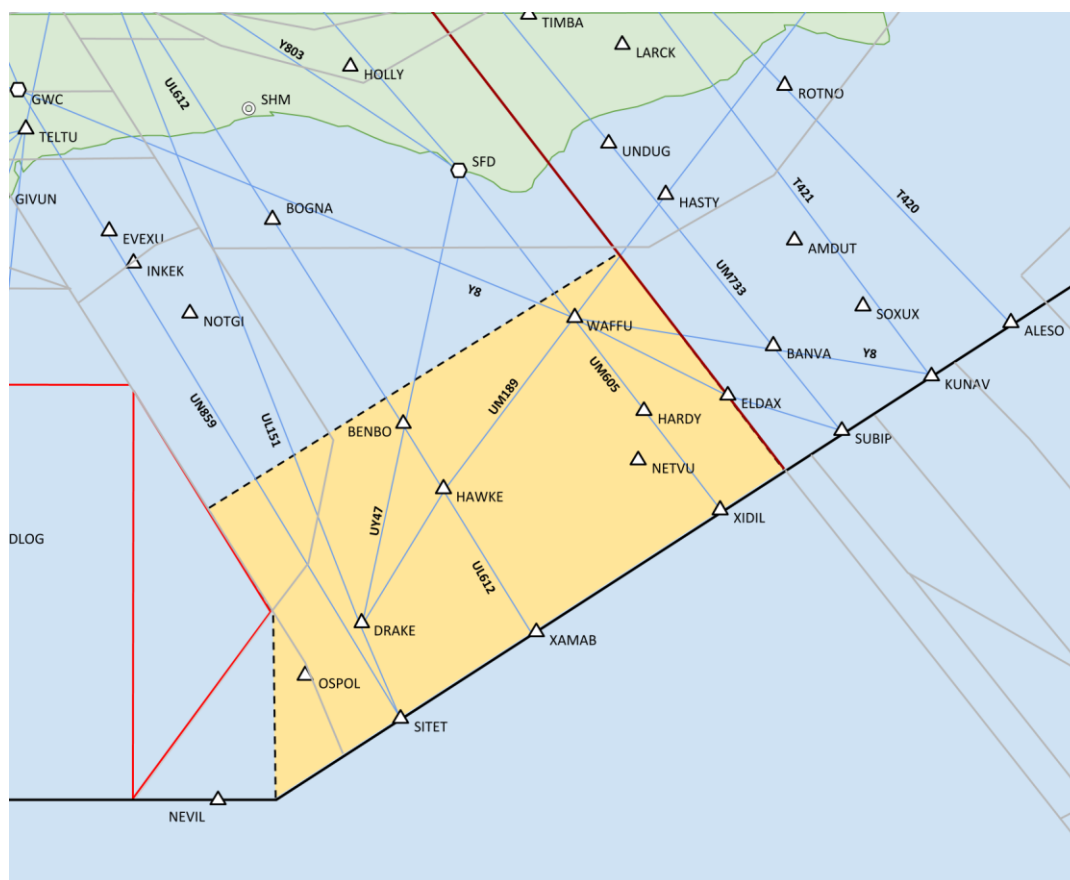
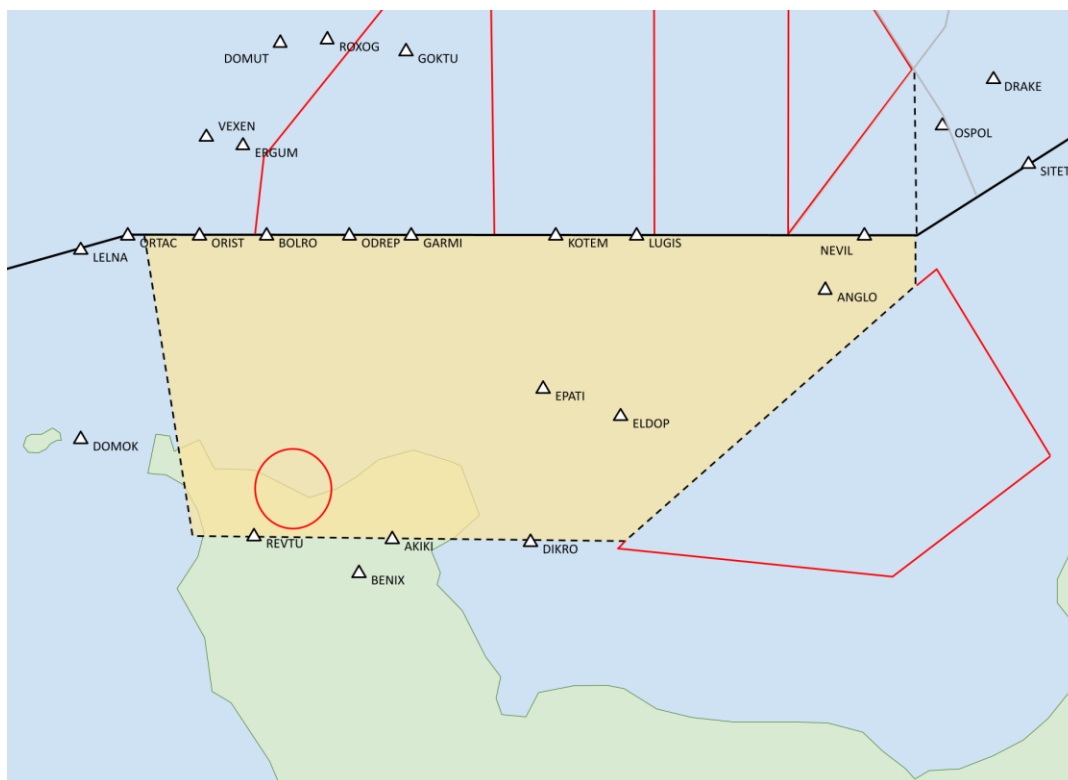


Figure LAC-4 – DIKRO Box



2.4.2.10 Jersey RFC Line

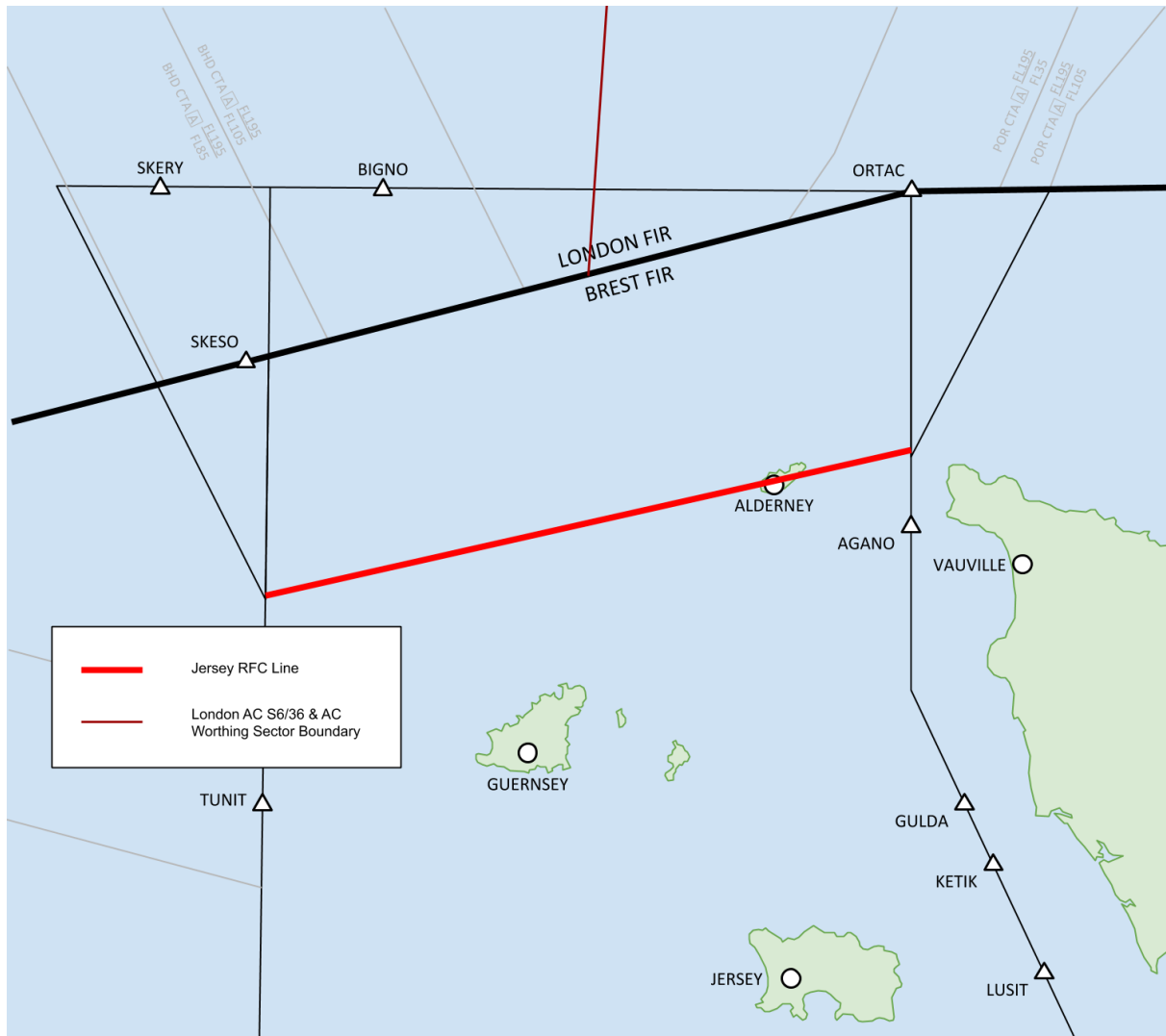
The Jersey RFC Line (as shown in red in Figure LAC-5 below) is defined by the following coordinates:

- 1. 049°35'00.00" N 003°00'00.00" W
- 2. 049°44'00.00" N 002°00'00.00" W

North of the Jersey RFC Line and within the lateral confines of the Channel Islands TMA, aircraft transferred from Jersey Control to London AC Sector 6 and London AC Worthing are RFC to FL250 and RFT (up to a maximum of 45°).

It is the responsibility of the respective London controller to separate aircraft from any southbound traffic. Additionally, it is the responsibility of London AC Worthing to separate these aircraft from traffic routing northbound via REV TU.

Figure LAC-5 – Jersey RFC Line



2.5 En-route Holding Procedures

For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

ADLOG Hold

For aircraft inbound to London Stansted, London Luton, and Cambridge via TELTU STARs from ATS Routes M185/UM185.

ADLOG	RNAV Hold, 1.5-minute legs
Axis	005°
Direction	RIGHT hand
Holding Levels	FL130 – FL260
Speed	Max 240 kts IAS

BILNI Hold

For Aircraft inbound to London Heathrow via OCK, London Gatwick via WILLO and Northolt traffic from ATS Routes L620, M17 or N514 above FL200.

BILNI	RNAV Hold, 1.5-minute legs
Axis	106°
Direction	LEFT hand
Holding Levels	FL200 – FL300
Speed	Max 265 kts IAS

DOMUT Hold

For Aircraft inbound to London Heathrow via OCK, London Gatwick via WILLO and Northolt traffic from ATS Routes Q41, P87/UP87 or Y110.

DOMUT	RNAV Hold, 1.5-minute legs
Axis	039°
Direction	RIGHT hand
Holding Levels	FL230+
Speed	Max 240 kts IAS

GOKTU Hold

For aircraft inbound to London Gatwick via VASUX STARs from ATS Routes P88/UP88 may be instructed to hold at GOKTU.

GOKTU	RNAV Hold, 1.5-minute legs
Axis	017°
Direction	RIGHT hand
Holding Levels	FL200 – FL300
Speed	Max 240 kts IAS

KATHY Hold

For aircraft inbound to London Heathrow via OCK, London Gatwick via WILLO and Northolt traffic from ATS Routes L620, N63, Q41, P87/UP87 or Y110 above FL160.

KATHY	RNAV Hold, 1.5-minute legs
Axis	039°
Direction	LEFT hand
Holding Levels	FL160 – FL190
Speed	Max 240 kts IAS

SAM Hold

SAM	RNAV Hold, 1-minute legs
Axis	029°
Direction	RIGHT hand
Holding Levels	2000 ft – FL100
Speed	Maximum 210 kts IAS

2.5.1 Essex Holding Procedures

Essex traffic that routes through the Worthing sector will be instructed to hold at LOREL (EGSS/EGSC) or ZAGZO (EGGW) in the first instance by TC Stansted/Luton. The LOREL and ZAGZO stacks are owned by TC NE.

Should the LOREL/ZAGZO hold become full, additional holding will be carried out at VATON for traffic arriving from the south. AC Dover is responsible for the VATON (FL180 – FL200) hold.

Should the VATON hold become full, AC Dover will coordinate with AC Worthing and AC West respectively to initiate further holding.

- AC Worthing for aircraft on TELTU STARs; and
- AC West for aircraft on SIRIC STARs.

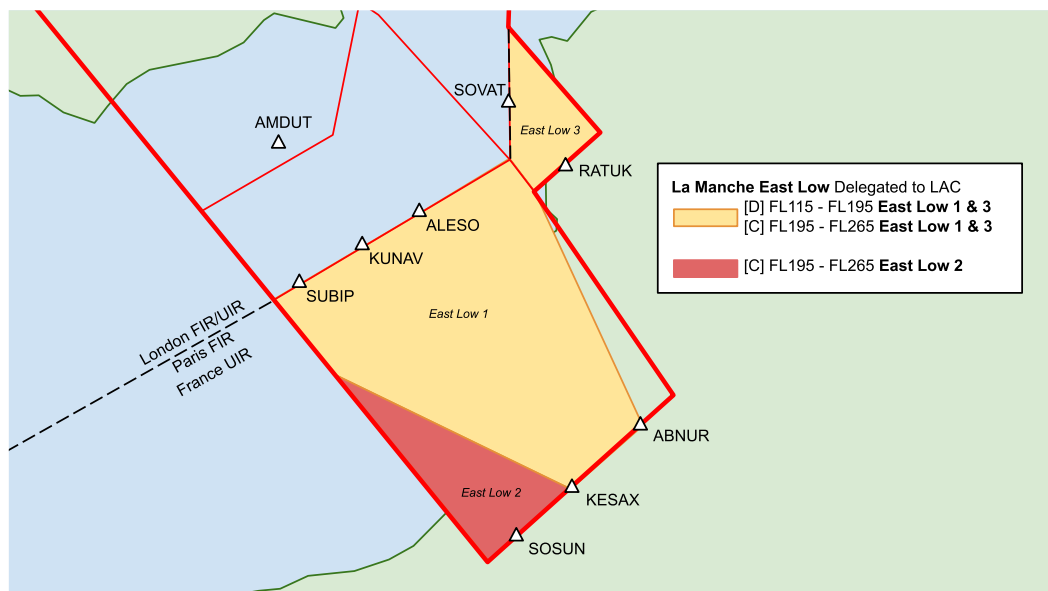
AC Worthing will be responsible for initiating holding within its sector for traffic routing via the TELTU STARs. Holding for traffic on the TELTU STAR is available at the (off route, RNAV) ADLOG hold.

3.1.2 Delegated Responsibility

3.1.2.1 To London ACC – La Manche East Low

From FL115/FL195 to FL265 within the yellow/red areas in Figure LAC-7 known collectively as the La Manche East Low delegation, ATS is delegated from Paris to London.

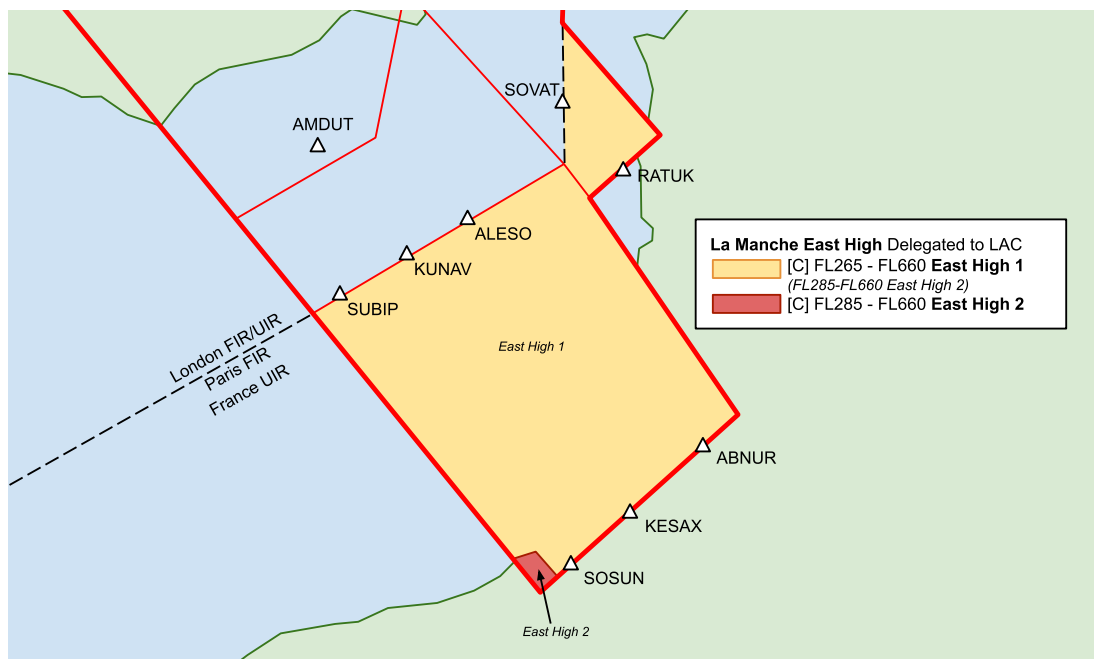
Figure LAC-7 – La Manche East Low Delegated Airspace



3.1.2.2 To London ACC – La Manche East High

From FL265/FL285 to FL660 within the yellow/red areas in Figure LAC-8 known collectively as the La Manche East High delegation, ATS is delegated from Paris & Reims to London.

Figure LAC-8 – La Manche East High Delegated Airspace



3.2 General Operating Procedures

3.2.1 Route Restrictions

The (U)L9 east of the LTMA is designated for eastbound flights only. It may be used for westbound traffic from the Brussels TMA, inbound to Gatwick (EGKK), Lydd (EGMD) or the Solent Group, at FL120 or below.

ATS routes Q70 and L18 are established to provide a route for traffic inbound to the Brussels TMA (EBBR, EBMB, EBCV and EBAW). Depending on the departure aerodrome, traffic will plan to use Q70 (northerly aerodromes and FIR overflights), or L18 (southerly aerodromes). Solent Group and EGLF/Wessex Group departures should route via L9 to KONAN.

Correct Routing

EGLL – EBBR	DET Q70 KOK
EGKK – EBBR	(MIMFO Y312 / ODVIK Y311) DVR L18 VABIK Q70 KOK

Traffic entering the FIR from Reims/Paris will use the following routes dependent on destination:

Destination/Routing	Level	FIR Entry	Routing
Solent Group, EGLF, Wessex Group	FL265-FL285	SOSUN	(U)M8 / N20 ELDAX
EGTE, EGHQ, EGDY, EGDR	FL265+	SOSUN	(U)M8 ELDAX
Essex Group, EGTK	FL265-FL430	SOSUN	(U)M733 MAY
EGKA	FL195-	KESAX	N20 ELDAX
Solent Group, EGLF, Wessex Group	FL265-	KESAX	N20 ELDAX
Severn Group, Brize Group, EGTE, EGHQ, EGDY, EGDR	FL175-	KESAX	N20 ELDAX
EGTE, EGHQ, EGDY, EGDR	FL175-FL265	KESAX	(U)Y8 WAFFU
Essex Group, EGTK	FL175-FL265	KESAX	(U)Y8 / (U)M733 BANVA
EGTC	FL195+	KESAX	(U)T421 BIG
Severn Group, Brize Group	FL175+	KESAX	(U)T421 BIG
EGKK	FL355-	KESAX	(U)T421 TIMBA
Heathrow Group, EGLD	FL265-	KESAX	DIMAL (U)T420 BIG
Midlands Group, EGSH, EGUN, EGUL	FL195-FL265	KESAX	DIMAL (U)T420 BIG
EGNE, EGSH, EGUN, EGUL, EGLD	FL430+	ABNUR	(U)T420 ALESO
Heathrow Group, Midlands Group	FL265-FL430	ABNUR	(U)T420 ALESO
Essex Group	FL175-	RATUK	(U)L613 SANDY
Midlands Group, EGNE, EGSH, EGUN, EGUL, Thames Group	FL195-	RATUK	(U)L613 SANDY
MTMA, SctMA, Irish, Oceanic	All	RATUK	(U)L613 SANDY

3.2.2 Initial Route Clearance

AC Dover shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

3.3 Standing Agreements

3.3.1 LAC Standing Agreements

3.3.1.1 AC Worthing

From AC Worthing to AC Dover

From	To	Agreement	Conditions
EGBB, EGGD, EGVN	-	↑ FL230	Via BIG
EGFF, EGSY	-	↑ FL290	
EGGD, Brize Group	-	↑ FL230	Via BPK
-	Essex Group, EGLC, EGKB	FL190 lvl AVANT/TELTU	Not RFD. (Notes 1 & 2)
-	EGBB, EGNX	FL250	Via AVANT – HEMEL

Note 1: AC Worthing shall endeavour to present Essex/EGLC/EGKB inbound traffic to AC Dover at least 10 NM in trail, constant or increasing.

Note 2: This traffic is **not** RFD until within AC Dover’s airspace, unless otherwise coordinated. If the traffic is **not** on a radar heading, it is released for right turns only within AC Worthing’s airspace.

From AC Dover to AC Worthing

To	Agreement	Conditions
Severn Group	FL300	

3.3.1.2 AC Clacton

From AC Clacton to AC Dover

To	Agreement	Conditions
Midlands Group, EGNE	FL300 lvl LIVSU / TUGPO / UNSAD	
Severn Group	FL300 lvl LIVSU / TUGPO / UNSAD / IDITU	

From AC Dover to AC Clacton

From	Agreement	Conditions
EGFF, EGGD, EGSY, EGVN	↑ FL290	Via BPK

3.3.1.3 AC Daventry

From AC Daventry to AC Dover

From	Agreement	Conditions
MTMA Group	↑ FL310	Via BIG

3.3.1.4 AC West

From AC West to AC Dover

To	Agreement	Conditions
Essex Group, Thames Group	FL180 lvl SIRIC	‘Skipped’ to AC Dover. (Notes 1, 2 & 3)

Note 1: Coincident traffic via ELSOF and SIRIC shall be transferred on a heading to ensure separation inside Worthing airspace. AC West shall endeavour to stream inbounds at least 10 NM in trail, constant or increasing.

Note 2: Not RFD in AC West airspace. When AC Dover/TC SW is split from AC Worthing, this traffic is also **not** RFD until within AC Dover’s airspace.

Note 3: Not RFT until passing SIRIC. Then released for right turns only except when AC Dover is split from AC Worthing, when traffic is not RFT inside Worthing airspace.

3.3.2 LTC Standing Agreements

3.3.2.1 TC NE

From AC Dover to TC NE

To	Agreement	Conditions
Essex Group	↓ FL160	Not RFD until TC N/S boundary. (Notes 1, 2 & 3).

Note 1: AC Dover shall endeavour to present traffic to TC NE at least 5 NM in trail. Aircraft are to be on own navigation between VATON-OZZOT/BPK track to ensure separation from the LAM and BNN holds.

Note 2: Aircraft should be transferred in good time to be able to reach FL150 by OZZOT (EGGW) or FL140 by BPK (EGSS/EGSC).

Note 3: Due to system limitations, the calculated descent profile for Luton inbounds may cause an incorrect predicted next controller. In certain sector configurations, Dover will need to manually initiate the data tag transfer to the correct TC sector.

3.3.2.2 TC SE

From TC SE to AC Dover

From	Agreement	Conditions
EGKK	FL130 lvl TC N/S boundary	(Notes 1 & 2)
Heathrow Group, EGKK	↑ FL180	(Note 3)
Thames Group	↑ FL170	Departures via DVR
EGSS	↑ FL180	Night Only , Departures via DVR

Note 1: To be positioned on a radar heading west of the DET – LAM track. Due to the potential confliction with the LAM hold, aircraft which do not achieve FL130 by the TC N/S boundary must be coordinated with both TC NE and AC Dover.

Note 2: Traffic must cross the northern edge of the London CTR at FL155 or above to leave TC NE airspace. AC Dover must coordinate with TC NE if this cannot be achieved.

Note 3: This traffic must be climbed such that it does not enter Dover’s airspace prior to transfer of communications.

From AC Dover to TC SE

To	Agreement	Conditions
Thames Group	FL160 lvl BIG	(See Note)
Heathrow Group	FL180 lvl ETVAX	
EGKK	FL160 lvl AMDUT	

Note: Traffic must not enter TC SE airspace prior to BIG.

3.3.2.3 TC SW

From TC SW to AC Dover

From	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL170 lvl OCK	Via OCK-KOBBI (RFL175+)
EGLF, Wessex Group	FL170 lvl OTSID	Via OTSID-BIG (RFL165+)

From AC Dover to TC SW

To	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL180 lvl 5 NM before ELDAX	(See Note)
Solent Group, EGLF, Wessex Group	FL180 lvl 15 NM before WAFFU	(See Note)
Solent Group	FL160 lvl 5 NM before OCK	
EGTK	FL160 lvl 35 NM before CPT / FL160 lvl 5 NM after GOXUL	

Note: When AC Worthing and AC Dover are split, this traffic is **not** RFT or RFD and must be kept level through AC Worthing airspace.

3.3.2.4 TC East

From TC East to AC Dover

From	Agreement	Conditions
EGSS	FL200 lvl ABTUM	FPL via CLN-DVR (Notes 1 & 2)
EGGW	FL200 lvl TC East/AC Dover boundary	FPL via MATCH-DVR (Notes 1 & 2)

Note 1: TC East shall **not position** aircraft east of ABTUM without prior coordination with AC Dover.

Note 2: Traffic transferred to AC Dover is released for **right turns** only.

To	Agreement	Condition
Solent Group	FL210 lvl 20 NM before UMBUR	(See Note)
EGLF, Wessex Group, Brize Group, EGTK	FL210 lvl 15 NM before LAM	(See Note)

Note: Traffic RFD to FL180 only, regardless of sector configuration.

3.3.2.5 TC Midlands

From AC Dover to TC Midlands

To	Agreement	Conditions
Midlands Group	FL220 lvl HEMEL	Positioned through the Midlands Radar Gate.

From	Agreement	Conditions
EGKK	↑ FL190	Positioned east of the Midlands Radar Gate. (See Note)

Note: Traffic must cross the northern edge of the London CTR at FL155 or above to leave TC NE airspace. AC Dover shall coordinate with TC NE if this cannot be achieved.

3.3.3 External Standing Agreements

3.3.3.1 Paris North (FL295-)

From Paris North to AC Dover

To	Agreement	Condition
EGKA	FL200 or below lvl KESAX	
Essex Group	All levels FL210 – FL260	Via KESAX
EGLF, Wessex Group	FL280 or below lvl KESAX	

3.3.3.2 Reims North (FL295+)

From AC Dover to Reims North

From	Agreement	Condition
EGKK	FL310	Via RINTI (Notes 1 & 2)
EGGW	Eastbound levels FL310 – FL350	Via RINTI (Note 1)

Note 1: Traffic may be presented in the climb to the XFL. Traffic climbing to FL310 or above should be transferred directly to Reims if it will reach FL270 or above by ELTEG.

Note 2: FL290 and FL270 may also be used if FL310 is unavailable, coordinated with Paris North.

From Reims North to AC Dover

To	Agreement	Condition
Essex Group, Solent Group, EGLF, Wessex Group	All levels FL270+	Via SOSUN
EGKK	All levels FL210+ Maximum FL350 lvl KESAX	
Heathrow Group	All levels FL210+	Via ABNUR

3.3.3.3 Brussels West (FL245-)

From AC Dover to Brussels West

To	Agreement	Condition
EBAW, EBBR, EBCI, EBCV, EBMB, EBLG, EH**, LFOK, LFPB, LFPC, LFPG, LFPN, LFPO, LFPT, LFPV	FL230 or below lvl VABIK	(See Note)

Note: Additionally, FL200, FL220 and FL240 may be allocated for Brussels Group arrivals, except that LTMA outbounds may only be allocated a maximum of FL230 at VABIK.

From Brussels West to AC Dover

To	Agreement	Condition
EGKK	FL140 – FL160 lvl KOK	

3.3.3.4 Maastricht UAC – KOKSY (FL245+)

From AC Dover to Maastricht UAC Koksy

From	Agreement	Condition
London Group (Except Thames Group)	↑ any level between FL250 – FL290, or FL310	Traffic shall be positioned through the KOKSY Gate (see LAC 3.4.3.7). (Notes 1 & 2)
Thames Group	↑ FL250	

Note 1: *Traffic allocated FL310 must be level by abeam KOK, else London AC Dover shall stop the aircraft at FL290 or effect coordination with Maastricht UAC KOKSY.*

Note 2: *London AC Dover shall endeavour to provide an eastbound flow that is evenly spread out to avoid bunching on the (U)L607.*

3.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

3.4.1 Coordination with AC Daventry

3.4.1.1 AC Dover to AC Daventry

MTMA Group and EGNM/NH/NO/NJ inbound traffic from AC Dover to Daventry is released for descent within the confines of Dover airspace, subject to known traffic. This includes southbound traffic (via the L15) previously transferred from Daventry to Dover.

If an aircraft requires earlier descent to meet the expected level restrictions on the STAR, or Dover wishes to descend aircraft early for tactical reasons, this will be coordinated by Dover with Daventry.

3.4.1.2 Midlands Inbounds through the ‘Midlands Radar Gate’

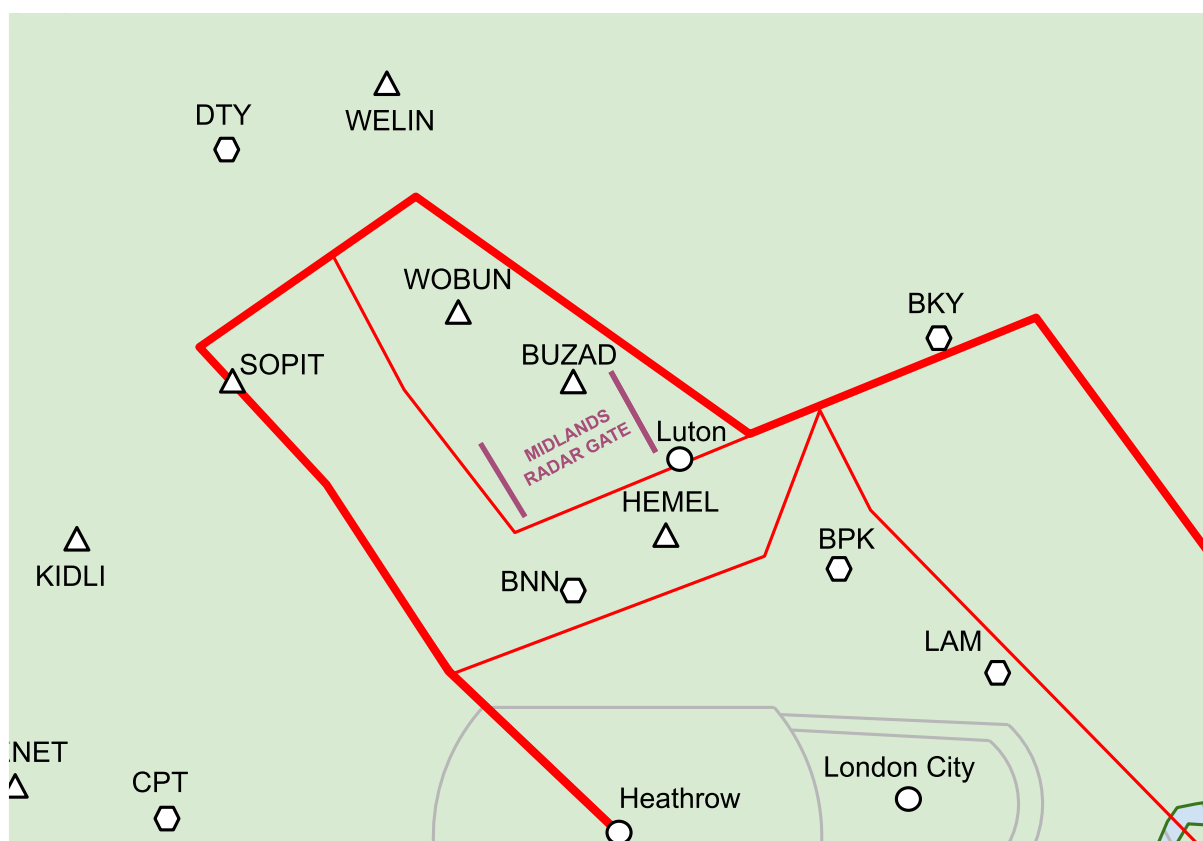
The Midlands Radar Gate is 9 NM wide, aligned parallel to ATS route T420, and is used for the positioning of Midlands group airfield arrivals from AC Dover.

AC Dover will position arrivals to the Midlands Group airports *through* the Midlands Radar Gate.

Traffic may be on its own navigation, or on radar heading (*See Note*) providing it passes through the confines of the Radar Gate. Traffic to EGNX should be positioned east of traffic to EGGB.

Note: Traffic transferred on radar headings are **not** RFT until they have entered TC Midlands airspace.

Figure LAC-9 – Midlands Radar Gate



3.4.2 Brussels ACC

Brussels ACC is responsible for the whole of the Brussels FIR FL245 and below.

As in real world, the Maastricht KOKSY (EDYY_K_CTR) sector has responsibility for portions of the Brussels FIR adjacent to London above FL245. However, in their absence, Brussels ACC takes responsibility of all Brussels FIR airspace on VATSIM.

3.4.2.1 Sectorisation

The coverage priority (left to right) for Brussels (SFC-FL245) at the interface with London ACC is as follows:

EBBU_(W_)CTR 131.100 MHz	EBBU_E_CTR 129.575 MHz
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3.4.2.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

3.4.2.3 Transfer of Control and Communication

3.4.2.3.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L9 / Q70	VABIK / KONAN	VABIK / KONAN	VABIK / KONAN

3.4.2.3.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L9	KONAN	KONAN	Between KOK and KONAN

3.4.2.4 Level Planning

For Standing Agreements, see [LAC 3.3.3.3](#).

3.4.2.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of **3 minutes** may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is **no less than 20 NM**.

3.4.2.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2.

3.4.2.7 KOKSY Buffer Zone and KOKSY Gate

There is 10 NM between the Q70 and (U)L610 ATS routes at their closest point, so an area of airspace called the KOKSY Buffer Zone (**Red** outlined area in Figure LAC-12) is established between the two ATS routes to ensure traffic remains separated.

Traffic operating on the centreline of Q70 is considered to be clear of the Buffer Zone.

L610: Neither Brussels ACC nor AC Clacton shall vector traffic south of the centreline of the L610, unless coordination is effected with AC Dover, or the traffic is west of the FIR boundary.

Effective 26 December 2024

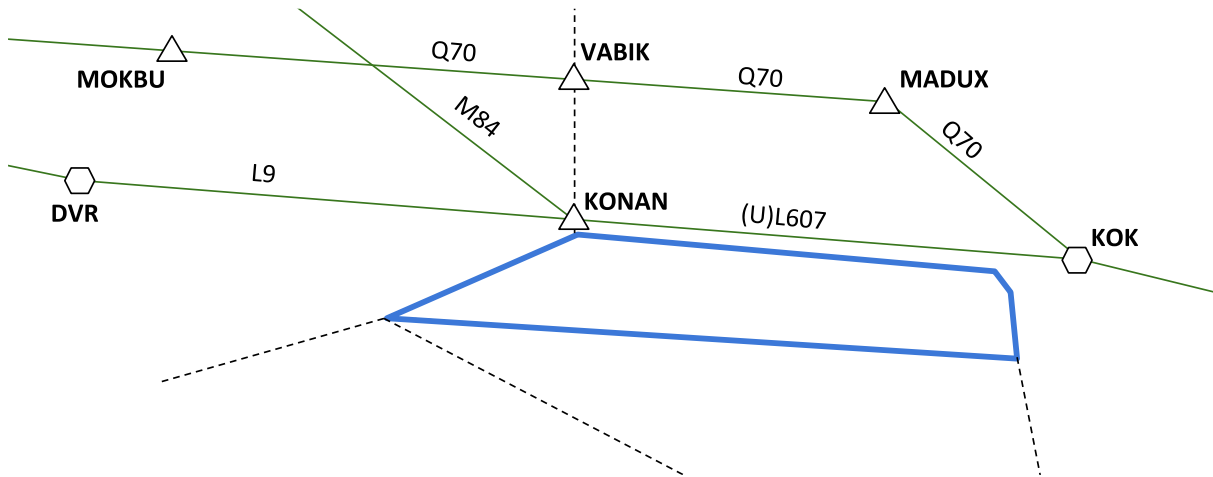
UL610: Neither Maastricht UAC (KOKSY) nor AC Clacton shall vector westbound traffic to enter the KOKSY Buffer Zone unless otherwise coordinated with Maastricht UAC (KOKSY) or AC Dover, as appropriate. The same condition applies for eastbound flights by AC Dover and Maastricht UAC (KOKSY), who shall ensure traffic on the UL9/L607 is positioned to remain within the KOKSY Gate (**blue** shaded area in Figure LAC-12).

3.4.3 Maastricht UAC

As described in [LAC 3.4.2 Brussels ACC](#), and as in real world, the Maastricht KOKSY (EDYY_K_CTR) sector has responsibility for portions of the Brussels FIR adjacent to London above FL245.

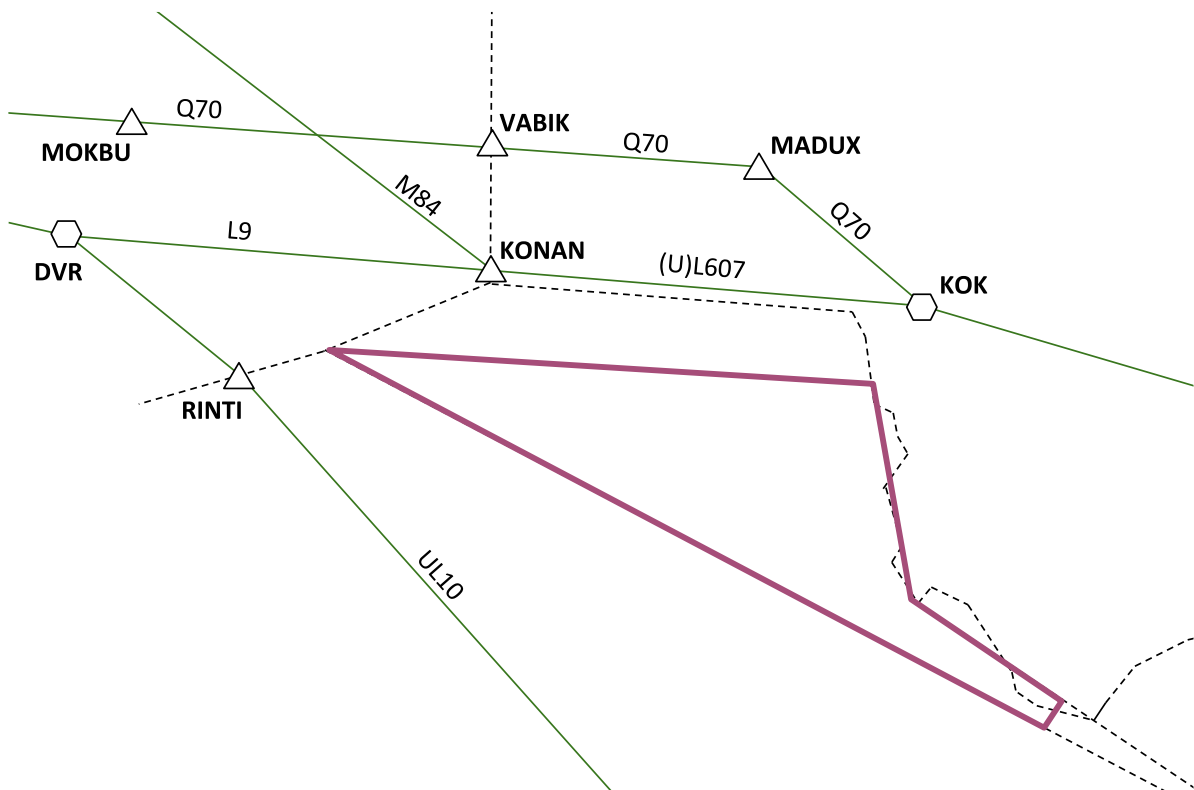
Between the London FIR boundary and KOK, up to 5 NM south of the centreline of ATS Route L607 (and as shown in Figure LAC-10), within the France UIR the provision of ATS is performed by Maastricht UAC (KOKSY).

Figure LAC-10 – (U)L607 West of KOK



Within an area (as shown in Figure LAC-11) designated as the Cross Border Working Volume (CBWV) within the France UIR, the provision of ATS is performed by Maastricht UAC (KOKSY).

Figure LAC-11 – Cross Border Working Volume (CBWV)



In Maastricht KOKSY’s absence, Brussels ACC takes responsibility of all Brussels FIR airspace on VATSIM.

3.4.3.1 Sectorisation

The coverage priority (left to right) for Maastricht UAC (FL245+) at the interface with London ACC is as follows:

KOKSY Sector

EDYY_K_CTR 132.205 MHz	EDYY_N_CTR 135.980 MHz	EBBU_U_CTR 125.980 MHz	Brussels ACC – West Sector
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3.4.3.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

3.4.3.3 Transfer of Control and Communication

3.4.3.3.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
(U)L9 / L607	KONAN	KONAN	At or before 10 NM east of DVR

3.4.3.3.2 Traffic Entering London

N/A

3.4.3.4 Level Planning

For Standing Agreements, see [LAC 3.3.3.4](#).

3.4.3.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of **3 minutes** may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is **no less than 20 NM**.

3.4.3.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

3.4.3.6.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Maastricht UAC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

3.4.3.7 KOKSY Buffer Zone and KOKSY Gate

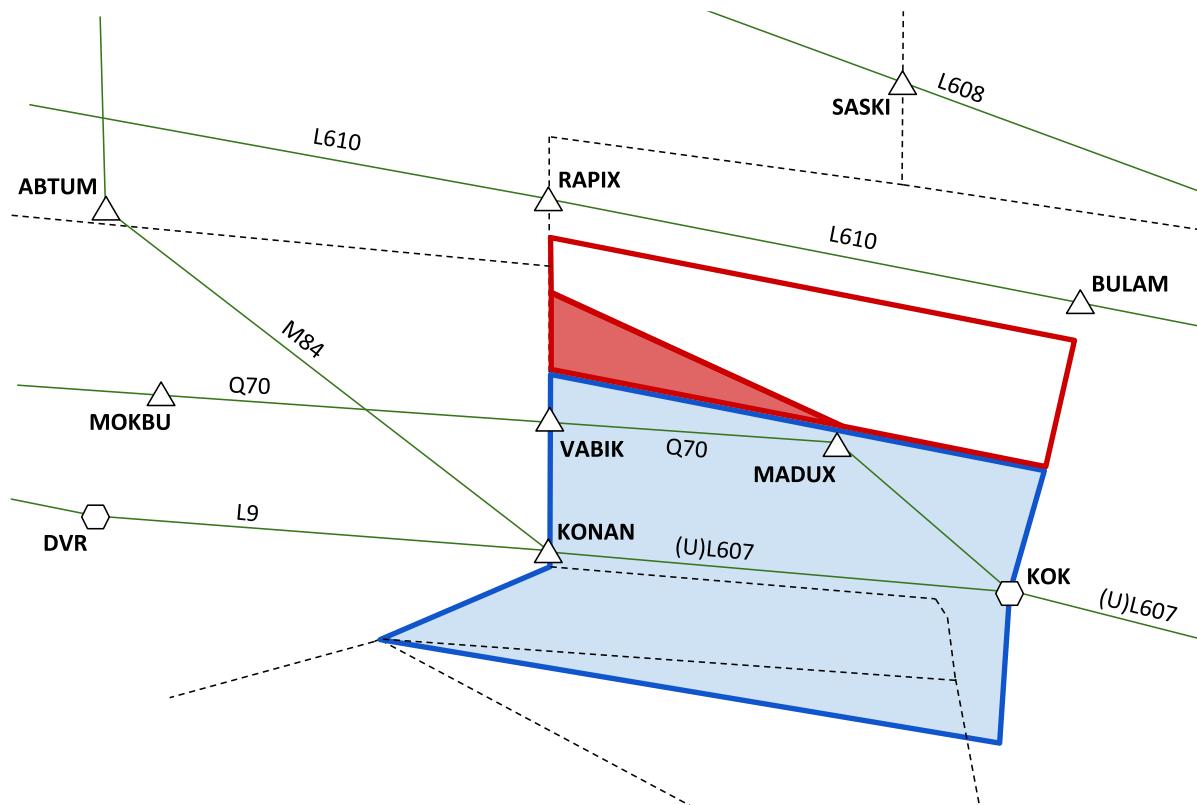
The **KOKSY Buffer Zone** (Red outlined area in Figure LAC-12) is established at all levels, except in the red shaded area where it is FL245+, to ensure separation between westbound traffic on the L610 and eastbound traffic on the Q70/(U)L607. Any breaches of the Buffer Zone shall be coordinated with all controllers concerned.

Effective 26 December 2024

Traffic transferred from London AC Dover to Maastricht UAC (KOKSY) either on own navigation, or on radar headings, shall be positioned to track within the confines of the **KOKSY Gate** (Blue shaded area in Figure LAC-12).

London AC Dover shall endeavour to position traffic in the same general direction as the (U)L607 (the ATS route east of KOK).

Figure LAC-12 – KOKSY Buffer Zone and KOKSY Gate

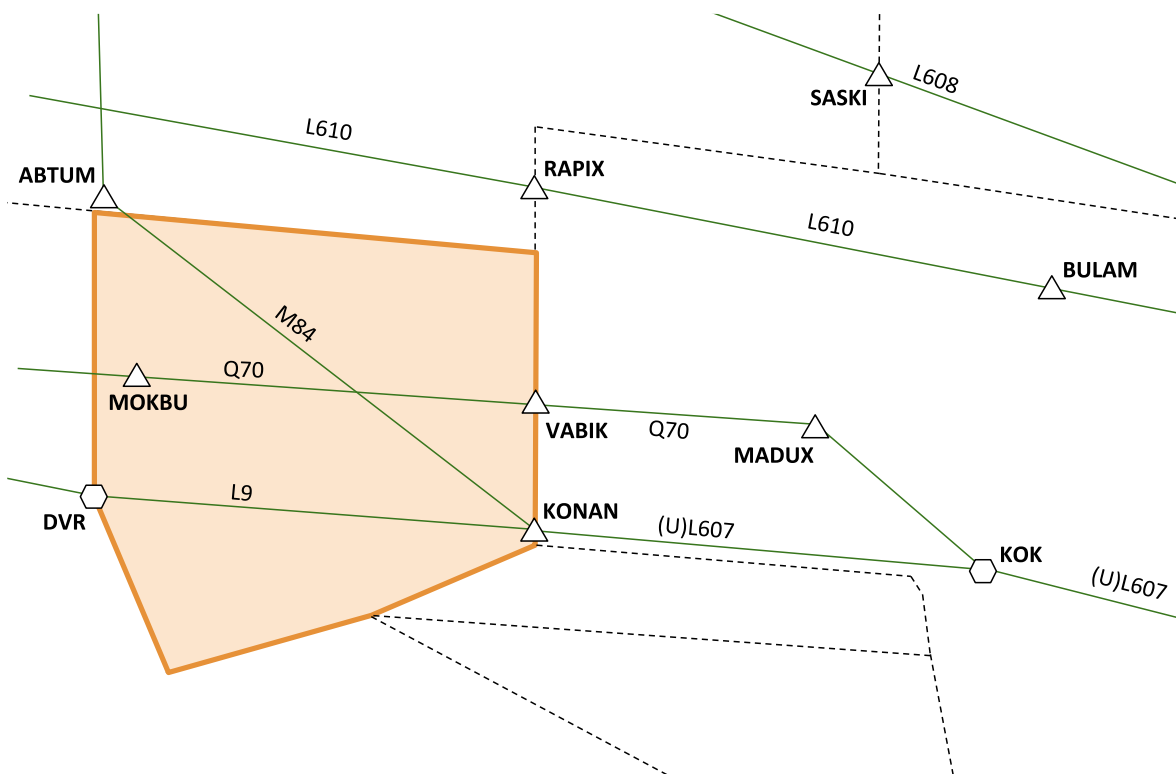


3.4.3.8 Dover RFC Area

Traffic transferred from London ACC to Brussels ACC/Maastricht UAC is released for climb and turns within the DVR RFC Area (the orange shaded area shown in Figure LAC-13). Aircraft must remain within the release area if turned, and outside of the KOKSY Buffer Zone (see above).

London AC Dover shall ensure that all traffic above FL315 is level at the RFL by the Dover RFC Area. If the traffic is not level, it must be co-ordinated with Maastricht UAC (KOKSY). All traffic at the RFL by the RFC Area is considered known to Maastricht UAC (KOKSY).

Figure LAC-13 – DVR RFC Area



3.4.4 Paris & Reims ACCs

The French ACCs Paris and Reims both border London AC Dover. The division of airspace between the two is at FL295. A major portion of airspace is delegated to AC Dover, known as the ‘La Manche East’ Areas, as described in LAC 3.1.2.

A portion of airspace above FL245 is delegated from Paris & Reims to Maastricht UAC (KOKSY) – see LAC 3.4.3.

3.4.4.1 Sectorisation

3.4.4.1.1 Paris ACC

The coverage priority (left to right) for Paris ACC (FL295-) at the interface with London ACC is as follows:

Paris North (TN+TP+TB) Sector

LFFF_N_CTR 128.875 MHz	LFFF_CTR 128.100 MHz
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3.4.4.1.2 Reims ACC

The coverage priority (left to right) for the Reims ACC (FL295+) sector at the interface with London ACC is as follows:

Reims North (HN+UB+UN1+UN2+UR+XR) Sector

LFEE_N_CTR 127.555 MHz	LFEE_CTR 133.005 MHz	LFFF_CTR 128.105 MHz	EUC-WN_CTR 135.125 MHz
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3.4.4.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

3.4.4.3 Transfer of Control and Communication

Transfer of control shall occur at the point specified in the table below, else at the FIR/AoR boundary.

Unless otherwise specified in the table below, transfer of communication shall occur at or before the relevant COP on the AoR boundary. Except where approved elsewhere in this vMATS, the use of vectors requires coordination before the transfer of communication takes place.

3.4.4.3.1 From London ACC to Reims ACC

Coordination Point	Transfer of Control	Transfer of Communications
RINTI	ELTEG	At or before ELTEG
MOTOX	ING	At or before ING

3.4.4.3.2 From Reims ACC to London ACC

Coordination Point	Transfer of Control	Transfer of Communications
KESAX	KESAX	10 NM before KESAX
SOSUN	SOSUN	10 NM before SOSUN

3.4.4.4 Level Planning

For Standing Agreements, see LAC 3.3.3.1 (Paris) & LAC 3.3.3.2 (Reims).

3.4.4.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

3.4.4.6 Separation between ATS Routes

Northbound traffic via UM733 (SOSUN), UT421 (KESAX) and UT10 (ABNUR) are deemed laterally separated at the AoR boundary.

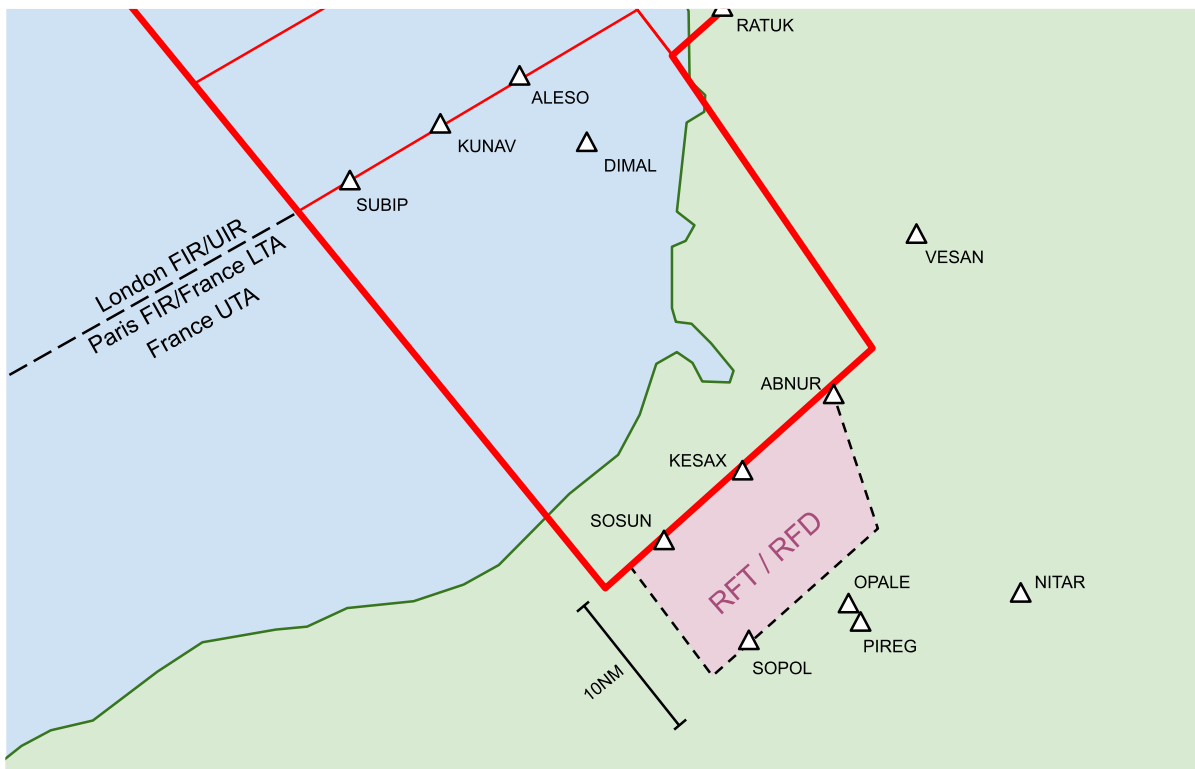
3.4.4.7 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2.

3.4.4.8 Reims ACC Release Area

Traffic transferred from Reims ACC to London AC Dover is released for turns and descent within all Reims sectors (lowest FL295) when inside the RFT/RFD Box, as shown in Figure LAC-14.

Figure LAC-14 – Reims ACC Release Area



3.5 En-route Holding Procedures

For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

TIGER Hold

For aircraft inbound to London Heathrow via Biggin.

TIGER	RNAV Hold, 1.5-minute legs
Axis	315°
Direction	RIGHT hand
Holding Levels	FL150 – FL240
Speed	Standard ICAO Holding Speeds

Note: Below FL190, the TIGER hold is contained within the TC SE sector.

AMDUT Hold

For aircraft inbound to Gatwick via TIMBA.

AMDUT	RNAV Hold, 1-minute legs
Axis	312°
Direction	RIGHT hand
Holding Levels	FL160 – FL190
Speed	Maximum 240 kts IAS

Note: Traffic in the AMDUT hold shall be retained by AC Dover. TC South East will 'call on' traffic from AC Dover, who shall transfer the aircraft at/cleared to FL160.

UNDUG Hold

For aircraft inbound to London Stansted, London Luton, or Cambridge.

UNDUG	RNAV Hold, 1.5-minute legs
Axis	319°
Direction	RIGHT hand
Holding Levels	FL200 – FL240
Speed	Standard ICAO Holding Speeds

VATON Hold

For aircraft inbound to London Stansted, London Luton, or Cambridge.

VATON	RNAV Hold, 1.5-minute legs
Axis	025°
Direction	LEFT hand
Holding Levels	FL180 – FL200
Speed	Maximum 240 kts IAS

3.5.1 Essex Holding Procedures

Essex traffic that routes through the Dover sector will be instructed to hold at LOREL (EGSS/EGSC) or ZAGZO (EGGW) in the first instance by TC Stansted/Luton. The LOREL and ZAGZO stacks are owned by TC NE.

Should the LOREL/ZAGZO hold become full, additional holding should be carried out at VATON for traffic arriving from the south. AC Dover is responsible for the VATON (FL180 – FL200) hold.

Should the VATON hold become full, AC Dover shall coordinate with AC Worthing and AC West respectively to initiate further holding:

- AC Worthing for aircraft on TELTU STARs; and
- AC West for aircraft on SIRIC STARs.

Chapter 4 Central LAG | AC Daventry

4.1 Area of Responsibility

AC Daventry Sector (LON_M_CTR) is one of the AC Central Group sectors, covering the area over Midlands and down to the north-western corner of the London TMA. In the central part of the sector, it extends from the FL195 up to FL660.

The AC Central position (LON_C_CTR) is the ‘parent’ of the Central LAG sector splits. The coordination name for the combined Daventry & Clacton sectors is “AC Central”.

Figure LAC-15 – London AC Daventry Area of Responsibility



4.1.1 Sector Frequency

AC Daventry operates on frequency 120.025 MHz.

4.1.2 Delegated Airspace

There is no delegated airspace in the AC Daventry sector.

4.3 Standing Agreements

4.3.1 LAC Standing Agreements

4.3.1.1 AC Dover

From AC Daventry to AC Dover

From	Agreement	Conditions
MTMA Group	↑ FL310	Via BIG

4.3.1.2 AC Worthing

From AC Daventry to AC Worthing

From	Agreement	Conditions
MTMA Group	↑ FL310	

4.3.2 LTC Standing Agreements

4.3.2.1 TC Midlands

From AC Daventry to TC Midlands

To	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL200 lvi PEPUL	
EGKK	FL200 lvi DISIT	
EGLL, EGWU	FL200 lvi TOBID	
Essex Group, EGMC	FL200 lvi ROGBI	

From TC Midlands to AC Daventry

From	Agreement	Conditions
EGLL, Essex Group, EGLC, EGMC	FL190 lvi TIMPO / PIPIN	
Solent Group, EGLF, Wessex Group, EGKB	↑ FL210	(See Note)

Note: Traffic with a cruise of FL200 may be transferred climbing to this level.

4.3.2.2 TC East

From AC Daventry to TC East

To	Agreement	Conditions
Thames Group (excl. EGMC)	FL220 lvi ODVOD	

4.3.3 MPC Standing Agreements

4.3.3.1 PC Southeast

From AC Daventry to PC Southeast

To	Agreement	Conditions
MTMA Group	FL200 lvl ELVOS / LESTA / 25 NM before TNT	(Notes 1, 2 & 3)
EGNM, EGNH, EGNO	FL200 lvl 10 NM before TNT	(Notes 1, 2 & 3)
EGNM, EGNH, EGNO	FL200 lvl EMBOR	(Notes 1, 2 & 3)
EGNJ	FL200 lvl 25 NM before EVSON	(Notes 1, 2 & 3)

Note 1: Aircraft transferred on a radar heading are **not** RFT.

Note 2: PC Southeast is to ensure that this traffic is given timely descent to ensure it does not enter PC West's airspace.

Note 3: If an aircraft is unable to achieve the Standing Agreement, it is AC Daventry's responsibility to coordinate with PC Southeast **and** PC West (if required).

From PC Southeast to AC Daventry

From	Agreement	Conditions
MTMA Group (RFL > FL195)	FL190 lvl 10 NM before HON	(See Note)

Note: Traffic will be positioned in accordance with the requirements in LAC 4.4.3 and transferred in good time so that AC Daventry can climb above TC Midlands Airspace.

4.3.3.2 PC Northeast

From AC Daventry to PC Northeast

To	Agreement	Conditions
EGNT, EGNV	FL280 lvl BETAX	(See Note)
EGNT, EGNV	FL280 lvl 25 NM before MAMUL	(See Note)

Note: Due to system limitations, the calculated descent profile for these inbound may cause an incorrect predicted next controller. In certain sector configurations, Daventry will need to manually initiate the data tag transfer to the correct PC sector.

4.3.3.3 PC West

From PC West to AC Daventry

From	Agreement	Conditions
EGNM, EGNH, EGNJ	↑ FL280	(See Note)

Note: Aircraft transferred on a radar heading are **not** RFT.

4.3.4 External Standing Agreements

None.

4.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

4.4.1 Coordination with AC Lakes

4.4.1.1 Southbound Traffic

All traffic transferred by Lakes on own navigation or on a heading is released for turn, subject to known traffic.

To assist with integrating and streaming LTMA inbounds, Lakes and PC West may coordinate opposite direction levels with Daventry (i.e. even levels).

All traffic transferred from Lakes to Daventry may be climbing/descending to the coordinated level at the sector boundary.

LTMA, Solent, Farnborough and Wessex Group inbounds transferred to Daventry from Lakes are released for descent within the confines of Lakes, subject to known traffic.

If an aircraft requires earlier descent to meet the expected level restrictions on the STAR, or Lakes wishes to descend aircraft early for tactical reasons, this will be coordinated by Lakes with Daventry.

4.4.1.1.1 Positioning of Southbound Traffic

AC Lakes will endeavour to position overflights and inbounds to the London TMA west to east according to their intention code (see Figure LAC-16).

Overflights

← West		Intention Code					East →
		HON (Honiley VOR)					
H9 – H6/JC/H	E3 – E	V6 – V X1 – X	P	D3 – D	EB/EX/AS	C3, AM/C2, C1	

LTMA Inbounds

← West		Routing/Destination					East →
		HON (Honiley VOR)					
Solent Group, EGLF, Wessex Group		EGKK	BNN Arrivals	EGMC	LOREL Arrivals	EGGW	JACKO Arrivals

4.4.1.2 Northbound Traffic

All traffic coordinated by AC Daventry with AC Lakes at levels above FL300 but below its RFL is released for climb.

Daventry may transfer LTMA, Solent, Farnborough and Wessex Group departures that have been coordinated below their RFL on a heading to Lakes (or PC West if slow climbing). Lakes/PC West must not alter the track of any aircraft transferred on a heading before the aircraft enters their airspace unless coordination is effected with Daventry.

4.4.1.3 Slow Climbing LTMA, Solent, Farnborough and Wessex Group Departures

Traffic outbound from LTMA, Solent, Farnborough and Wessex Group airfields that is unable to reach FL290 by abeam TNT shall be coordinated by Daventry with PC West.

PC West will either:

- Request that the traffic be transferred directly to Lakes, released for climb.
- Request to work the traffic climbing to FL280.
- Request to work the traffic climbing to an intermediate level below FL280.

4.4.2 Coordination with LAG South

4.4.2.1 AC Dover to AC Daventry

MTMA Group and EGNM/NH/NO/NJ inbound traffic from AC Dover to Daventry is released for descent within the confines of Dover airspace, subject to known traffic. This includes southbound traffic (via the L15) previously transferred from Daventry to Dover.

If an aircraft requires earlier descent to meet the expected level restrictions on the STAR, or Dover wishes to descend aircraft early for tactical reasons, this will be coordinated by Dover with Daventry.

4.4.2.2 AC Worthing to Daventry

MTMA Group and EGNM/NH/NO/NJ inbound traffic from AC Worthing to Daventry that has flight planned VASUX DCT ELVOS or has been coordinated by Worthing to ‘skip’ Dover is released for descent within the confines of Worthing airspace, subject to known traffic.

4.4.3 Coordination with PC Southeast

4.4.3.1 Aircraft Departing EGCC and EGGP with an RFL FL200+

AC Daventry shall not alter speed of an aircraft transferred from PC Southeast until the aircraft is within the confines of AC Daventry airspace. Where published, the speed profile is to be maintained until the flight passes FL260 unless separation may be compromised.

Intention Codes: H9-H6/JC/H, E/E2, V6-V & P

PC Southeast will position aircraft with these intention codes through the ‘Honiley Radar Gate’ (see Figure LAC-17) either on own navigation (See Note 1) or on a radar heading. A maximum of two aircraft may be transferred abreast through the gate at any one time without coordination. PC Southeast shall endeavour to ensure subsequent aircraft are at least 10 NM in trail.

From	Intention Code	Agreement
EGCC, EGGP, EGNR	H9-H6/JC/H, E/E2, V6-V & P	Through the ‘Honiley Radar Gate’

Note: Aircraft may be positioned on its own navigation to either CPT/GWC/MID/WOD/VIDOK (depending on geographical intention code) provided this takes the aircraft through the radar gate.

Figure LAC-17 – Honiley Radar Gate



Effective 26 December 2024

Intention Codes: D3-D, C3-1, EB, AM and AS

PC Southeast will position departures from EGCC, EGGP and EGNR with these intention codes outside the radar gate. PC Southeast will endeavour to consider other AC Daventry traffic when transferring these aircraft outside of the confines of the radar gate.

Note: Traffic with intention codes Dx should be positioned west of traffic with intention codes Cx.

4.5 En-route Holding Procedures

For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

DELBO Hold

During periods of congestion in the London TMA aircraft inbound to London Gatwick from ATS Routes via HON, WAL and KEPAD may be required to hold at DELBO.

DELBO	RNAV Hold, 1.5-minute legs
Axis	153°
Direction	RIGHT hand
Holding Levels	FL150 – FL200
Speed	Maximum 240 kts IAS

Note: DELBO is not aligned with the ATS Routes (L612/UL612; N859) serving Gatwick inbound traffic. Traffic via L612/ UL612 may be required to route from DISIT to DELBO. Traffic via N859 may be required to route from HON to DELBO.

HON Hold

HON	RNAV Hold, 1.5-minute legs
Axis	144°
Direction	RIGHT hand
Holding Levels	FL150 – FL350
Speed	Maximum 240 kts IAS

Note 1: Below FL200, the direction of pattern is LEFT hand. Holding below FL200 is contained within the TC Midlands and PC Southeast sectors.

Note 2: PC Southeast must be informed when holding is taking place at HON.

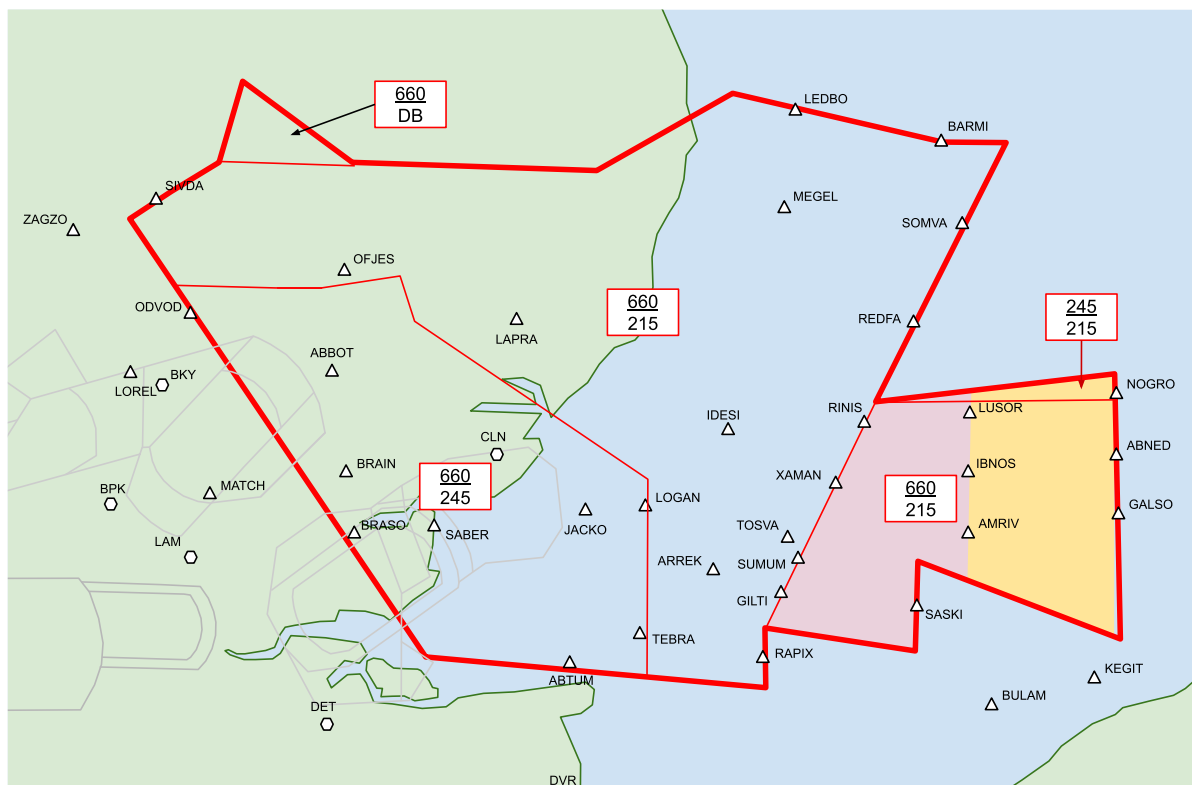
Chapter 5 Central LAG | AC Clacton

5.1 Area of Responsibility

AC Clacton (LON_E_CTR) covers the area to the north-east and east of the LTMA, including some airspace delegated from Amsterdam FIR. It extends from FL245 at its western end, and from FL215 at its eastern end. TC East sector is situated beneath AC Clacton.

The AC Central position (LON_C_CTR) is the ‘parent’ of the Central LAG sector splits. The coordination name for the combined Daventry & Clacton sectors is “AC Central”.

Figure LAC-18 – London AC Clacton Area of Responsibility



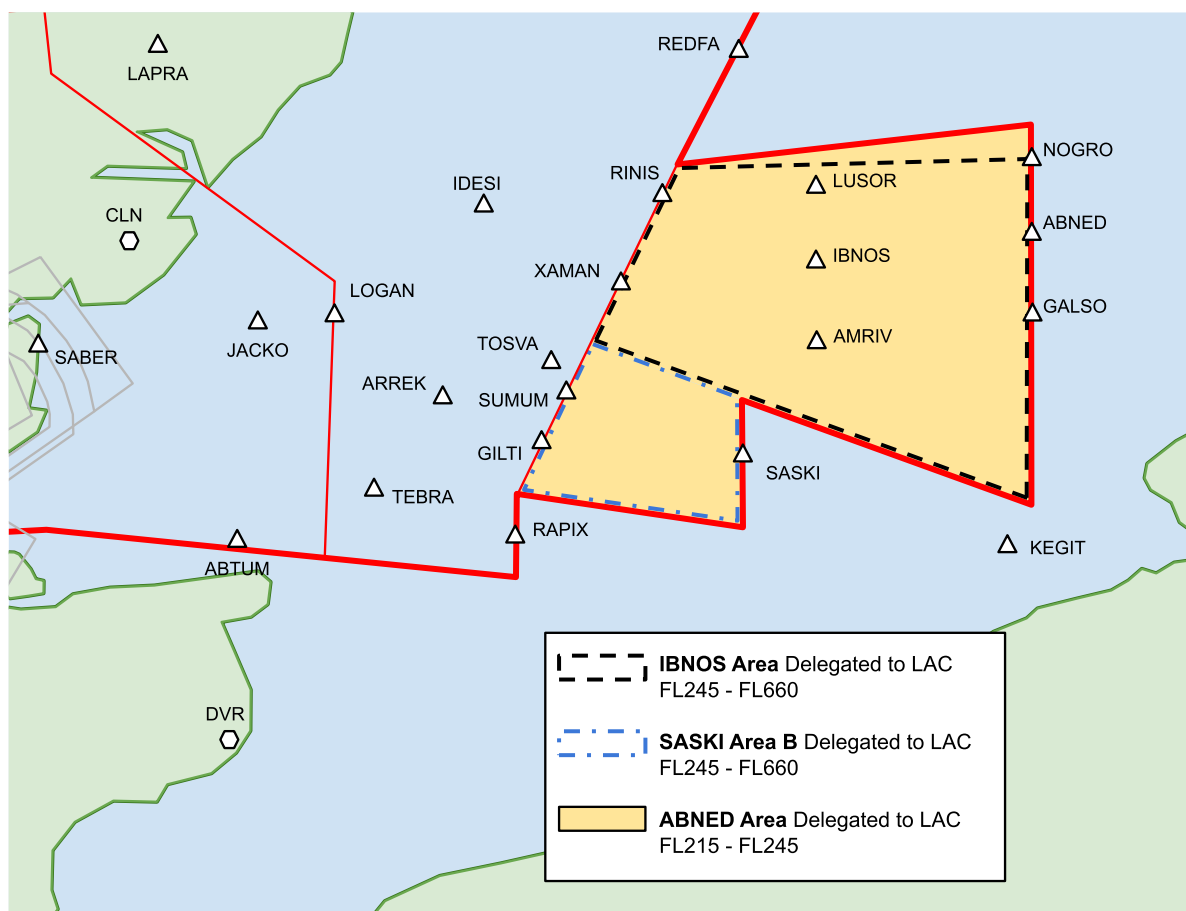
5.1.1 Sector Frequency

AC Clacton operates on frequency 118.480 MHz.

5.1.2 Delegated Airspace

5.1.2.1 To London ACC – Within the Amsterdam FIR

Figure LAC-19 – Delegation of Airspace to AC Clacton within the Amsterdam FIR



5.2 General Operating Procedures

5.2.1 Route Restrictions

5.2.1.1 Level Restrictions

FL250 is not available for traffic overflying the Amsterdam FIR, due to the interface between Amsterdam ACC and Maastricht UAC at FL245.

5.2.2 Initial Route Clearance

AC Clacton shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

5.3 Standing Agreements

5.3.1 LAC Standing Agreements

5.3.1.1 AC Dover

From AC Dover to AC Clacton

From	Agreement	Conditions
EGFF, EGGD, EGVN	↑ FL290	Via BPK

From AC Clacton to AC Dover

To	Agreement	Conditions
Midlands Group, EGNE	FL300 lvi LIVSU / TUGPO / UNSAD	
Severn Group	FL300 lvi LIVSU / TUGPO / UNSAD / IDITU	

5.3.1.2 AC North Sea

From AC North Sea to AC Clacton

To	Agreement	Conditions
Essex Group	FL260 lvi BARMi	Positioned on the west side of the P7 ATS route. (See Note)
Heathrow Group, Solent Group, EGLF, Wessex Group, EGVN, EGTK	FL300 lvi BARMi	Traffic is not RFT/RFD within AC North Sea
EGKK	FL260 lvi BARMi	Positioned on the east side of the P7 ATS route

Note: Wherever possible, AC North Sea shall endeavour to position EGGW (ZAGZO) arrivals to the west of EGSS/EGSC (ABBOT) arrivals.

5.3.2 LTC Standing Agreements

5.3.2.1 TC East

From TC East to AC Clacton

From	Agreement	Conditions
Heathrow Group, EGKK, EGKB, EGGW, EGLF, Wessex Group	↑ FL230	
EGSS, EGSC, Thames Group (excl. EGKB)	↑ FL210	

From AC Clacton to TC East

To	Agreement	Conditions
Essex Group	FL220 lvi MEGEL	
Essex Group	FL220 lvi RINIS / XAMAN / TOSVA / 15 NM before IDESI	
Thames Group	FL220 lvi MOMIC	
Thames Group	FL220 lvi INLOD	
Heathrow Group, Brize Group, EGTK, Solent Group, EGLF, Wessex Group	FL250 lvi LOGAN	
EGKK	FL220 lvi ODROB	Via P7
EGKK	FL220 lvi BLIXY / SUNUP	Via Y4, Q63, L610

5.3.2.2 TC Midlands

From TC Midlands to AC Clacton

From	Agreement	Conditions
Midlands Group, EGTK	FL210 lvl SIVDA	

5.3.3 External Standing Agreements

5.3.3.1 Amsterdam West (FL245-)

From Amsterdam West to AC Clacton

From	To	Agreement	Conditions
EH**	Essex Group, EGTC, EGSB, EGUL, EGUN, EGYM	↑ FL240	Via NOGRO. (Note 2)
EH**	All	↑ FL240	Via ABNED. (Notes 1 & 2)

Note 1: Traffic is RFC to FL300 subject to known traffic. Further climb shall be coordinated with DELTA Sector (or Amsterdam ACC in their absence).

Note 2: Traffic FL245 and below is RFT no further north than the M40 centreline.

From AC Clacton to Amsterdam West

To	Agreement	Conditions
EH** (except Haamstede Group)	FL230 lvl REDFA	(Notes 1 & 2)

Note 1: This traffic is released for descent to FL190 10 NM before REDFA and released for left turns, provided it crosses the FIR boundary no more than 5 NM north/south of REDFA.

Note 2: Traffic inbound to EHAM can also be allocated FL220 and FL240 without coordination. However, traffic at these levels is only released for left turns, to cross the FIR boundary no more than 5 NM north of REDFA.

5.3.3.2 Maastricht UAC (FL245+)

From Maastricht UAC – DELTA to AC Clacton

To	Agreement	Conditions
Essex Group, EGTC, EGSB, EGUL, EGUN, EGYM	FL280 or below lvl NOGRO	(Notes 1, 2 & 3)
EGKK	FL290 lvl GALSO	(Notes 1, 2 & 3)
EGLC, EGKB, EGMC	FL260 lvl GALSO	(Notes 1, 2 & 3)
Heathrow Group, Solent Group, EGLF/Wessex Group, Brize Group	Westbound levels; All levels FL290-FL390	Includes opposite direction levels (Notes 1, 2 & 3)

Note 1: Traffic is RFD to FL260 on contact.

Note 2: Traffic is RFT no further north than the IBNOS Area. Traffic positioned on parallel headings are subject to conditions set out in LAC 5.4.4.7.1.

Note 3: Maastricht UAC (DELTA) shall position aircraft north-south according to the COP. DELTA shall endeavour to present aircraft inbound to the same destination/group in accordance with this priority order (high to low):

- Sequencing initiated (not necessarily completed)
- Laterally separated (using headings; see Note 2)
- Vertically separated.

From Maastricht UAC – KOKSY to AC Clacton

To	Agreement	Conditions
Essex Group, Thames Group, EGSB	FL270 or FL280 lvl KEGIT or IMPOH	(See Note)
EGKK	Maximum FL290 lvl BULAM	(See Note)
Heathrow Group, EGLF/Wessex Group	Westbound levels; All levels FL310 – FL390	Via L179/L608. Includes opposite direction levels.
Solent Group, EGTK, EGLF/Wessex Group	Westbound levels; All levels FL310 – FL390	Via L610. Includes opposite direction levels.

Note: Where traffic is transferred vertically separated, Maastricht UAC (KOKSY) shall endeavour to position traffic as follows:

Highest	EGKK inbounds
	EGSS/GW/SC/SH inbounds
Lowest	Thames Group inbounds

5.3.3.3 Brussels West (FL245-)

From Brussels West to AC Clacton

From	Agreement	Condition
EBBR, EBAW, EBCI, EBCV, EBMB	↑ FL250	Via L608/L610. RFC after the Brussels Release Line (see LAC 5.4.4.8)

5.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

5.4.1 Coordination with AC North Sea

5.4.1.1 Eastbound LTMA Traffic via LEDBO

All LTMA Group departures via LEDBO (M604) transferred on their own navigation or on a heading are released for turns, subject to known traffic. If coordinated at a level below their RFL, this traffic is also released for climb.

5.4.2 Amsterdam ACC

Amsterdam ACC is responsible for the whole of the Amsterdam FIR FL245 and below.

As in real world, the Maastricht Delta sector has responsibility for portions of the Amsterdam FIR adjacent to London above FL245. However, in their absence, Amsterdam ACC takes responsibility of all Amsterdam FIR airspace on VATSIM.

FL250 is not available as a cruising level in the Amsterdam FIR/UIR.

5.4.2.1 Sectorisation

The coverage priority (left to right) for Amsterdam (SFC-FL245) at the interface with London ACC is as follows:

EHAA_W_CTR 123.705 MHz	EHAA_LOW_CTR 125.750 MHz	EHAA_ALL_CTR 134.375 MHz	EHAA_S_CTR 123.850 MHz	EHAA_E_CTR 124.880 MHz
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5.4.2.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

5.4.2.3 Transfer of Control and Communication

5.4.2.3.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L620 / M183 / M197 / P137	REDFA	REDFA	At or before REDFA

5.4.2.3.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
M40 / L980 / Z344 / Q63	LUSOR / IBNOS / AMRIV	NOGRO / ABNED	At or before NOGRO / ABNED

5.4.2.4 Level Planning

For Standing Agreements, see [LAC 5.3.3.1](#).

5.4.2.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

5.4.2.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

5.4.2.6.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Amsterdam ACC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

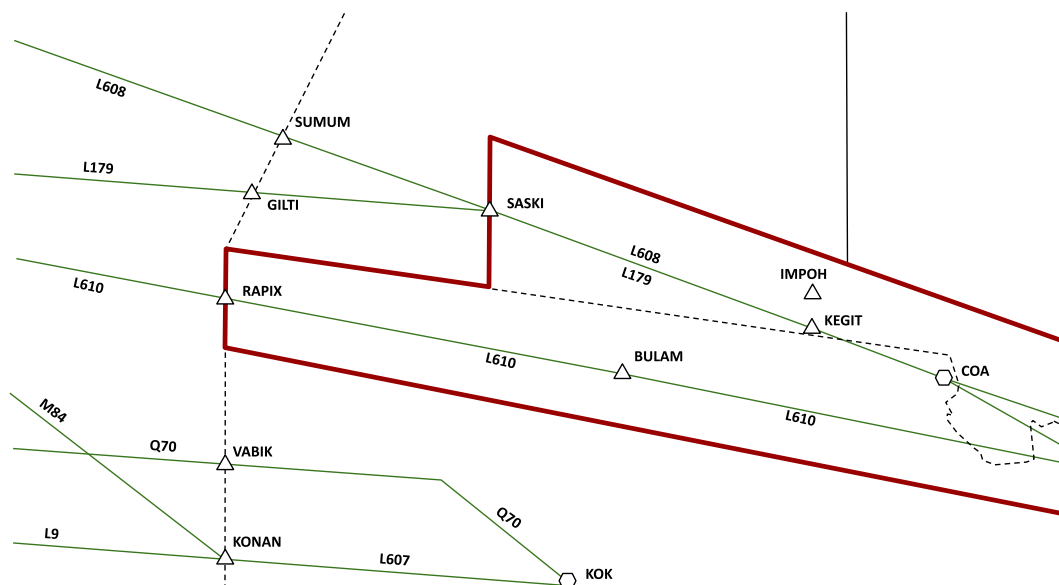
5.4.3 Brussels ACC

Brussels ACC is responsible for the whole of the Brussels FIR FL245 and below.

Additionally, Brussels ACC is responsible for L179 and L608 east of SASKI and L610 east of the FIR boundary between FL55 and FL245.

Within the BULAM Area, the use of FL250 is permanently delegated from Maastricht UAC (KOKSY) to Brussels West. Maastricht UAC (KOKSY) will not assign FL250 in the BULAM area without prior co-ordination with Brussels West.

Figure LAC-20 – BULAM Area



As in real world, the Maastricht KOKSY (EDYY_K_CTR) sector has responsibility for portions of the Brussels FIR adjacent to London above FL245. However, in their absence, Brussels ACC takes responsibility of all Brussels FIR airspace on VATSIM.

Note: Brussels Control always has a higher priority over the upper airspace than the Maastricht Eurocontrol position (EUC-MW_CTR).

5.4.3.1 Sectorisation

The coverage priority (left to right) for Brussels (SFC-FL245) at the interface with London ACC is as follows:

EBBU_(W_)CTR 131.100 MHz	EBBU_E_CTR 129.575 MHz
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5.4.3.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

5.4.3.3 Transfer of Control and Communication

5.4.3.3.1 Traffic Leaving London

N/A

5.4.3.3.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L179	SASKI	SASKI (Note 1)	20 NM east of SASKI
L610	RAPIX	RAPIX (Notes 1 & 2)	20 NM east of SASKI

Note 1: Aircraft are RFT after passing 5 NM before SASKI (right turns only for aircraft on L610). This must not position aircraft south of the L610 centreline until the aircraft has passed RAPIX.

Note 2: Traffic transferred from Brussels ACC and London AC Clacton to London TC JACKO is released for descent to FL110 west of BULAM.

5.4.3.4 Level Planning

For Standing Agreements, see [LAC 5.3.3.3](#).

5.4.3.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

5.4.3.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2.

5.4.3.7 KOKSY Buffer Zone and KOKSY Gate

There is 10 NM between the Q70 and (U)L610 ATS routes at their closest point, so an area of airspace called the KOKSY Buffer Zone (Red outlined area in in Figure LAC-22) is established between the two ATS routes to ensure traffic remains separated.

Traffic operating on the centreline of Q70 is considered to be clear of the Buffer Zone.

L610: Neither Brussels ACC nor AC Clacton shall vector traffic south of the centreline of the L610, unless coordination is effected with AC Dover, or the traffic is west of the FIR boundary.

UL610: Neither Maastricht UAC (KOKSY) nor AC Clacton shall vector westbound traffic to enter the KOKSY Buffer Zone unless otherwise coordinated with Maastricht UAC (KOKSY) or AC Dover, as appropriate. The same condition applies for eastbound flights by AC Dover and Maastricht UAC (KOKSY), who shall ensure traffic on the UL9/L607 is positioned to remain within the KOKSY Gate (Blue shaded area in in Figure LAC-22).

5.4.4 Maastricht UAC

As described in [LAC 5.4.1 Amsterdam ACC](#) & [LAC 5.4.2 Brussels ACC](#), and as in real world, the Maastricht DELTA and KOKSY sectors have responsibility for portions of the Amsterdam and Brussels FIRs adjacent to London above FL245. However, in their absence, Amsterdam ACC/Brussels ACC takes responsibility of all Amsterdam/Brussels FIR airspace on VATSIM, respectively.

5.4.4.1 Sectorisation

The coverage priority (left to right) for Maastricht UAC (FL245+) at the interface with London ACC is as follows:

DELTA Sector

EDYY_D_CTR 135.960 MHz	Amsterdam ACC (FL245-)
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KOKSY Sector

EDYY_K_CTR 132.205 MHz	EDYY_N_CTR 135.980 MHz	EBBU_U_CTR 125.980 MHz	Brussels ACC – West Sector
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5.4.4.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

5.4.4.3 Transfer of Control and Communication

5.4.4.3.1 Traffic Leaving London

DELTA Sector

Route	Coordination Point	Transfer of Control	Transfer of Communications
P155 / P44 / Q295	SOMVA	SOMVA (See Note)	5 NM before SOMVA
L620 / M183 / M197 / P137	REDFA	REDFA (See Note)	5 NM before REDFA

Note: Aircraft may be climbing to the RFL at the transfer of control point (as an exception to GEN 5.2 Deemed Coordination of En-Route Traffic), subject to previously transferred traffic.

KOKSY Sector

N/A

5.4.4.3.2 Traffic Entering London

DELTA Sector

Route	Coordination Point	Transfer of Control	Transfer of Communications
M40	NOGRO	NOGRO	At or before NOGRO
L980	ABNED	ABNED	At or before ABNED
Q63	GALSO	GALSO	At or before GALSO

KOKSY Sector

Route	Coordination Point	Transfer of Control	Transfer of Communications
L179 / L608	SASKI	SASKI (Notes 1 & 2)	At or before abeam KEGIT
L610	RAPIX	RAPIX (Note 3)	10 NM northwest of LUMEN

Note 1: After KEGIT, aircraft are RFT and either RFD to FL260 or RFC.

Note 2: Aircraft are RFD to FL220 after the Brussels Release Line (see LAC 5.4.4.8).

Note 3: After 10 NM northwest of LUMEN, aircraft are RFT and either RFD to FL260 or RFC. After the Brussels Release Line (see LAC 5.4.4.8), traffic is RFD to FL220 and RFT in Brussels airspace.

5.4.4.4 Level Planning

For Standing Agreements, see [LAC 5.3.3.2](#).

5.4.4.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

5.4.4.6 Radar Handover

Maastricht UAC also use the phrase “radar handover” in place of the ICAO phrase “transfer of radar control”.

5.4.4.7 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

5.4.4.7.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Maastricht UAC, in both directions, on parallel headings and with speed control provided that:

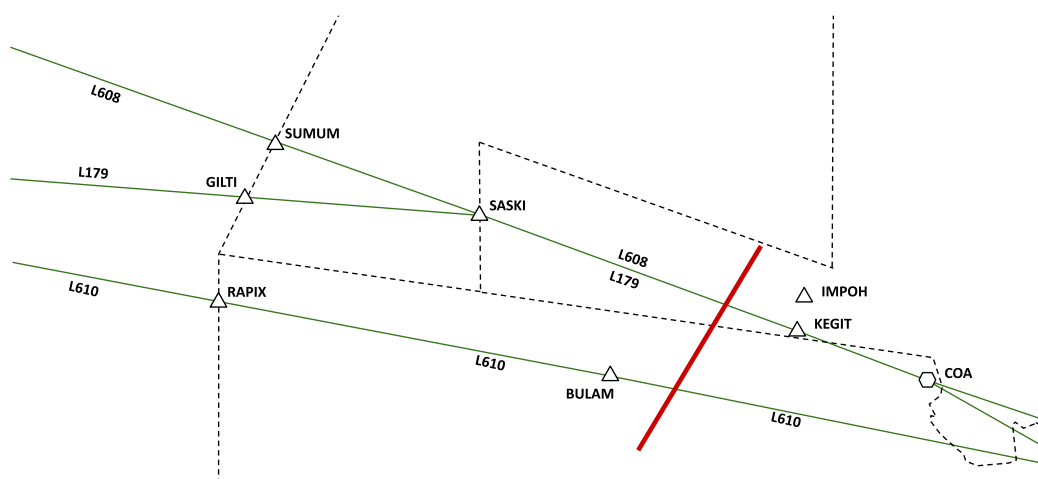
- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

5.4.4.8 Brussels Release Line

The Brussels Release Line (as shown in red in Figure LAC-21 below) is defined by the following coordinates:

1. 51°30'47.06" N – 003°02'21.20" E
2. 51°15'39.38" N – 002°48'16.80" E

Figure LAC-21 – Brussels Release Line



5.4.4.9 KOKSY Buffer Zone and KOKSY Gate

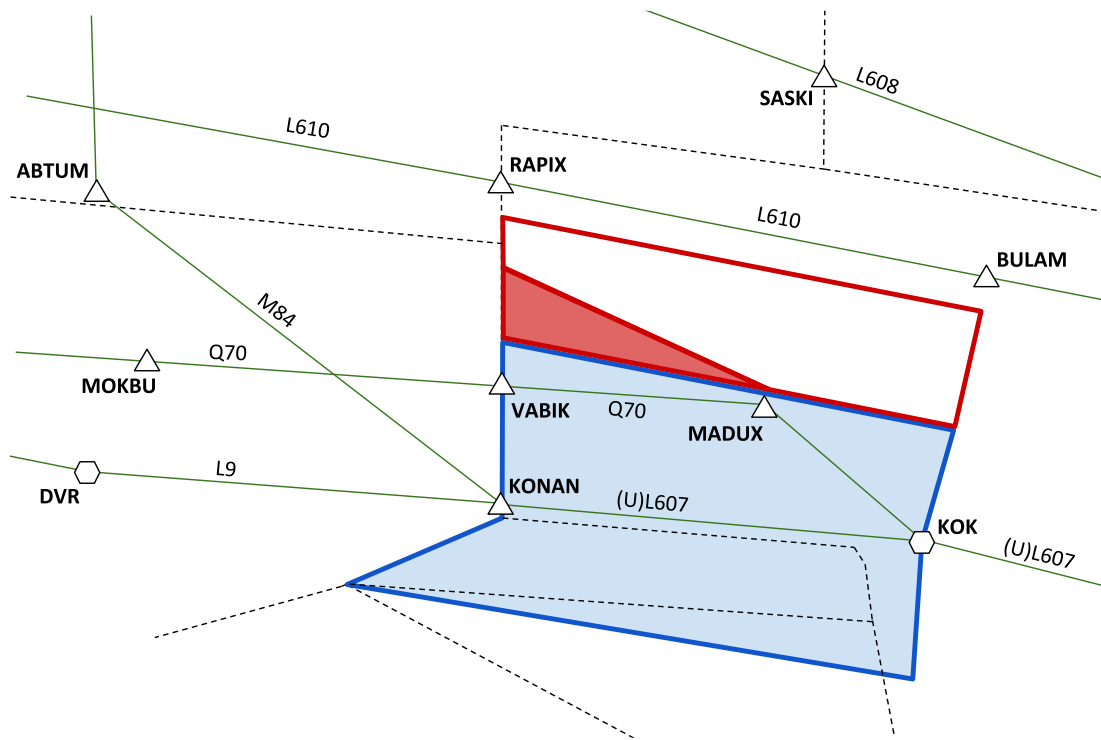
There is 10 NM between the Q70 and (U)L610 ATS routes at their closest point, so an area of airspace called the KOKSY Buffer Zone (Red outlined area in Figure LAC-22) is established between the two ATS routes to ensure traffic remains separated.

Traffic operating on the centreline of Q70 is considered to be clear of the Buffer Zone.

L610: Neither Brussels ACC nor AC Clacton shall vector traffic south of the centreline of the L610, unless coordination is effected with AC Dover, or the traffic is west of the FIR boundary.

UL610: Neither Maastricht UAC (KOKSY) nor AC Clacton shall vector westbound traffic to enter the KOKSY Buffer Zone unless otherwise coordinated with Maastricht UAC (KOKSY) or AC Dover, as appropriate. The same condition applies for eastbound flights by AC Dover and Maastricht UAC (KOKSY), who shall ensure traffic on the UL9/L607 is positioned to remain within the KOKSY Gate (Blue shaded area in Figure LAC-22).

Figure LAC-22 – KOKSY Buffer Zone and KOKSY Gate



5.5 En-route Holding Procedures

For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

LOGAN Hold

At the discretion of ATC, for example when the Lambourne hold is full, the LOGAN intersection may be used as a common holding point for westbound aircraft en-route to or overflying the London TMA from ATS routes L608, L980 and P7.

LOGAN	RNAV Hold, 1.5-minute legs
Axis	289°
Direction	LEFT hand
Holding Levels	FL100 – FL410
Speed	Maximum 220 kts IAS up to and including FL140 Standard ICAO Holding Speeds FL150 and above

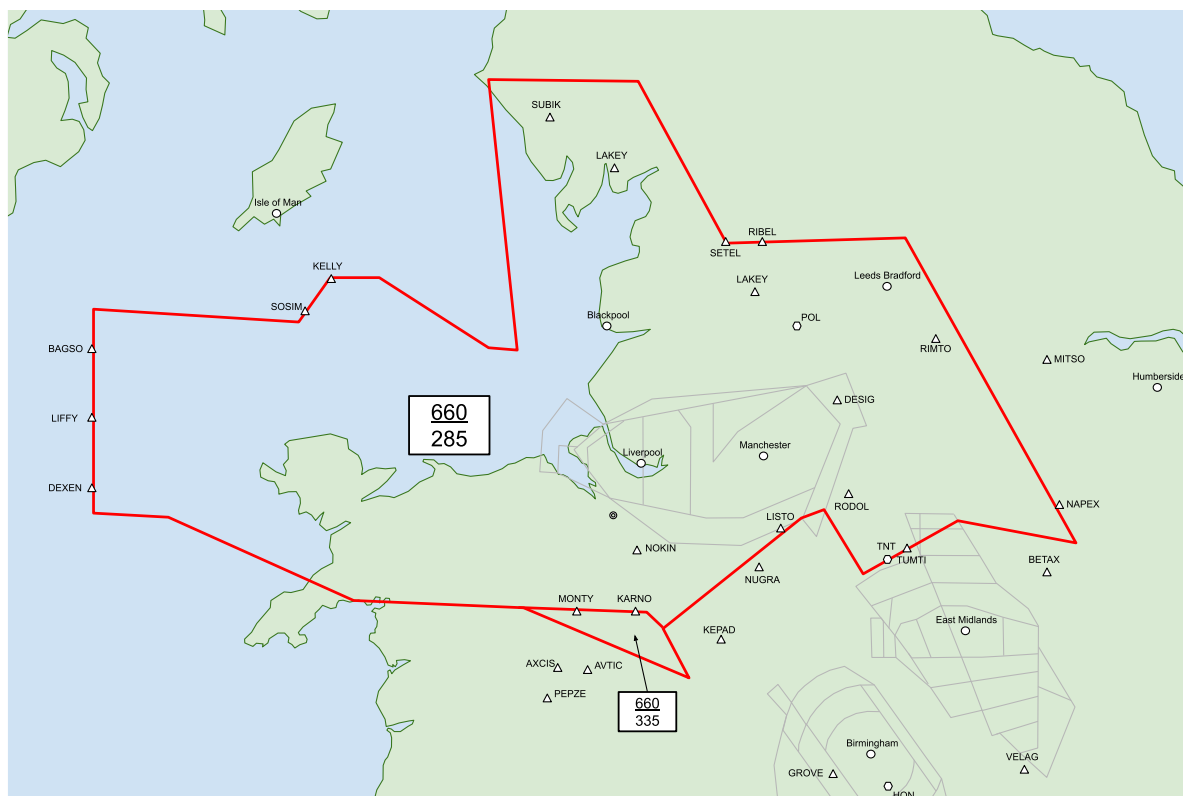
Chapter 6 North LAG | AC Lakes

6.1 Area of Responsibility

AC Lakes (LON_NW_CTR) is one of the North LAG sectors, covering the area over the Lake district and Northern England/Wales above FL285, bordering the Shannon FIR to the west.

The AC Lakes position is the ‘parent’ of the North LAG sector splits. The coordination name for the combined Lakes & North Sea sectors is “AC North”.

Figure LAC-23 – London AC Lakes Area of Responsibility



6.1.1 Sector Frequency

AC Lakes operates on frequency 135.580 MHz.

6.2 General Operating Procedures

6.2.1 Route Structure

AC Lakes has major routes running both north-south and east-west, converging in the “VOR triangle” (WAL-MCT-POL). Care should be taken in this area.

6.2.2 Route Restrictions

6.2.2.1 (U)Y124

The Y124/UY124 is a CDR which, on VATSIM, is available at all times unless the North Wales MTA has been notified as active.

Dublin to Heathrow traffic is permitted to file via DEXEN UY124 MOGTA UY53 NUGRA NUGRA1H when the CDR is available.

6.2.3 Initial Route Clearance

AC Lakes shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

6.2.4 Flight Positioning in the Daventry Corridor

AC Lakes is responsible for initiating sequencing for flights southbound down the Daventry Corridor.

For positioning requirements, see *LAC 6.4.1 Coordination with Daventry* (and also *Figure LAC-16*).

6.3 Standing Agreements

6.3.1 LAC Standing Agreements

6.3.1.1 AC West

From AC Lakes to AC West

To	Agreement	Conditions
EGFF, EGSY, EGGD	↓ FL290	Via N862

6.3.2 MPC Standing Agreements

6.3.2.1 PC West

From PC West to AC Lakes

From	Agreement
Dublin Group	FL280 lvl DONAX/ROLEX/ALAVA/BAGIT
EGNM	FL280 lvl PENIL

From AC Lakes to PC West

To	Agreement	Conditions
Dublin Group	↓ FL290	Via (U)L70, M144, M145
EGCC	↓ FL290	Via MALUD. (See Note)
Midlands Group	FL290 lvl ROLEX/BAGIT/DONAX	Via (U)L975, (U)Y124, Q37. (See Note)

Note: Aircraft transferred on a radar heading are **not** RFT until within PC West's airspace.

6.3.3 External Standing Agreements

6.3.3.1 ScAC Deancross

From ScAC Deancross to AC Lakes

From	Agreement	Conditions
EGPH, EGPF, EGPH, EGPN, EGQL	FL350 lvl SUBUK/LAKEY	
EGPK	FL310 lvl SUBUK/LAKEY	(See Note)

Note: If outbound traffic is likely to penetrate MPC airspace, ScAC Deancross will coordinate with MPC and establish if MPC would like to work the traffic. ScAC Deancross will then advise AC Lakes accordingly.

6.3.3.2 ScAC Rathlin

From ScAC Rathlin to AC North

From	Agreement	Conditions
EGAA, EGAC (RFL290+)	FL290 lvl <u>abeam</u> SOSIM	Transfer of communications at or before abeam MAKUX. Positioned between KELLY and SOSIM on own navigation or a heading. RFT after passing FL255, remaining south of the REMSI buffer. (Notes 1, 2 & 3)
EGAA, EGAC (RFL290+)	FL290 lvl <u>abeam</u> INKOB	Transfer of communication at or before abeam ETIGA. Positioned between KELLY and SOSIM on own navigation or a heading. RFT after passing FL255, remaining south of the REMSI Buffer. (Notes 1, 2 & 3)

Note 1: If the ScAC Rathlin controller assesses that the aircraft will not achieve FL290 abeam SOSIM/INKOB, the controller shall coordinate with PC West and AC North as early possible.

Note 2: Should such traffic be transferred on a radar heading, it is **not** RFT until within the confines of AC North airspace unless coordination with ScAC Rathlin is effected.

Note 3: Traffic inbound to EGFF, EGGD and EGTE shall be positioned to the south of all other traffic and south of KELLY.

6.3.3.3 Shannon LIFFY (FL245+)

From Shannon LIFFY to AC Lakes

To	Agreement	Conditions
EGCC	Max FL330 lvl BOFUM/LIFFY	(See Note)

Note: This traffic may be transferred directly to PC West (at FL270) during busy/split periods on request to Shannon ACC.

6.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

6.4.1 Coordination with Daventry

6.4.1.1 Southbound Traffic

All traffic transferred to Daventry on own navigation or on a heading is released for turn, subject to known traffic.

To assist with integrating and streaming LTMA inbounds, Lakes and PC West may coordinate opposite direction levels with Daventry (i.e. even levels).

All traffic transferred from Lakes to Daventry may be climbing/descending to the coordinated level at the sector boundary.

LTMA, Solent, Farnborough and Wessex Group inbounds transferred to Daventry from Lakes are released for descent within the confines of Lakes, subject to known traffic.

If an aircraft requires earlier descent to meet the expected level restrictions on the STAR, or Lakes wishes to descend aircraft early for tactical reasons, Lakes shall coordinate a lower level with Daventry.

6.4.1.1.1 Positioning of Southbound Traffic

AC Lakes shall endeavour to position overflights and inbounds to the London TMA west to east according to their intention code (see Figure LAC-16).

Overflights

Intention Code						
← West	HON (Honiley VOR)					East →
H9 – H6/JC/H	E3 – E	V6 – V X1 – X	P	D3 – D	EB/EX/AS	C3, AM/C2, C1

LTMA Inbounds

Routing/Destination						
← West	HON (Honiley VOR)					East →
Solent Group, EGLF, Wessex Group	EGKK	BNN Arrivals	EGMC	LOREL Arrivals	EGGW	JACKO Arrivals

6.4.1.2 Northbound Traffic

All traffic coordinated by AC Daventry with AC Lakes at levels above FL300 but below its RFL is released for climb.

Daventry may transfer LTMA, Solent, Farnborough and Wessex Group departures that have been coordinated below their RFL on a heading to Lakes (or PC West if slow climbing). Lakes/PC West must not alter the track of any aircraft transferred on a heading before the aircraft enters their airspace unless coordination is effected with Daventry.

6.4.1.3 Slow Climbing LTMA, Solent, Farnborough and Wessex Group Departures

Traffic outbound from LTMA, Solent, Farnborough and Wessex Group airfields that is unable to reach FL290 by abeam TNT will be coordinated by Daventry with PC West.

PC West will either:

- Request that the traffic be transferred directly to Lakes, released for climb.
- Request to work the traffic climbing to FL280.
- Request to work the traffic climbing to an intermediate level below FL280.

6.4.2 Coordination with ScAC Rathlin

6.4.2.1 Level Agreements

From Rathlin	Via	Max Level	Conditions
Brize Group, Severn Group, EGTE, EGUN, EGUL and EGTK	KELLY	FL330	Transferred on a heading between KELLY and SOSIM, RFT to remain south of the REMSI Buffer Zone (see below). RFD after passing IOM.
Belfast TMA departures to Brize Group, Severn Group, EGTE, EGUN, EGUL and EGTK	SOSIM	FL310	Transferred on a heading between KELLY and SOSIM, RFT to remain south of the REMSI Buffer Zone (see below). RFD after passing IOM.
EGSH, EGUL, EGUN, EGYM	BELOX	FL330	Released for turns to remain North of the REMSI Buffer Zone (see below). RFD after passing REMSI.

6.4.2.2 The REMSI Buffer Zone

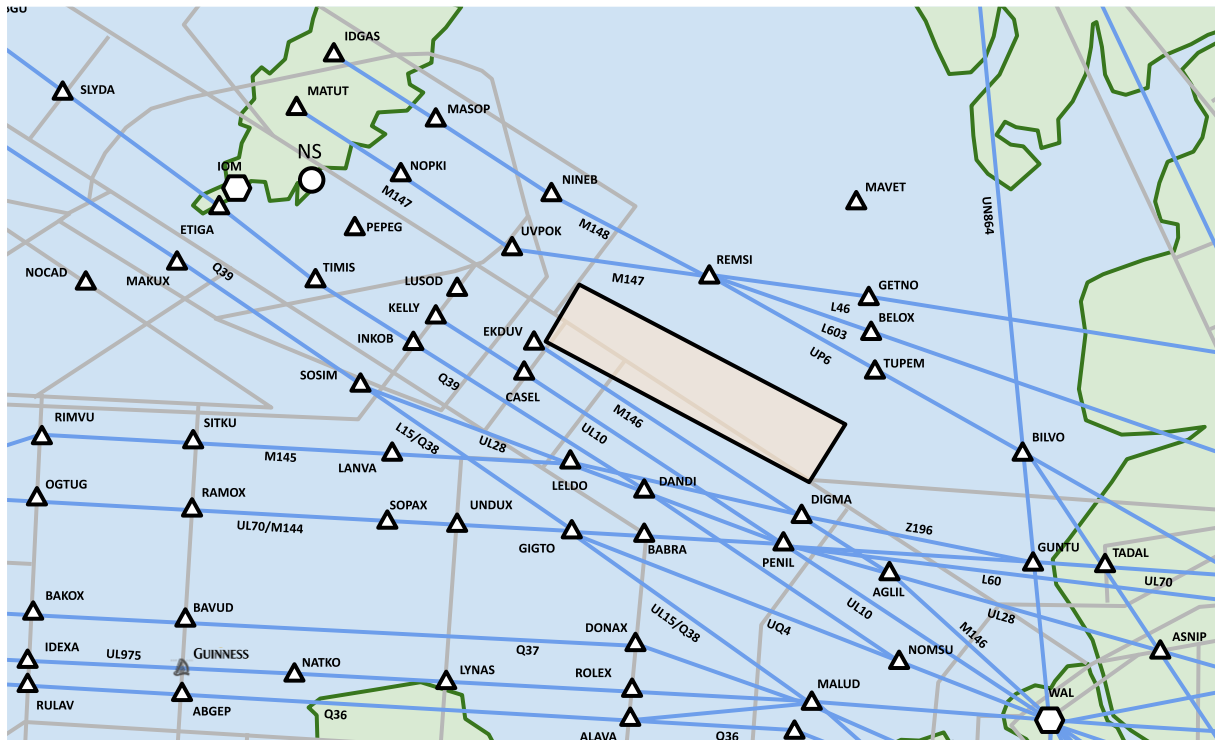
The REMSI Buffer Zone (see Figure LAC-24 below) is established to ensure separation between eastbound traffic from the Belfast TMA and ScAC Rathlin versus westbound traffic inbound to the Belfast TMA via REMSI or entering FRA.

Lakes shall ensure that eastbound aircraft remain on the southern boundary or south of the REMSI buffer zone to ensure separation against traffic entering FRA via GETNO, TUPEM or BELOX.

Rathlin will ensure that westbound aircraft remain on the northern boundary or north of the buffer zone. This traffic is RFT subject to known traffic, provided it remains to the north of the REMSI buffer zone.

The buffer may be displayed on the controller scope under **Display Settings → Stars → REMSI Buffer**.

Figure LAC-24 – REMSI Buffer Zone



6.4.3 Coordination with ScAC Deancross

6.4.3.1 Traffic Entering AC Lakes

6.4.3.1.1 Positioning

Deancross shall endeavour to position traffic inbound to London and nearby airfields as follows (west to east):



6.4.3.1.2 Level Agreements

To	Via	Max Level
Overflights to Brize Group, Severn Group, EGTE, EGUN, EGUL, EGYM, EGSH and EGTK	DCS	FL330

6.4.3.2 Traffic Leaving AC Lakes

6.4.3.2.1 Positioning

AC Lakes shall position inbounds to EGPH, EGPN or EGQL to the east of other inbounds to the ScTMA.

AC Lakes shall endeavour to position Aberdeen arrivals via the UP18 to the east of all other traffic transferred to Deancross, except that northbound traffic via the UP17 via ARSAT shall be positioned to the east of Aberdeen arrivals. This traffic will be transferred to ScAC East (South), unless Deancross elects to work the traffic. This traffic is released for right turns only.

6.4.3.2.2 Level Planning (Westbound)

PC West and AC Lakes will plan westbound traffic via ABEVI/HALIF in accordance with the following table:

Levels	Availability
FL200 – FL260	Even levels only. Odd levels after coordination.
FL280+	All levels.

6.4.3.2.3 Traffic at Cruising Levels

AC Lakes and PC West will normally transfer all SctMA overflights and inbounds via ABEVI/ASLIB at cruising levels.

Traffic departing from MTMA airfields and EGNM to the Scottish TMA shall be allocated a maximum level of FL240.

Traffic departing EGNX, EGBB, EGBE and EGNJ inbound to or overflying the SctMA will be allocated a maximum of FL280 and should therefore not enter Lakes.

All levels FL250 and above between HALIF and ABEVI may be used at all times.

6.4.3.2.4 RFT/RFD of traffic from AC Lakes

Aircraft inbound to the Scottish TMA which is transferred to Deancross prior to the transfer of control position (i.e., the sector boundary) is RFD within the confines of AC Lakes, subject to known traffic.

Any vectoring of traffic must ensure that aircraft do not track west of the western edge of ATS route UN601 while within AC Lakes airspace.

6.4.4 Shannon ACC

6.4.4.1 Sectorisation

Although Shannon have defined a day-to-day configuration of the high-level airspace (see Figure LAC-25), they use a dynamic sectorisation above FL245 that varies according to the particular traffic demands. The airspace can also be split vertically at FL355; when this occurs, the sector from FL245-FL355 will be referred to as ‘Upper’, with the sector above FL355+ referred to as ‘Super’.

Shannon ACC will advise London of the current sector configuration and frequencies if different from the configuration detailed below.

The coverage priority (left to right) for Shannon ACC sectors at the interface with AC North is as follows:

Shannon LIFFY – Upper (FL245-FL355)

EISN_E_CTR 134.260 MHz	EISN_CTR 134.260 MHz
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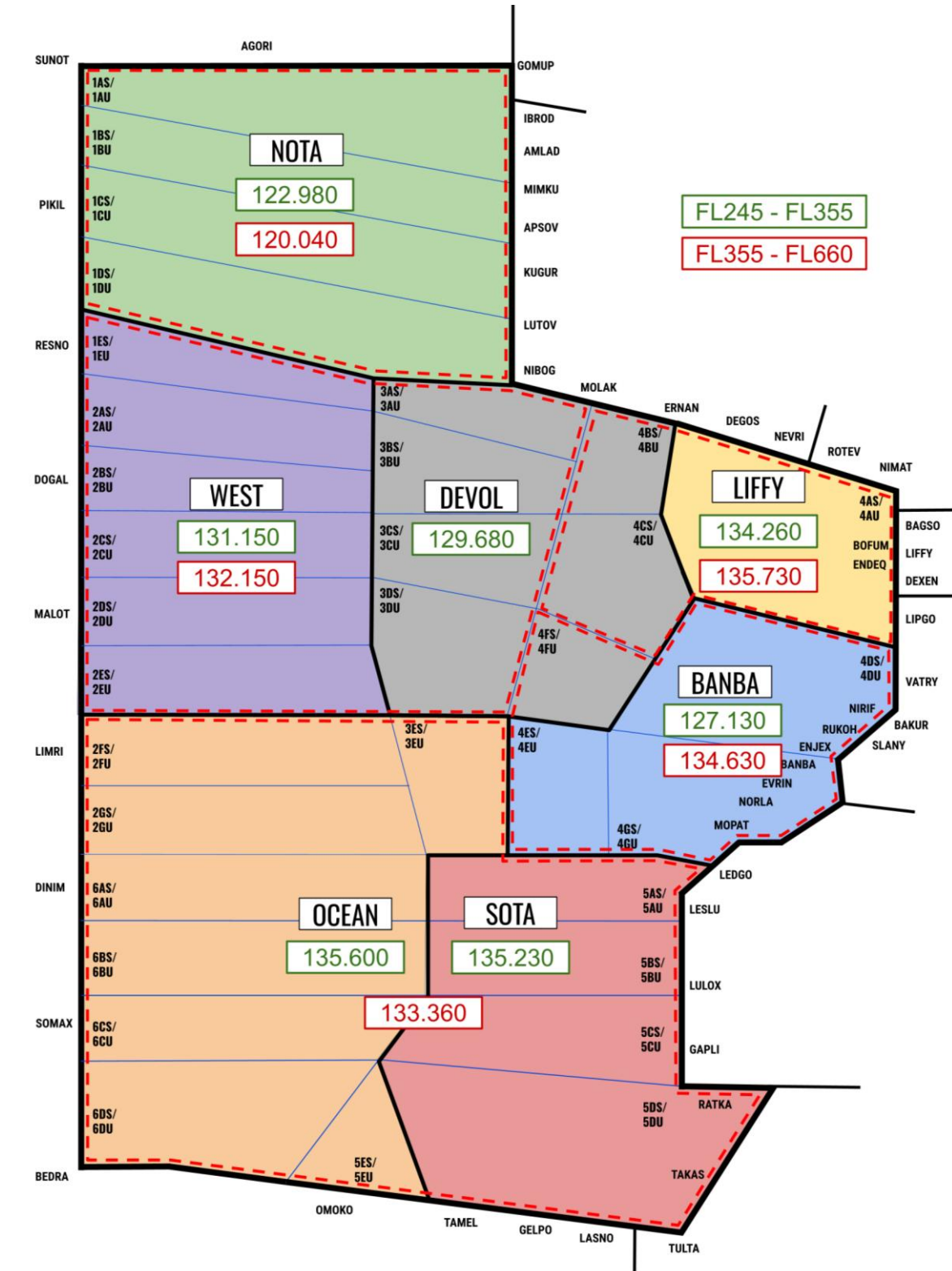
Shannon LIFFY – Super (FL355+)

EISN_ES_CTR 135.730 MHz	Shannon LIFFY – Upper
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6.4.4.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

Figure LAC-25 – Shannon ACC Standard Sectorisation



6.4.4.3 Transfer of Control and Communication

Unless otherwise specified in the table below, transfer of communication shall occur at or before the relevant COP at the FIR/AoR boundary.

UK ATS Route	Coordination Point	Transfer of Control	Transfer of Communications	
			From London ACC to Shannon ACC	From Shannon ACC to London ACC
M144 / (U)L70	BAGSO	BAGSO	RAMOX	N/A
Q37	BOFUM	BOFUM (Note 1)	N/A	Abeam DUB
(U)L975	LIFY	LIFY (Note 1)	N/A	Abeam DUB
Q36	ENDEQ	ENDEQ (Note 1)	N/A	Abeam DUB
(U)Y124	DEXEN	DEXEN (Notes 2 & 3)	N/A	Abeam DUB

Note 1: Eastbound traffic transferred to AC Lakes through BOFUM/LIFY/ENDEQ is RFT (up to a maximum of 45°) within 25 NM of the respective coordination point.

Note 2: Eastbound traffic transferred to AC Lakes through DEXEN is released for **left** turn only (up to a maximum of 45°) when within 25 NM of DEXEN.

Note 3: Traffic south of the UY124 centreline shall not be climbed by AC Lakes or PC West unless it is at least 5 NM from the northern edge of the L18.

6.4.4.4 Level Planning

There are no Standing Agreements between AC Lakes and Shannon ACC.

6.4.4.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

6.4.4.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

6.4.4.6.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Shannon ACC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.

If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

6.5 En-route Holding Procedures

No sector-specific details. For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

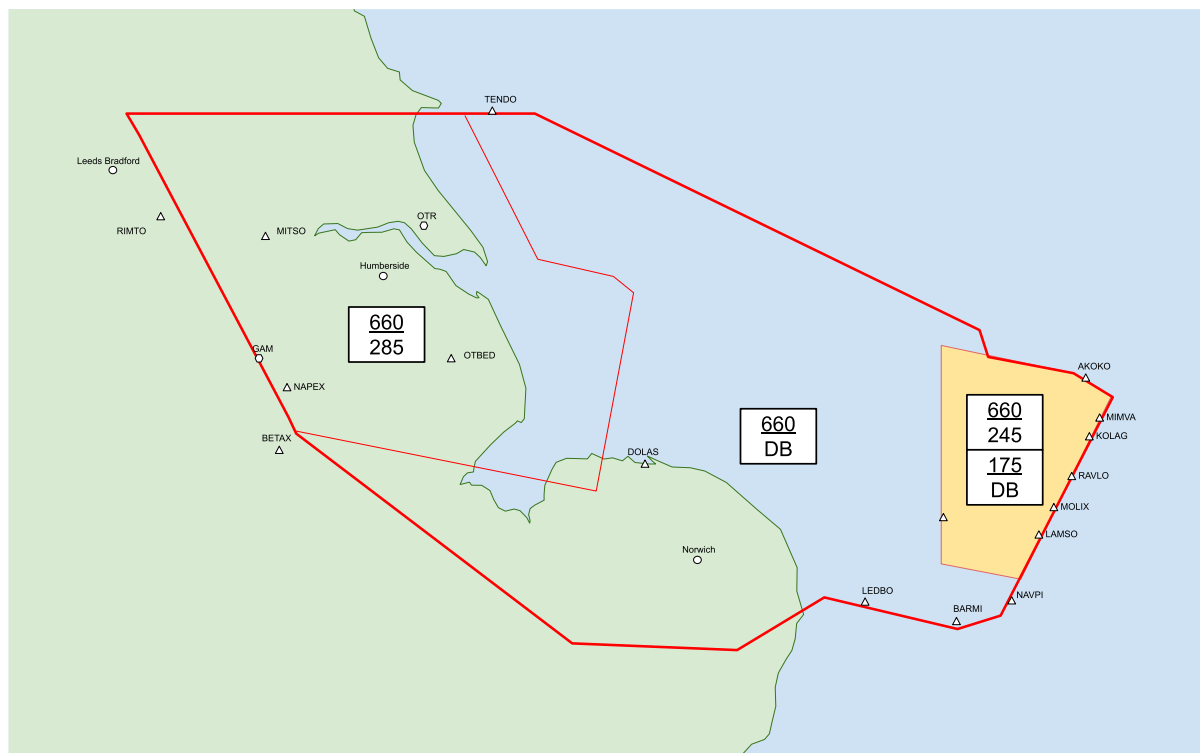
Chapter 7 North LAG | AC North Sea

7.1 Area of Responsibility

AC North Sea (LON_NE_CTR) is one of the North LAG sectors, covering the area over northern England to the eastern border of the London FIR. It covers airspace above and east of the Manchester TMA to FL660, as well as having top-down responsibility for Norwich.

The AC Lakes position is the ‘parent’ of the North LAG sector splits. The coordination name for the combined Lakes & North Sea sectors is “AC North”.

Figure LAC-26 – London AC North Sea Area of Responsibility



7.1.1 Sector Frequency

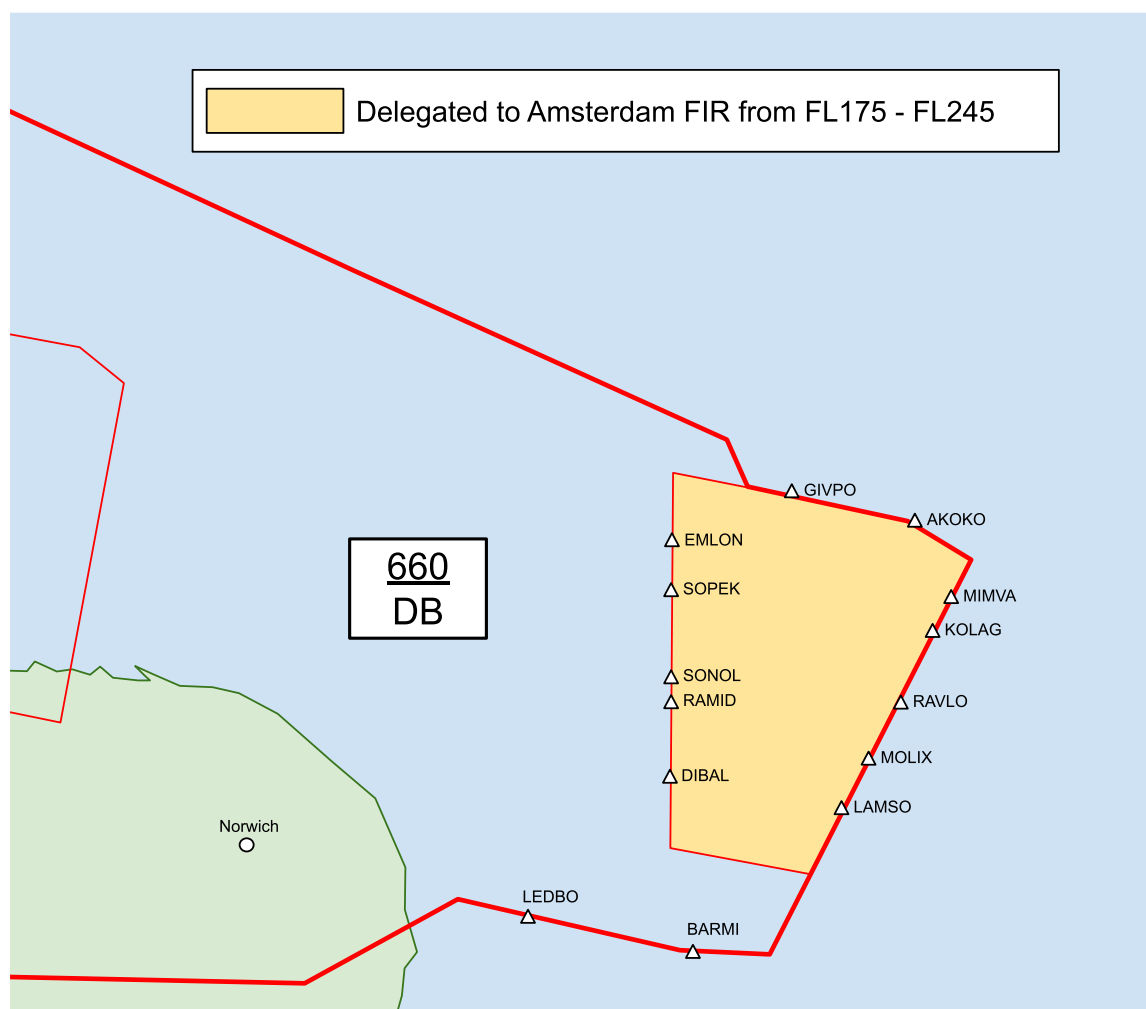
AC North Sea operates on frequency 128.130 MHz.

7.1.2 Delegated Responsibility

7.1.2.1 To Amsterdam ACC – MOLIX Area

From FL175 to FL245 within the yellow area in Figure LAC-30 known as the MOLIX Area, ATS is delegated from London to Amsterdam.

Figure LAC-27 – Delegation of Airspace to AC North Sea in the MOLIX Area



7.2 General Operating Procedures

7.2.1 Route Structure

AC North Sea ATS route structure is predominantly east/west, working traffic between the Amsterdam FIR and AC Lakes or the Manchester TMA. Crossing occurs at high level, primarily at the eastern portion of the sector, typically for LTMA arrivals/departures.

7.2.2 Route Restrictions

7.2.2.1 M79

The M79 is compulsory for traffic from EMLON and MIMVA when EG D323 is inactive (as in, when it has not been notified as active by Swanwick Mil) for westbound traffic only bound for the SctMA, EGPE, EGQS and EGPO, or exiting the Scottish FIR at GOMUP, ETILO, AMLAD, IBROD and MIMKU. Eastbound traffic will then use N110.

7.2.3 Initial Route Clearance

AC North Sea shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

7.3 Standing Agreements

7.3.1 LAC Standing Agreements

7.3.1.1 AC Clacton

From AC North Sea to AC Clacton

To	Agreement	Conditions
Essex Group	FL260 lvl BARM1	Positioned on the west side of the P7 ATS route. (See Note)
Heathrow Group, Solent Group, EGLF, Wessex Group, EGVN, EGTK	FL300 lvl BARM1	Traffic is not RFT/RFD within AC North Sea
EGKK	FL260 lvl BARM1	Positioned on the east side of the P7 ATS route

Note: Wherever possible, AC North Sea shall endeavour to position EGGW (ZAGZO) arrivals to the west of EGSS/EGSC (ABBOT) arrivals.

7.3.2 MPC Agreements

7.3.2.1 PC Northeast

From PC Northeast to AC North Sea

From	Agreement	Conditions
EGNJ	↑ FL230	Via Y70, L603. (See Note) Traffic with RFL250+ shall be transferred on a heading to the south of Y70 centreline.
MTMA Group, Midlands Group, EGNM, EGNH, EGNO, EGNT, EGNV	↑ FL280	Cross AMVEL FL250+. Via L603. (See Note)
MTMA and Midlands Group	FL280 lvl LIBSO	Via (U)L975/UT29. (See Note)

Note: If transferred on a heading, this traffic is **not** RFT until within North Sea's airspace.

From AC North Sea to PC Northeast

To	Agreement	Conditions
EGCC, EGNH, EGNO and EGNM	FL290 lvl OTBED	Traffic positioned on a heading to the north of Y70 centreline. (Note 1)
EGGP, EGNR, Midlands Group	FL290 lvl VEGUS	Traffic positioned on a heading to the north of Y70 centreline. (Note 1)
EGNT, EGNV	FL290 lvl NALAX	(Note 3)
EGNT, EGNV	FL290 lvl 15 NM before MITSO	(Note 3)
EGNJ	FL240 lvl 10 NM before SUPEL	Traffic positioned on the centreline of Y70 centreline.
MTMA and Midlands Group	FL290 lvl LIBSO	(Notes 2 & 3)

Note 1: If AC North Sea have a number of inbounds routing via Y70 to PC Northeast, they will endeavour to position traffic so that Midlands Group traffic will be north of MTMA traffic, which will be north of EGNM traffic.

Note 2: If transferred on a heading, this traffic is **not** RFT until within PC Northeast's Airspace.

Note 3: Traffic positioned at least 5 NM from the edge of any active parts of the EG D323 complex.

7.3.3 External Standing Agreements

7.3.3.1 Amsterdam West (FL245-)

From Amsterdam West to AC North Sea

From	Agreement	Conditions
EH**	All levels FL180 – FL240	Via KOLAG. (See Note)
EH**	↑ FL240	Via MIMVA. (See Note)

Note: Traffic is RFC to FL300 subject to known traffic and traffic to/from Scottish ACC. Further climb shall be coordinated with DELTA Sector (or Amsterdam ACC in their absence).

From AC North Sea to Amsterdam West

To	Agreement	Conditions
EH**	All levels below FL230	Via RAMID
EH**	FL250 lvl DIBAL / 20 NM before LAMSO	Via LAMSO. (See Note)

Note: This traffic is released for descent to FL180 after passing DIBAL.

7.3.3.2 Maastricht UAC – DELTA (FL245+)

From Maastricht UAC – DELTA to AC North Sea

To	Agreement	Conditions
EGSH	FL300 lvl 5 NM before RAVLO	
EGNJ	FL320 lvl 5 NM before RAVLO	

7.3.3.3 ScAC East

From AC North Sea to ScAC East

To	Agreement	Conditions
EGNT, EGNV	FL250 lvl TENDO	(Notes 1 & 2)

Note 1: AC North Sea shall pre-note Swanwick Military (North) if online, with the flight details including: call-sign, routing, SSR code, aircraft type and destination. Swanwick Mil will issue a squawk and frequency.

Note 2: Once the aircraft is clear of conflicts from all traffic under the control of AC North and Scottish East (including traffic via UL975) and on passing ROVNI; AC North Sea will change the SSR code to the assigned Swanwick Mil code and transfer the aircraft silently to Swanwick Mil (North).

7.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

7.4.1 Coordination with Clacton

7.4.1.1 Eastbound LTMA Traffic via LEDBO

All LTMA Group departures via LEDBO (M604) transferred on their own navigation or on a heading are released for turns, subject to known traffic. If coordinated at a level below their RFL, this traffic is also released for climb.

7.4.2 Coordination with ScAC South

7.4.2.1 Transfer of Control and Communication

7.4.2.1.1 Traffic Entering AC North Sea

Route	Coordination Point	Transfer of Control	Transfer of Communications
N866	AKOKO	AKOKO	At or before LARDI
UM185 CDR	ADGEG	14 NM NE of ADGEG (i.e. sector boundary)	At or before 14 NM NE of ADGEG (i.e. sector boundary)
P5 CDR	ELNAB	25 NM N of ELNAB (i.e. sector boundary)	At or before 25 NM N of ELNAB (i.e. sector boundary)
UL975, P39 CDR	ROVNI	5 NM NE of ROVNI (i.e. sector boundary)	At or before 5 NM NE of ROVNI (i.e. sector boundary)

Traffic via the N866 and UL975 ATS routes to the London TMA, EGHH, EGHI, EGLF, Wessex Group, Brize Group, EGSC, EGTC, EGTK, Manchester TMA and the Midlands Group are released for descent to FL330 on contact, subject to known traffic, and released for turns if on own navigation.

7.4.2.1.2 Traffic Leaving AC North Sea

Route	Coordination Point	Transfer of Control	Transfer of Communications
M604	GIVPO	GIVPO	At or before GIVPO
P5 CDR	ELNAB	25 NM N of ELNAB (i.e. sector boundary)	At or before 25 NM N of ELNAB (i.e. sector boundary)
P144, P44 CDR	LATMU	17 NM N of LATMU (i.e. sector boundary)	At or before 17 NM N of LATMU (i.e. sector boundary)
UL975, P39 CDR	ROVNI	5 NM NE of ROVNI (i.e. sector boundary)	At or before 5 NM NE of ROVNI (i.e. sector boundary)

7.4.2.2 Silent Handover

Traffic transferred in both directions is exempt from radar handover provided that aircraft on the same route are separated by a minimum of 10 NM in trail, constant or increasing.

7.4.2.3 Transfer of Control on Headings

In addition to the above conditions being met, aircraft may be transferred between ScAC South and AC North Sea on parallel headings provided that:

- The minimum lateral separation is never less than 5 NM
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.

If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading. In any case, the receiving controller must not turn aircraft off an assigned heading without first effecting coordination.

7.4.3 Amsterdam ACC

Amsterdam ACC is responsible for the whole of the Amsterdam FIR FL245 and below.

As in real world, the Maastricht Delta sector has responsibility for portions of the Amsterdam FIR adjacent to London above FL245. However, in their absence, Amsterdam ACC takes responsibility of all Amsterdam FIR airspace on VATSIM.

FL250 is not available as a cruising level in the Amsterdam FIR/UIR.

7.4.3.1 Sectorisation

The coverage priority (left to right) for Amsterdam (SFC-FL245) at the interface with London ACC is as follows:

EHAA_W_CTR 123.705 MHz	EHAA_LOW_CTR 125.750 MHz	EHAA_ALL_CTR 134.375 MHz	EHAA_S_CTR 123.850 MHz	EHAA_E_CTR 124.880 MHz
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7.4.3.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

7.4.3.3 Transfer of Control and Communication

7.4.3.3.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L17	RAMID	RAMID	At or before RAMID
L603	DIBAL	DIBAL	At or before DIBAL

7.4.3.3.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L602	MIMVA	EMLON	At or before EMLON
L60	KOLAG	SOPEK	At or before SOPEK

7.4.3.4 Level Planning

For Standing Agreements, see [LAC 6.3.3.1](#).

7.4.3.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

7.4.3.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

7.4.3.6.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Amsterdam ACC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

7.4.4 Maastricht UAC

As described in [LAC 6.4.5 Amsterdam ACC](#), and as in real world, the Maastricht DELTA sector has responsibility for a portion of the Amsterdam FIR adjacent to London above FL245. However, in their absence, Amsterdam ACC takes responsibility of all Amsterdam FIR airspace on VATSIM, respectively.

7.4.4.1 Sectorisation

The coverage priority (left to right) for Maastricht UAC (FL245+) at the interface with London ACC is as follows:

DELTA Sector

EDYY_D_CTR 135.960 MHz	Amsterdam ACC (FL245-)
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7.4.4.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

7.4.4.3 Transfer of Control and Communication

7.4.4.3.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L60	KOLAG	KOLAG	At or before KOLAG
L602	MIMVA	MIMVA	At or before MIMVA
Y70	RAVLO	RAVLO	At or before RAVLO

7.4.4.3.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L603	LAMSO	LAMSO	At or before BUKUT

7.4.4.4 Level Planning

There are no Standing Agreements between AC North and Maastricht UAC – DELTA.

7.4.4.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

7.4.4.6 Radar Handover

Maastricht UAC also use the phrase “radar handover” in place of the ICAO phrase “transfer of radar control”.

7.4.4.7 Silent Transfer of Radar Control (Silent Handover)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

7.4.4.7.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Maastricht UAC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

7.5 En-route Holding Procedures

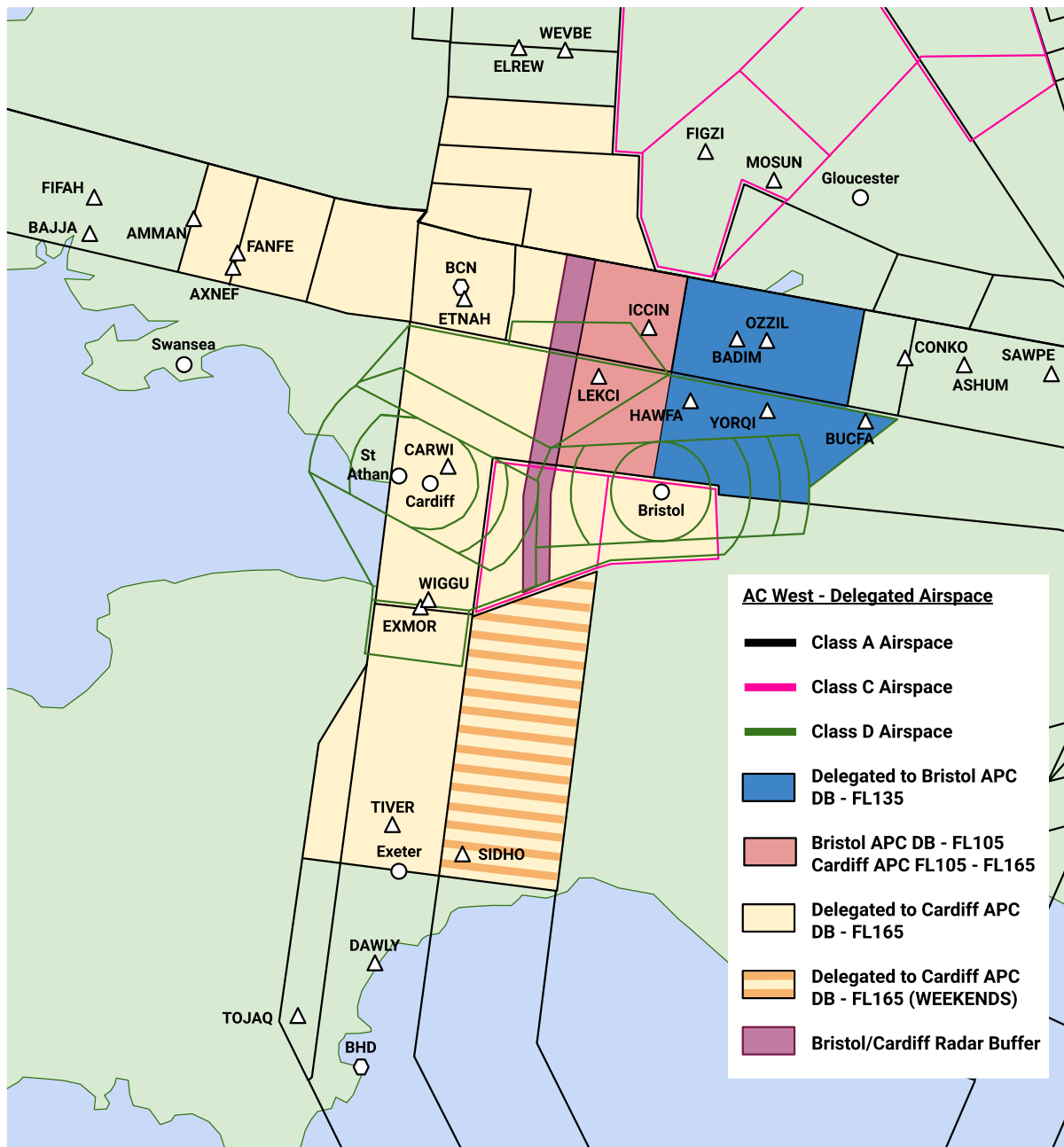
No sector-specific details. For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

8.1.2 Delegated Airspace

8.1.2.1 To Cardiff and Bristol APC Units

The airspace in the vicinity of Cardiff airport is delegated to Cardiff APC from DB – FL165. A portion of Cotswold CTAs 3 and 13 are delegated to Bristol APC up to FL135.

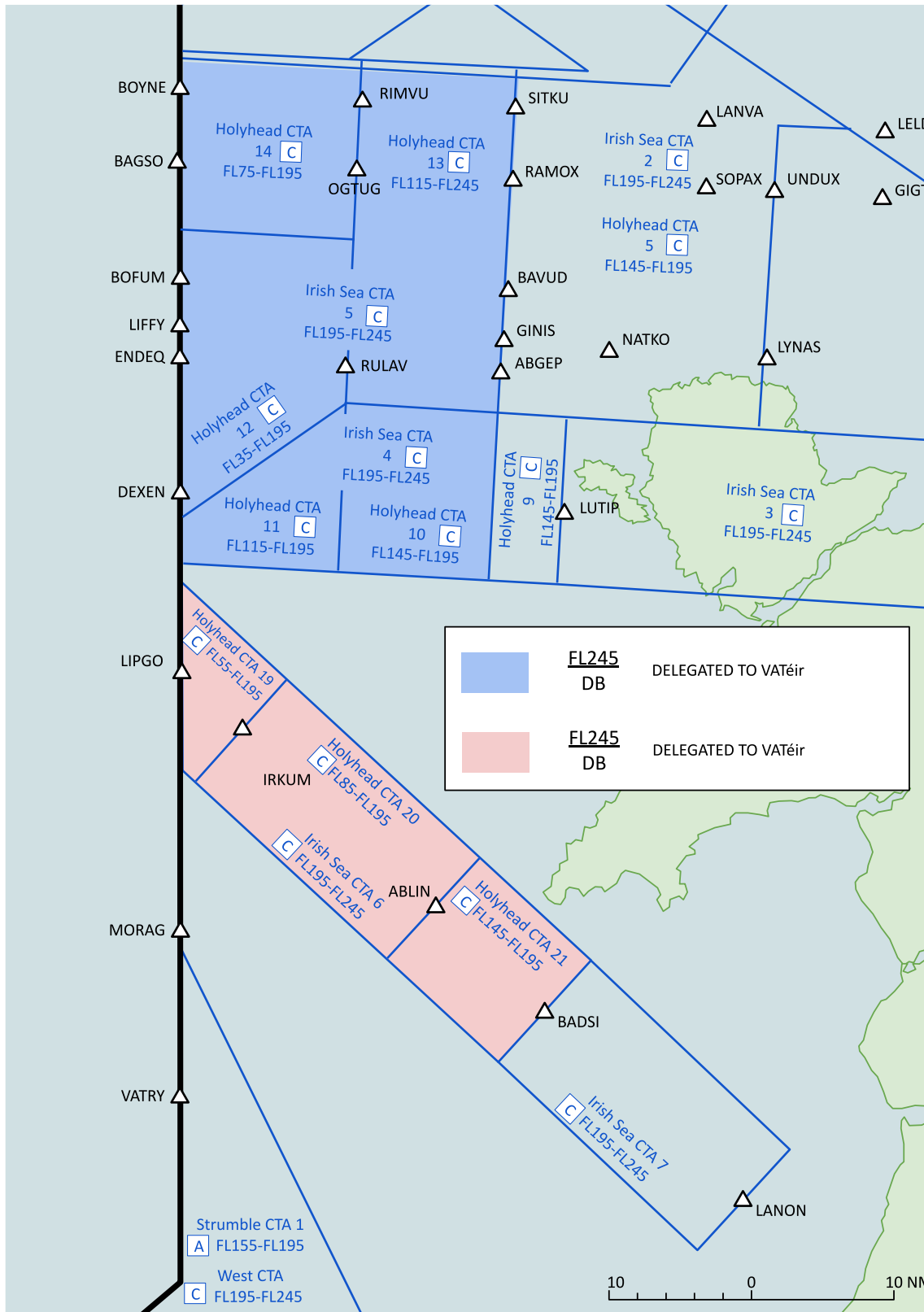
Figure LAC-29 – Delegation of Airspace to Cardiff and Bristol ATC within London AC West



8.1.2.2 To Dublin ACC – Between LIPGO and BADSI (L18)

From the declared base (DB) to FL245 within the red area in Figure LAC-30 (a combination of Holyhead CTAs 19, 20 & 21, and Irish Sea CTAs 6 & 7), ATS is delegated from London to Dublin.

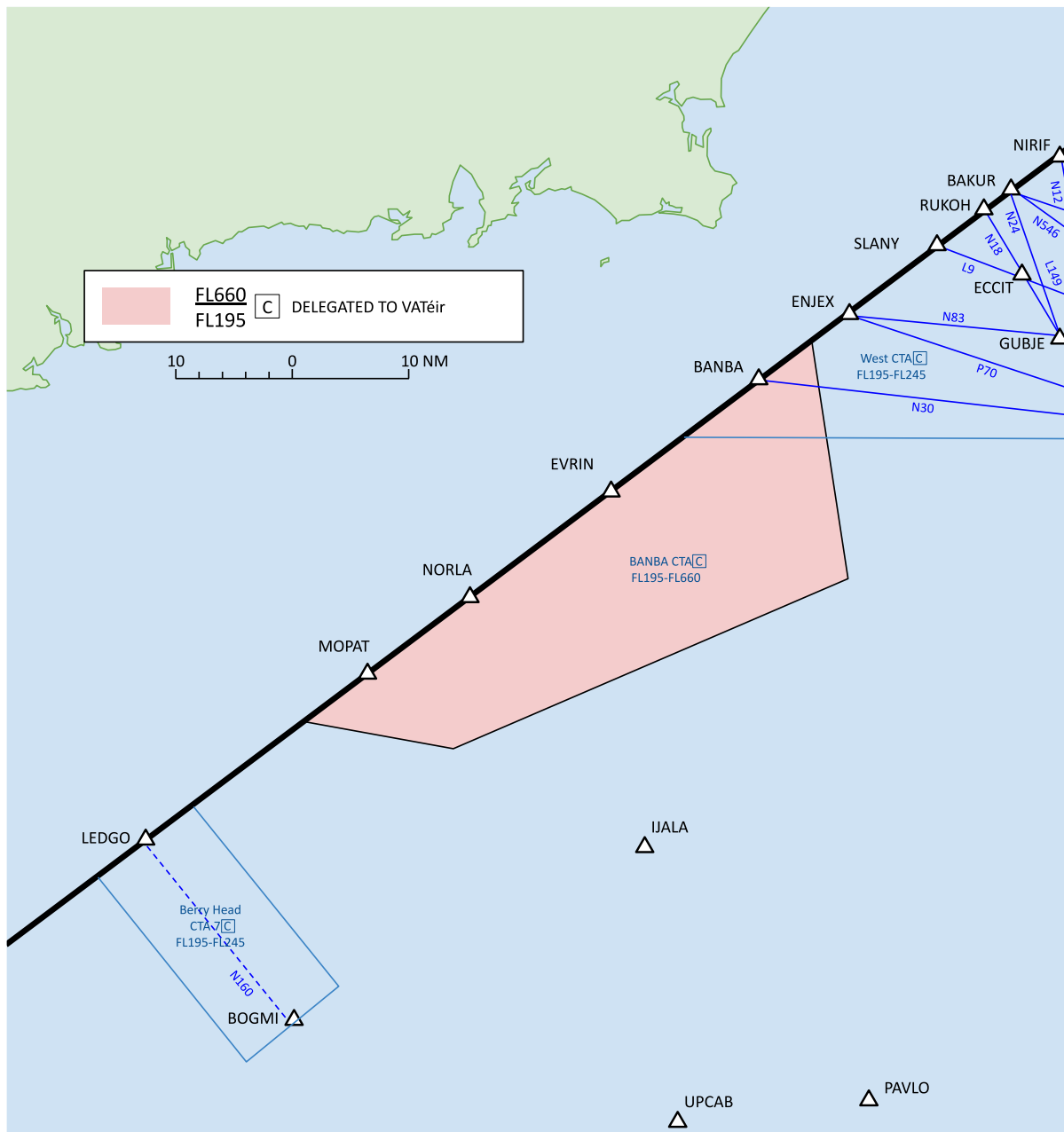
Figure LAC-30 – Delegation of Airspace from London AC West in the Holyhead/Irish Sea CTAs



8.1.2.3 To Shannon ACC – BANBA CTA

From FL195 to FL660 within the red area in Figure LAC-31 (the BANBA CTA), ATS is delegated from London to Shannon.

Figure LAC-31 – Delegation of Airspace from London AC West in the BANBA CTA

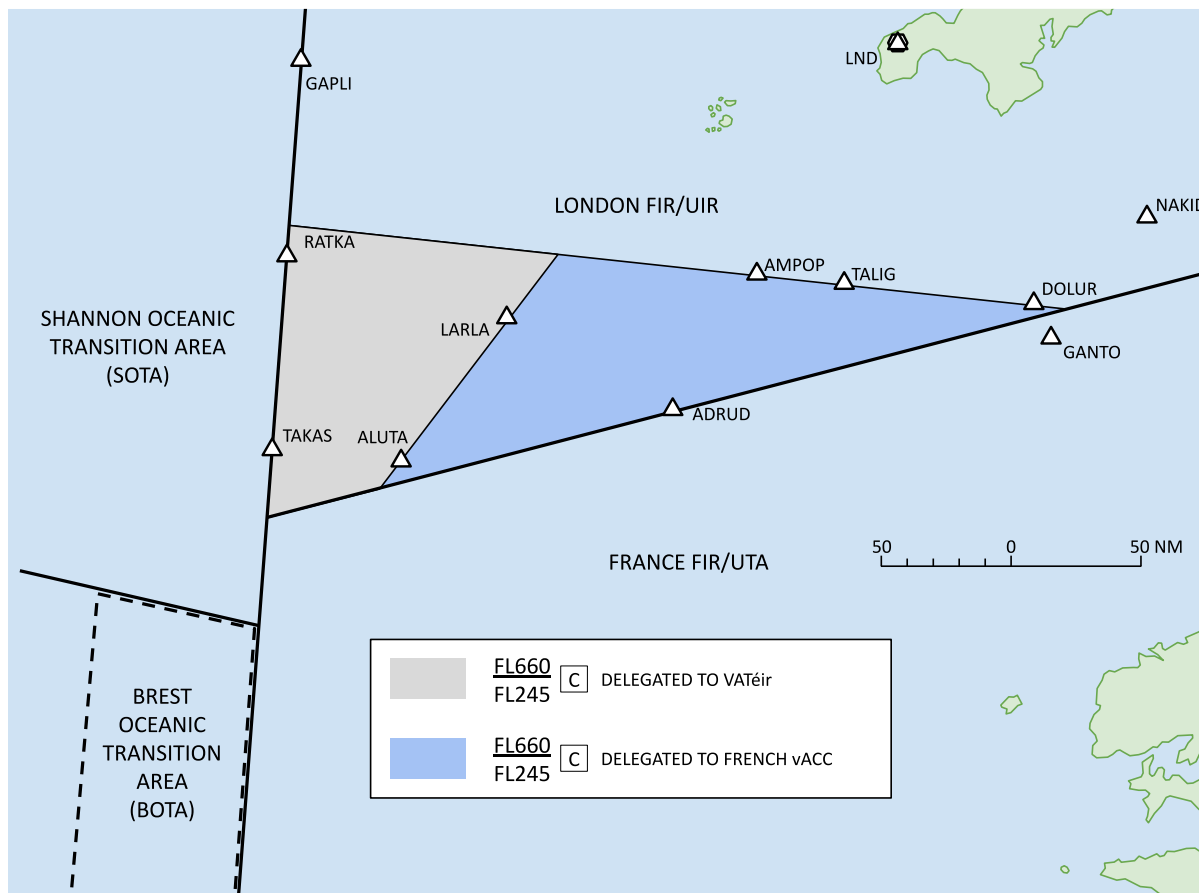


8.1.2.4 To Shannon ACC and Brest ACC – In the Southwestern Corner of the London FIR

From FL245 to FL660 within the grey area in Figure LAC-32 known as the TAKAS Box, ATS is delegated from London to Shannon.

From FL245 to FL660 within the blue area in Figure LAC-32 known as the LARLA Triangle, ATS is delegated from London to Brest.

Figure LAC-32 – Delegation of Airspace from London AC West in the Southwestern Corner of the London FIR



8.2 General Operating Procedures

8.2.1 Initial Route Clearance

AC West shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

Note: STARs for aircraft inbound to the Channel Islands must only be issued by Jersey Control, or AC West if they are covering top-down.

8.2.2 Middle Airspace Radar Service (MARS)

The real-world provision of FIS between FL95 and FL195 by Western Radar is not simulated on VATSIM. Western Radar is considered permanently bandboxed to AC West, however the traffic situation may make it impractical for AC West to provide a service to all traffic.

For traffic arriving/departing from an airport with suitable radar coverage (Cardiff, Exeter, Bournemouth, Yeovilton, Newquay, Culdrose, Boscombe and Plymouth), FIS may be extended by the respective unit up to FL195. The controllers online should judge the situation to consider the most appropriate controller to work the relevant traffic.

8.2.2.1 Joining from MARS airspace

By default, traffic wishing to enter controlled airspace from the MARS airspace under AC West should contact AC West 10 minutes before expected joining time. When a radar controller is extending coverage into the MARS airspace, they may call AC West to handover traffic outside controlled airspace, or else relay a joining clearance. A joining clearance should include a frequency to contact and if necessary, a new (non-local) squawk code, which should be observed by the offering radar controller before transfer of traffic. Transfer must occur before the traffic enters controlled airspace.

8.3 Standing Agreements

8.3.1 LAC Standing Agreements

8.3.1.1 AC Worthing

From AC Worthing to AC West

To	Agreement	Conditions
Brize Group	↓ FL160	(See Note)
EGGD	FL220 lvl ICTAM	
EGFF, EGSY	FL260 lvl ICTAM	RFD to FL220

From	Agreement	Via
LTMA Group (excl. EGSS), Wessex Group	↑ FL260	GIBSO/ADKIK
EGSS	↑ FL260	OKSAW
EGSC	↑ FL210	OKSAW/SAWPE (See Note)
EGBB	↑ FL210	SAWPE (See Note)

Note: Worthing should endeavour to transfer this traffic on own navigation to SAWPE.

From AC West to AC Worthing

To	Agreement	Conditions
EGLF, Wessex Group	FL270 lvl 10 NM before GIBSO / FL270 lvl 10 NM before OTMET	
LTMA Group (excl. Essex Group)	FL270 lvl GIBSO / OTMET	

From	Agreement	Conditions
EGGD, Brize Group	FL180 lvl ELSOF	Not RFT until passing ELSOF. Then released for right turns only. (See Note)
EGFF, EGSY	FL250 lvl ELSOF	Released for right turns only until passing ELSOF. (See Note)

Note: Coincident traffic via ELSOF and SIRIC shall be transferred on a heading to ensure separation inside Worthing airspace.

8.3.1.2 AC Dover

From AC West to AC Dover

To	Agreement	Conditions
Essex Group, Thames Group	FL180 lvl SIRIC	'Skipped' to AC Dover. (Notes 1, 2 & 3)

Note 1: Coincident traffic via ELSOF and SIRIC shall be transferred on a heading to ensure separation inside Worthing airspace. AC West shall endeavour to stream inbounds at least 10 NM in trail, constant or increasing.

Note 2: Not RFD in AC West airspace. When AC Dover/TC SW is split from AC Worthing, this traffic is not RFD until within AC Dover's airspace.

Note 3: Not RFT until passing SIRIC. Then released for right turns only except when AC Dover is split from AC Worthing, when traffic is not RFT inside Worthing airspace.

8.3.1.3 AC Lakes

From AC Lakes to AC West

To	Agreement	Conditions
EGFF, EGSY, EGGD	↓ FL290	Via N862

8.3.2 LTC Standing Agreements

8.3.2.1 TC SW

From TC SW to AC West

From	Agreement	Conditions
Heathrow Group, EGKK, EGGW, Thames Group	↑ FL150	TC SW should endeavour to transfer on own navigation to DIDZA/OKSAW
Solent Group, EGLF, Wessex Group	↑ FL130	TC SW should endeavour to transfer on own navigation to SAWPE

From AC West to TC SW

To	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL120 lvl NUCHU	Not RFT until passing NUCHU. (See Note)
Heathrow Group, EGKK	FL140 lvl SIRIC	Not RFT until passing SIRIC

Note: West shall ensure traffic is given route clearance to join the correct STAR. For EGLF/Wessex Group airfields: NUCHU-REFQI-GOBNU-CPT1V. For Solent Group airfields: NUCHU-NUBRI-BUGUP1S.

8.3.2.2 TC Midlands

From AC West to TC Midlands

To	Agreement	Conditions
Heathrow Group	FL180 lvl FITBO	FITBO 1H is not for flight planning. (See Note)

Note: This traffic is **not** RFD and is released for left turns **only** within West airspace.

8.3.3 MPC Standing Agreements

8.3.3.1 PC West

From AC West to PC West

To	Via	Agreement	Conditions
EGCC, EGNH, EGNO, EGNM	P16 (RNAV1)	FL200 lvl AXCIS	To cross MONTY at FL190 or below
EGCC, EGNH, EGNO, EGNM	N864	FL200 lvl AVTIC	To cross MONTY at FL190 or below
EGGP, EGNR	P16 (RNAV1)	FL180 lvl PEPZE	
EGGP, EGNR	N864	FL180 lvl KISWO	
EGNT, EGNV, EGNJ	N864	FL280 lvl AVTIC	RFD to FL260. (Note 1)

Note 1: This traffic may be offered to AC Lakes at higher levels/the RFL during quieter periods.

From	Agreement	Conditions
Severn Group, EGTE	FL280 lvl AVTIC	(Note 2)

Note 2: Severn Group/EGTE departures with RFL285+ should be offered at higher levels to AC Lakes, particularly when PC West and AC Lakes are split.

From PC West to AC West

From	Agreement	Conditions
EGNM	FL270 lvl KARNO	
MTMA	↑ FL190	

8.3.4 External Standing Agreements

8.3.4.1 Jersey Control (SKERY Sector)

From Jersey Control (SKERY Sector) to AC West

From	Agreement	Conditions
Jersey Group	↑ FL200	

From AC West to Jersey Control (SKERY Sector)

To	Agreement	Conditions
Jersey Group	Max FL210 lvl SKERY	
Jersey Group	Max FL210 lvl BIGNO	Weekends only (Fri 1600 local to Mon 0745 local).

8.3.4.2 Brest V Sector (FL255+)

From AC West to Brest V Sector

From	Via	Agreement
Severn Group, EGTE	MANIG/SALCO/ANNET	Maximum FL330

From Brest V Sector to AC West

To	Via	Agreement	Conditions
London TMA Group	NOZHU	Maximum FL340	
Severn Group, EGDY, EGBJ	NOZHU	Maximum FL300	
EGHQ	LIZAD	Maximum FL280	RFD to FL200

8.3.4.3 Brest W Sector (FL255+)

From Brest W Sector to AC West

To	Via	Agreement	Conditions
EGHQ	AMPOP/TALIG/ DOLUR	Maximum FL280	RFD to FL200

8.3.4.4 Brest FIR Sector (FL255-)

From Brest FIR Sector to AC West

To	Agreement	Conditions
EGTE	Maximum FL230 lvl SKESO	

8.3.4.5 Dublin Upper South (FL245-)

From AC West to Dublin Upper South

To	Agreement	Conditions
Dublin TMA	FL200 lvl BADSI	EIDW Runway 28L/R or 34
Dublin TMA	FL200 lvl IRKUM	EIDW Runway 10L/R or 16
Dublin TMA	FL240 lvl LEMGU / TIBGA / 10 NM before VATRY	EIDW Runway 28L/R or 34
Dublin TMA	FL240 lvl VATRY	EIDW Runway 10L/R or 16
Dublin TMA	FL240 lvl NIRIF	(See Note)

Note: Since D201F/G is always deemed inactive on VATSIM, AC West should tactically re-route traffic filed via NIRIF to VATRY.

From Dublin Upper South to AC West

From	Agreement	Conditions
Dublin TMA	↑ FL230	(Notes 1 & 2)

Note 1: This traffic is RFC to FL330 within the confines of the BAKUR RFC Area (see LAC 8.4.1.7 BAKUR RFC Area). It is **not** RFT until passing BAKUR. Shannon ACC shall ensure separation between this traffic and other aircraft within the Shannon FIR.

Note 2: Since D201F/G is always deemed inactive on VATSIM, Dublin ACC will endeavour to tactically re-route traffic filed via RUKOH to (PESIT-)BAKUR.

8.3.4.6 Shannon Low Level (FL245-)

From AC West to Shannon Low Level

To	Via	Agreement	Conditions
EIWF	ENJEX	↓ FL180	
EICK	N160	Max FL240 lvl LEDGO	Must cross BOGMI at FL250 or above. (See Note)
EICK	LULOX	Max FL240 lvl LULOX	

Note: Traffic is RFD and RFT after passing BOGMI. The transfer of communications for EICK inbounds shall take place prior to BOGMI.

8.3.4.7 Shannon BANBA (FL245+)

From AC West to Shannon BANBA

To	Agreement	Conditions
EGAA, EGAC, EGAE	FL340 lvl LIPGO	
EICK	Max FL340 lvl BANBA	(Note 1)
Dublin Group	Min FL260	Via EVRIN. RFD to FL280. (Note 2)

Note 1: Traffic must be presented underneath overflights and Dublin Group arrivals via EVRIN.

Note 2: Traffic must be presented underneath overflights.

From Shannon BANBA to AC West

From	Agreement	Conditions
Dublin Group	Max FL350	Via BANBA. (See Note)

Note: Traffic may still be climbing to the cleared level at the AoR boundary without coordination, subject to known traffic.

8.3.5 Birmingham APC

Transfer of Traffic from AC West to Birmingham APC

To	Agreement	Conditions
EGBB	FL130 IM BIFIN	Not to be transferred prior to FIGZI. RFD on contact.

Transfer of Traffic from Birmingham APC to AC West

From	Agreement	Conditions
EGBB	↑ FL120	RFC to FL140 and further subject to coordination with TC Midlands.

8.3.6 Brize APC

Transfer of Traffic from AC West to Brize APC

To	Agreement	Conditions
EGVN	↓ FL110	Via ASHUM/CONKO

Transfer of Traffic from Brize APC to AC West

From	Agreement	Conditions
EGVN	↑ FL100	Via CONKO

8.4 Coordination and Procedures with Adjacent Units, Sectors and Airfields

8.4.1 Dublin & Shannon ACCs

8.4.1.1 Sectorisation

8.4.1.1.1 Dublin ACC

Dublin ACC is split into a North sector and a South sector, each of which is further divided vertically at FL125. The boundary between the Dublin ACC North sector and South sector is aligned along the extended centrelines of Dublin Runway 10R/28L.

All traffic leaving AC West into Dublin ACC via L18-BADSI or M17/Q63-VATRY shall be transferred by AC West to the Dublin South sector.

The coverage priority (left to right) for Dublin ACC sectors at the interface with AC West is as follows:

Dublin Lower South (DB-FL125)

EIDW_LS_CTR 120.755 MHz	EIDW_LN_CTR 132.580 MHz	EIDW_UN_CTR 129.180 MHz	Shannon LIFFY – Upper
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Dublin Upper South (FL125-FL245)

EIDW_US_CTR 135.655 MHz	EIDW_UN_CTR 129.180 MHz	Shannon LIFFY – Upper
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8.4.1.1.2 Shannon ACC

Although Shannon have defined a day-to-day configuration of the high-level airspace (see Figure LAC-33), they use a dynamic sectorisation above FL245 that varies according to the particular traffic demands. The airspace can also be split vertically at FL355; when this occurs, the sector from FL245-FL355 will be referred to as ‘Upper’, with the sector above FL355+ referred to as ‘Super’.

Shannon ACC will advise London of the current sector configuration and frequencies if different from the configuration detailed below.

The coverage priority (left to right) for Shannon ACC sectors at the interface with AC West is as follows:

Shannon BANBA – Upper (FL245-FL355)

EISN_B_CTR 127.130 MHz	Shannon LIFFY – Upper
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Shannon BANBA – Super (FL355+)

EISN_BS_CTR 134.630 MHz	Shannon BANBA – Upper
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Shannon SOTA – Upper (FL245-FL355)

EISN_S_CTR 135.230 MHz	EISN_B_CTR 127.130 MHz	Shannon LIFFY – Upper
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Shannon SOTA – Super (FL355+)

EISN_SS_CTR 133.360 MHz	Shannon SOTA – Upper
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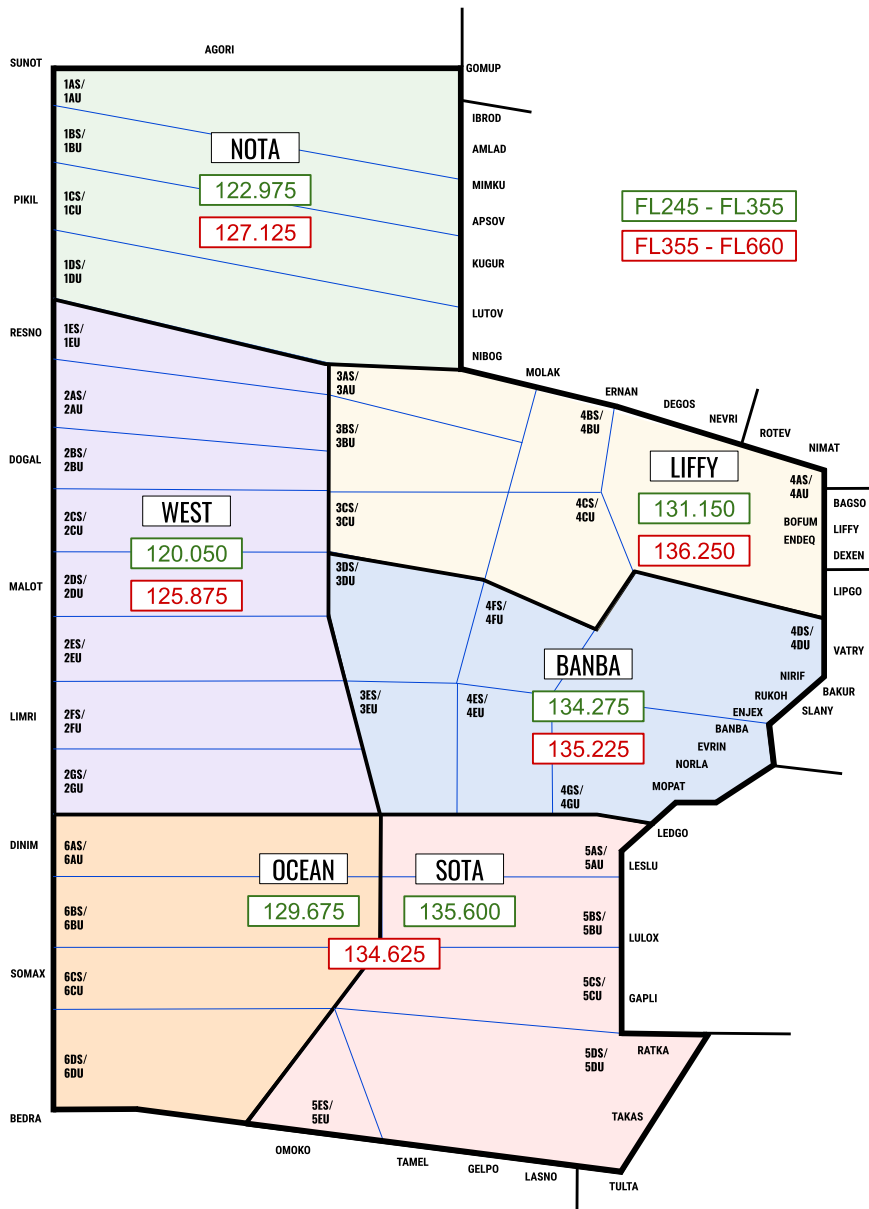
Shannon Low Level (DB-FL245)

EISN_LS_CTR 124.700 MHz	Shannon LIFFY – Upper
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8.4.1.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

Figure LAC-33 – Shannon ACC Standard Sectorisation



8.4.1.3 Transfer of Control and Communication

8.4.1.3.1 Dublin ACC

Coordination Point	Transfer of Control	Transfer of Communications	
		From London ACC to Dublin ACC	From Dublin ACC to London ACC
LIPGO	LIPGO	N/A	LIPGO
		BADSI	N/A
VATRY	VATRY	10 NM before VATRY	N/A
NIRIF	NIRIF	EVTOL	N/A
BAKUR	BAKUR	N/A	PESIT
RUKOH	RUKOH	N/A	RUKOH

8.4.1.3.2 Shannon ACC

Unless otherwise specified in the table below, transfer of communication shall occur at or before the relevant COP at the FIR/AoR boundary.

Coordination Point	Transfer of Control	Transfer of Communications	
		From London ACC to Shannon ACC	From Shannon ACC to London ACC
LIPGO	LIPGO	BADSI	LIPGO
VATRY	VATRY	15 NM northwest of NICXI	3 mins before VATRY
ENJEX	ENJEX	GUBJE	ENJEX
BANBA	Eastern edge of BANBA Box	Abeam GUBJE	BANBA
EVRIIN	Eastern edge of BANBA Box	(Abeam) IJALA / GUBJE	EVRIIN
NORLA	Eastern edge of BANBA Box	N/A	3 mins before NORLA
MOPAT	Eastern edge of BANBA Box	(Abeam) IJALA	3 mins before MOPAT
SAMON	SAMON	N/A	3 mins before SAMON
LEDGO	LEDGO (except EICK arrivals at BOGMI)	3 mins before LEDGO	3 mins before LEDGO
LESLU	LESLU	3 mins before LESLU	3 mins before LESLU
ARKIL	ARKIL	N/A	3 mins before ARKIL
LULOX	LULOX	3 mins before LULOX	3 mins before LULOX
TURLU	TURLU	N/A	3 mins before TURLU
GAPLI	GAPLI	3 mins before GAPLI	3 mins before GAPLI

8.4.1.4 Level Planning

For Standing Agreements, see LAC 8.3.4.5, 8.3.4.6 and 8.3.4.7.

8.4.1.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes and exemption from radar handover may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

8.4.1.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

8.4.1.6.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Dublin/Shannon ACC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

8.4.1.7 BAKUR RFC Area

Traffic outbound from the Dublin Group via PESIT shall be transferred directly from Dublin Upper South to London AC West climbing FL230, no earlier than when passing FL150.

Traffic transferred from Dublin ACC to London ACC is RFC to FL270 within RFC Area 1 and RFC to FL330 within RFC Area 2 (see Figure LAC-34, next page), without coordination with Shannon ACC. Aircraft must not be turned without coordination with Shannon ACC.

8.4.1.8 RFC/RFT of Westbound traffic to Shannon ACC

All westbound traffic transferred to Shannon is RFC and RFT (up to a maximum of 45°) on contact within the offering sector only.

All traffic inbound to Irish airfields (EI** & EGA*) is RFD on contact within the offering sector only.

If Shannon changes the level or heading of an aircraft, they are then responsible for providing separation against any potentially conflicting traffic on routes in the vicinity of DUB or CRK.

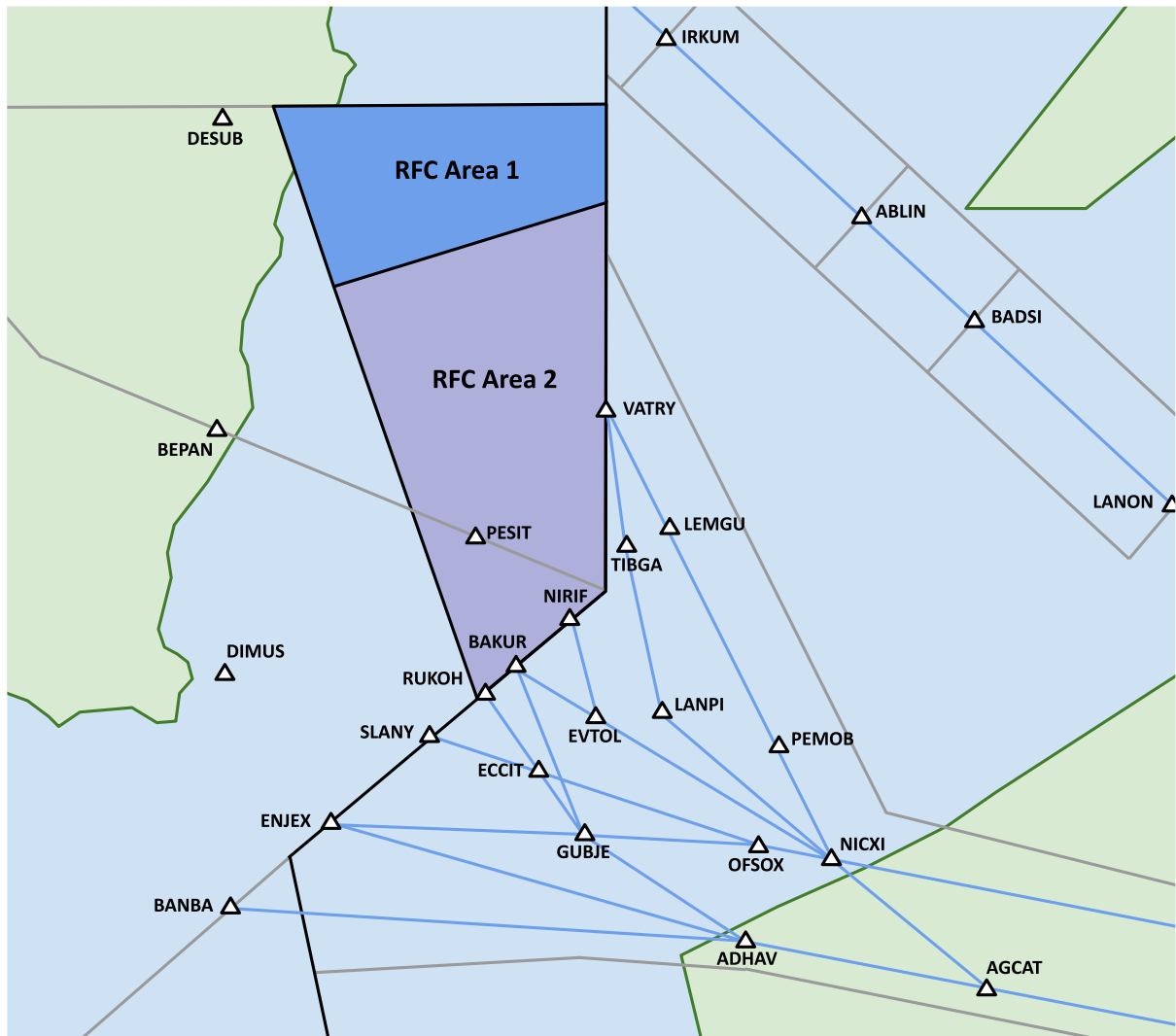
If London is transferred a potentially conflicting eastbound aircraft from Shannon, the level of said traffic shall not be changed until co-ordination is effected with Shannon.

8.4.1.9 FRA Directs from 15W to London AC Sector 9

Traffic making landfall at 15W may be cleared to certain directs by Shannon without co-ordination with London ACC, provided that the sector sequence remains unaltered. Shannon is responsible for ensuring that, at the point of transfer, converging aircraft have at least 10 NM planned lateral separation for a minimum of 20 NM beyond the common boundary.

- **London TMA Arrivals** – PEWBI, FONZU, SIDDI
- **Overflights** – GAJIT, OXLOW, AMPOP, TALIG, DOLUR, NAKID, LIZAD

Figure LAC-34 – BAKUR RFC Area



8.4.2 Brest ACC

The French Brest ACC borders London AC West. The division between Brest Upper and Lower sectors is at FL255.

8.4.2.1 Sectorisation

The coverage priority (left to right) for Brest ACC sectors at the interface with London ACC is as follows:

Brest J (FL255+) Sector

LFRR_J_CTR 132.510 MHz	LFRR_W_CTR 127.860 MHz	LFRR_CTR 125.500 MHz	EUC-WN_CTR 135.125 MHz
----------------------------------	----------------------------------	--------------------------------	----------------------------------

Brest V (FL255+) Sector

LFRR_VK_CTR 124.775 MHz	LFRR_J_CTR 132.510 MHz	LFRR_W_CTR 127.860 MHz	LFRR_CTR 125.500 MHz	EUC-WN_CTR 135.125 MHz
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Brest W (FL255+) Sector

LFRR_W_CTR 127.860 MHz	LFRR_CTR 125.500 MHz	EUC-WN_CTR 135.125 MHz
----------------------------------	--------------------------------	----------------------------------

Brest FIR (SFC-FL255) Sector

LFRR_CTR 125.500 MHz

8.4.2.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

8.4.2.3 Transfer of Control and Communication

Transfer of control shall occur at the point specified in the table below, else at the FIR/AoR boundary.

Transfer of communication shall occur at or before the relevant COP on the AoR boundary. Except where approved elsewhere in the vMATS, the use of vectors requires coordination before the transfer of communication takes place.

8.4.2.3.1 Traffic Leaving London

Coordination Point	Transfer of Control	Transfer of Communications
No differences to the procedures specified above		

8.4.2.3.2 Traffic Entering London

Coordination Point	Transfer of Control	Transfer of Communications
No differences to the procedures specified above		

8.4.2.4 Level Planning

For Standing Agreements, see LAC 8.3.4.2 (V Sector), 8.3.4.3 (W Sector), and 8.3.4.4 (FIR Sector).

Except where a specific level by point is detailed in an agreement, the aircraft may be at or climbing/descending to a level within the specified range on transfer of communications, to cross the FIR/AoR boundary at the assigned level. Traffic at its RFL is deemed coordinated, subject to the conditions in GEN 5.2.

Both London ACC and Brest ACC shall endeavour to stream successive inbounds to the same destination at least 7 NM in trail. This does not affect the conditions for silent handover, as set out in GEN 5.6.2.

8.4.2.4.1 North-South Rule in French Airspace

Due to the nature of traffic flow over France, ICAO standard cruising levels are not applicable. Instead, the North-South rule is applicable where no level parity is defined on an ATS route, or where traffic is not following an ATS route. Up to FL410, traffic with a general heading between 271° and 089° shall cruise at an even flight level. Traffic with a general heading between 090° and 270° shall cruise at an odd flight level.

Should a parity change be needed, it shall be performed by the sending unit, before the border or coordinated point of transfer of the receiving unit.

8.4.2.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes and exemption from radar handover may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

8.4.2.6 Separation between COPs

Traffic via COPs spaced less than 10 NM apart are to be considered the same for the purposes of Longitudinal Separation.

If any doubt exists regarding lateral separation, then vertical separation must be provided.

8.4.2.7 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2.

8.4.2.8 Jersey RFC Line

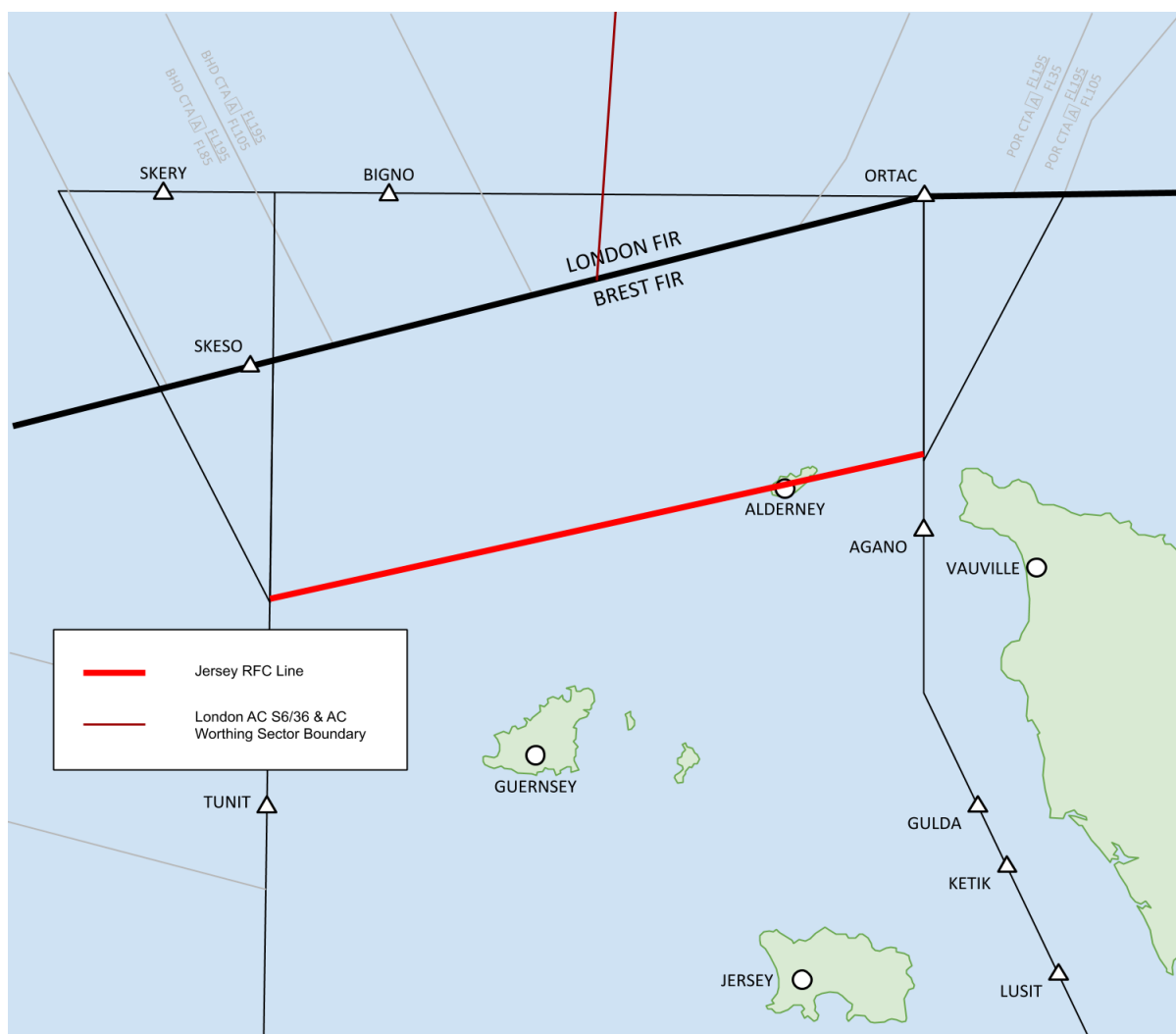
The Jersey RFC Line (as shown in red in Figure LAC-35 below) is defined by the following coordinates:

1. 049°35'00.00" N 003°00'00.00" W
2. 049°44'00.00" N 002°00'00.00" W

North of the Jersey RFC Line and within the lateral confines of the Channel Islands TMA, aircraft transferred from Jersey Control to London AC West and London AC Worthing are RFC to FL250 and RFT (up to a maximum of 45°).

It is the responsibility of the respective London controller to separate aircraft from any southbound traffic. Additionally, it is the responsibility of London AC Worthing to separate these aircraft from traffic routing northbound via REV TU.

Figure LAC-35 – Jersey RFC Line



8.4.3 Brize Norton (EGVN) Procedures

For Standing Agreements, see LAC 8.3.6. Controllers are reminded to consider the potential for significant aircraft performance for Brize inbounds.

8.4.4 Gloucestershire (EGBJ) Procedures

There are no standing agreements between AC West and Gloucester APC. Inbounds will be transferred to Cardiff APC (when online) in accordance with the agreements below and coordinated between Cardiff and Gloucester APC. Traffic that has left AC West airspace will not re-enter without coordination.

Transfer of Gloucester Traffic from AC West to Cardiff APC

To	Via	Agreement	Conditions
South (RNAV1)	N864	FL170 lvl WIGGU	
South (RNAV5)	N92	FL170 lvl EXMOR	
West	Q63	FL180 lvl AXNEF	

8.4.5 Channel Islands (EGJA, EGJB, EGJJ) Procedures

For Standing Agreements, see LAC 8.3.4.1. AC West must not allocate STARs to aircraft inbound to the Channel Islands unless they are covering top-down.

Aircraft inbound to Alderney (EGJA) are likely to be at lower levels than the standing agreements. Deemed coordination of enroute traffic procedures (GEN 5.2) may be used with Jersey Control, if applicable, otherwise traffic will require individual coordination.

8.4.6 Exeter (EGTE) Procedures

8.4.6.1 General

Exeter does not have any SIDs or STARs, and as such aircraft are issued an individual joining clearance with UK FIS provided by Exeter/LAC in accordance with CAP 774.

8.4.6.2 Inbound Procedures

For aircraft inbound to Exeter via BHD, AC West shall, where possible, provide a 15-minute prenote to Exeter APC.

From	Direction	Via	Level	Conditions
AC West	South	BHD	↓ FL120	RFT and RFD on transfer of communications
AC West	East	GIBSO	Individually coordinated	
Cardiff APC	North	EXMOR-TIVER	↓ FL80	RFT and RFD south of EXMOR
Any	Any	Outside CAS	Individually coordinated	

8.4.6.3 Outbound Procedures

All aircraft departing Exeter joining the ATS route structure will be given a standard clearance in accordance with the table below. Exeter APC shall obtain a joining clearance from AC West/Cardiff APC prior to departure.

Direction	Routing	To	Agreed Level
North	DCT EXMOR DCT CARWI N864	Cardiff APC	(Note 1)
East	DCT GIBSO L620	AC West	(Note 2)
South	DCT DAWLY N864, or DCT DAWLY N864 ABBEW N90	AC West	FL110 (Note 3)
Southwest	DCT LND	AC West	(Note 4)
West	DCT EXMOR DCT BCN P4	Cardiff APC	(Note 1)

Note 1: The Berry Head CTA north of Exeter (which contains the N864 ATS route) is delegated to Cardiff APC. Exeter will obtain a joining clearance from Cardiff APC when departure is imminent. Transfer will occur once inside controlled airspace.

Note 2: DCT GIBSO L620 departures require individual coordination with AC Worthing and there are no established standard levels for these departures. Exeter APC is expected to provide: callsign, routing and requested cruise level to AC West, and AC West should reply with an acceptance level to which should be passed to the aircraft in the clearance. Runway 26 departures will need clearance to cross N864 South of Exeter to facilitate continuous climb. This should be provided when initial coordination takes place.

Note 3: Exeter will give AC West a ‘departure warning’ when a departure is imminent. At this point, AC West may provide an alternative joining clearance if FL110 is not achievable or filed by the aircraft.

Note 4: Exeter will coordinate these departures individually when a departure is imminent. AC West will give an acceptance level.

8.5 En-route Holding Procedures

For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

OCTIZ Hold

OCTIZ	RNAV Hold, 1.5-minute legs
Axis	096°
Direction	LEFT hand
Holding Levels	FL160-FL240
Speed	ICAO Holding Speeds

FITBO Hold

FITBO	RNAV Hold, 1.5-minute legs
Axis	136°
Direction	RIGHT hand
Holding Levels	FL180-FL290
Speed	ICAO Holding Speeds

Additional Holds

Additional holds have been created in the UK Controller Plugin for en route use.

Hold	Axis	Direction
BHD	190°	RIGHT hand
DAWLY	257°	RIGHT hand
EXMOR	010°	LEFT hand
GIBSO	077°	LEFT hand
LND	073°	LEFT hand
TOJAQ	007°	RIGHT hand
PEWBI	090°	RIGHT hand
IJALA	350°	LEFT hand

8.5.1 Essex Holding Procedures

Essex Traffic that routes through the West sector will be instructed to hold at LOREL (EGSS/EGSC) or ZAGZO (EGGW) in the first instance by TC Stansted/Luton.

Should the LOREL/ZAGZO hold become full, additional holding will be carried out at VATON for traffic arriving from the south and west. AC Dover is responsible for the VATON (FL180 – FL200) hold.

Should the VATON hold become full, AC Dover will coordinate with AC West to initiate further holding for traffic on the SIRIC STARS.

LTC

LONDON TERMINAL CONTROL

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Chapter 1 General Operating Procedures

1.1 Altimeter Setting Procedures

1.1.1 Transition Altitude

The transition altitude in the LTMA is 6000 ft.

1.1.2 Transition Level and Minimum Stack Level

QNH	Transition Altitude	
	6000 ft	
	Transition Level (TL)	Minimum Stack Level (MSL)
1060		
1050	FL60	FL60
1049		
1032	FL65	FL70
1031		
1013	FL70	FL70
1012		
995	FL75	FL80
994		
977	FL80	FL80
976		
959	FL85	FL90
958		
940	FL90	FL90

Note: The classification of 1013 hPa as 'high pressure' in the above table differs from MATS Part 1 (CAP 493).

1.1.2.1 Change to MSL Procedure

When the pressure changes across an MSL boundary:

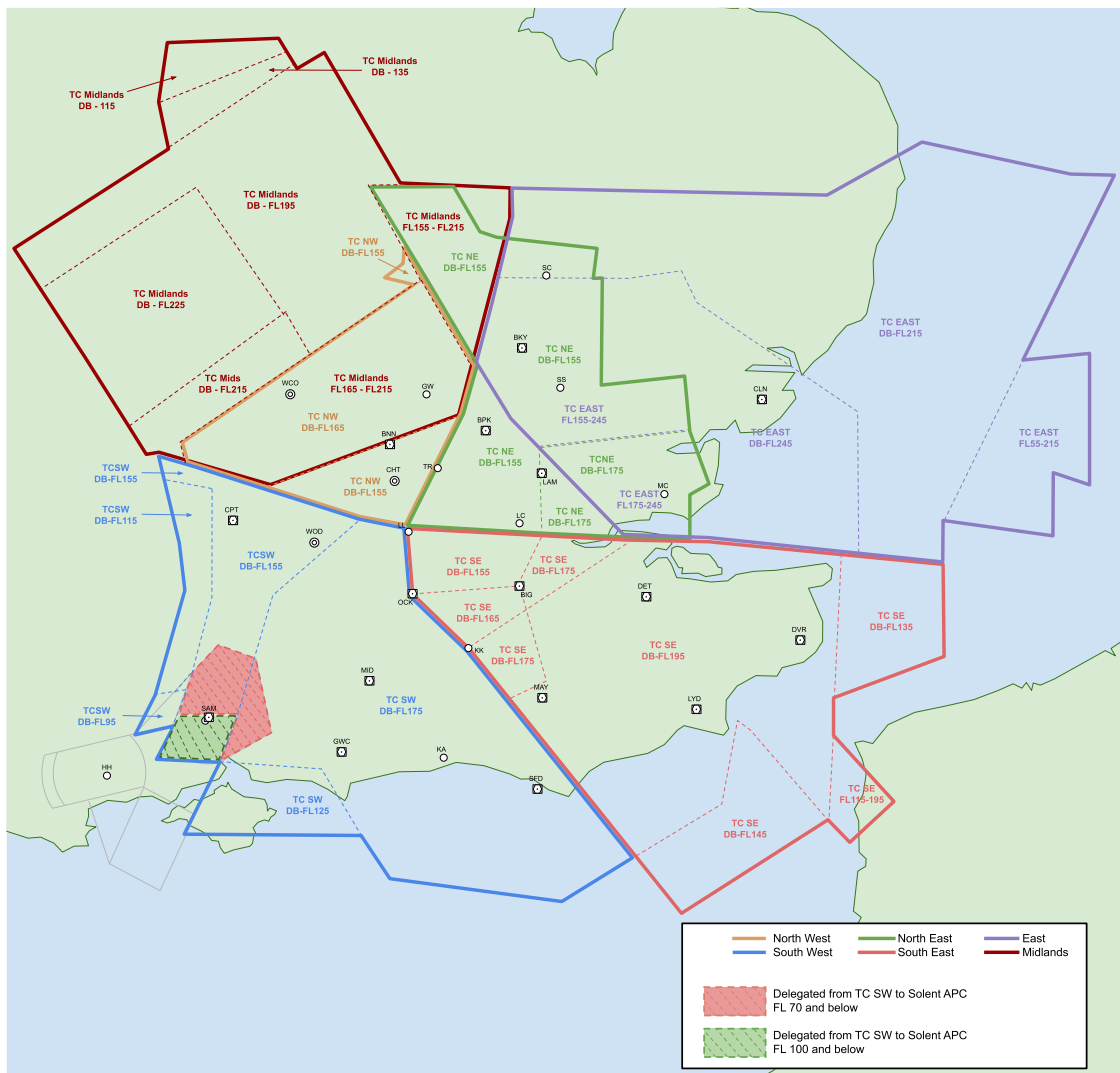
- The first APC/Enroute controller to notice the change shall notify all affected units who also refer to the MSL.
- The first controller shall coordinate the agreement of an effective time that is at least 5 minutes from the time the pressure change was noticed.

Aircraft operating at the old MSL are deemed separated from aircraft operating at the Transition Altitude until the new MSL is agreed to be in effect.

1.2 LTC Airspace

The London Terminal Control airspace is divided into sectors as shown:

Figure LTC-1 – London Terminal Control Sectorisation



1.2.1 Designated Sectors

Sector	Coordination Callsign	VATSIM Callsign	Frequency
TC North West – TC NW	TC North West	LTC_NW_CTR	121.280 MHz
TC North East – TC NE	TC North East	LTC_NE_CTR	118.825 MHz
TC South West – TC SW	TC South West	LTC_SW_CTR	133.180 MHz
TC South East – TC SE	TC South East	LTC_SE_CTR	120.530 MHz
TC East – TC E	TC East	LTC_E_CTR	121.230 MHz
TC Midlands – TC M	TC Midlands	LTC_M_CTR	121.030 MHz

TC London Bandbox Positions

Position	Coordination Callsign	VATSIM Callsign	Frequency
TC North – TC N	TC North	LTC_N_CTR	119.780 MHz
TC South – TC S	TC South	LTC_S_CTR	134.125 MHz
TC Bandbox – TC	TC Bandbox	LTC_CTR	135.805 MHz

Note: Relief callsigns shall be determined by the addition of a **second** underscore between the middle identifier (or prefix in the case of the Bandbox callsign) and the suffix (CTR).

For example:

LTC_CTR → LTC__CTR
 LTC_NE_CTR → LTC_NE__CTR

1.3 Sector Bandboxing/Splitting Procedures

LTC Sectors – Bandboxing/Splitting Procedures

TC Midlands	LTC_CTR TC Bandbox 135.805 MHz	LTC_N_CTR TC North 119.780 MHz	LTC_NW_CTR TC North West 121.280 MHz
TC East			LTC_NE_CTR TC North East 118.825 MHz
-		LTC_S_CTR TC South 134.125 MHz	LTC_SW_CTR TC South West 133.180 MHz
			LTC_SE_CTR TC South East 120.530 MHz
		LTC_E_CTR TC East 121.230 MHz	
		LTC_M_CTR TC Midlands 121.030 MHz	

Chapter 2 General Coordination Regulation

2.1 Standing Agreement

The majority of traffic entering and leaving LTC airspace is subject to Standing Agreement. Standing Agreements are also used extensively internally between the LTC sectors. See [GEN 5.1](#).

2.1.1 Individual Coordination

All traffic not subject to a Standing Agreement must be individually coordinated between sectors.

2.2 Major Aerodromes

Traffic to and from the major aerodromes within, or adjacent to, LTC sectors are subject to the procedures defined for each airfield in the APT | Airports section.

2.3 Minor Aerodromes

Minor aerodromes located under TC airspace require individual coordination of all departures and arrivals, unless otherwise stated in this document.

The respective aerodrome will request a joining clearance prior to departure. Inbounds should be coordinated at appropriate levels.

2.4 Coordination of Stack Levels Between LTC and TC APP Units

Each TC London sector is responsible for any stacks within its airspace. The LTC sector will 'feed' arrivals into the top of the stack. The respective Aerodrome's Approach Control Unit have been delegated the responsibility for the bottom of the stack.

Unless specified otherwise, if significant holding is taking place, the appropriate LTC sector will retain those aircraft at and above FL120, transferring them to the relevant approach control unit as they descend to FL110 or below, in the hold.

Holding should not be allowed to extend beyond the upper limit of the LTC sector. It may be necessary to keep some levels vacant, to enable overflights to transit through the stack area. Additional holding should take place at the designated en-route hold.

2.5 Flights between LTMA airfields

The following procedures apply to flights between airfields under the London TMA. This includes the London TMA Group, Wessex Group and Solent Group.

2.5.1 Routing

Routes between airfields are published in the Standard Route Document. Where an intra-TMA route or clearance differs, it will be published in airfield documentation.

2.5.2 On-stand Delay

The controller responsible for clearance delivery (called GMP here, even if such a split position does not exist) shall issue a pre-note to the first-receiving London Terminal Control sector (LTC) prior to issuing clearance. LTC shall confirm as soon as possible if there will be a delay, which shall be absorbed on stand (i.e., the aircraft may not start or push until delay is complete). In the event the relevant LTC sector is offline, either the receiving APP or the unit's APP should receive this coordination.

GMP shall take the following actions depending upon the delay:

1. Less than 10 minutes: inform the pilot of the delay. No further coordination required.
2. 10 to 20 minutes: inform the pilot of the delay. Send a courtesy message to LTC when the delay is absorbed, and the pilot is starting. ("GABCD starting for EGLL"), no response required from LTC.
3. Greater than 20 minutes: LTC to specify "greater than 20 minutes" or "delay not determined". GMP to inform pilot of "delay not determined, at least 20 minutes" and ask whether they wish to proceed. GMP to re-coordinate at 20 minutes with LTC to confirm delay.

LTC shall notify the next receiving controller that the aircraft is expected, especially if that next controller is the receiving APP unit.

In most situations, this coordination should ideally take place via text communication.

2.5.3 Departure Release

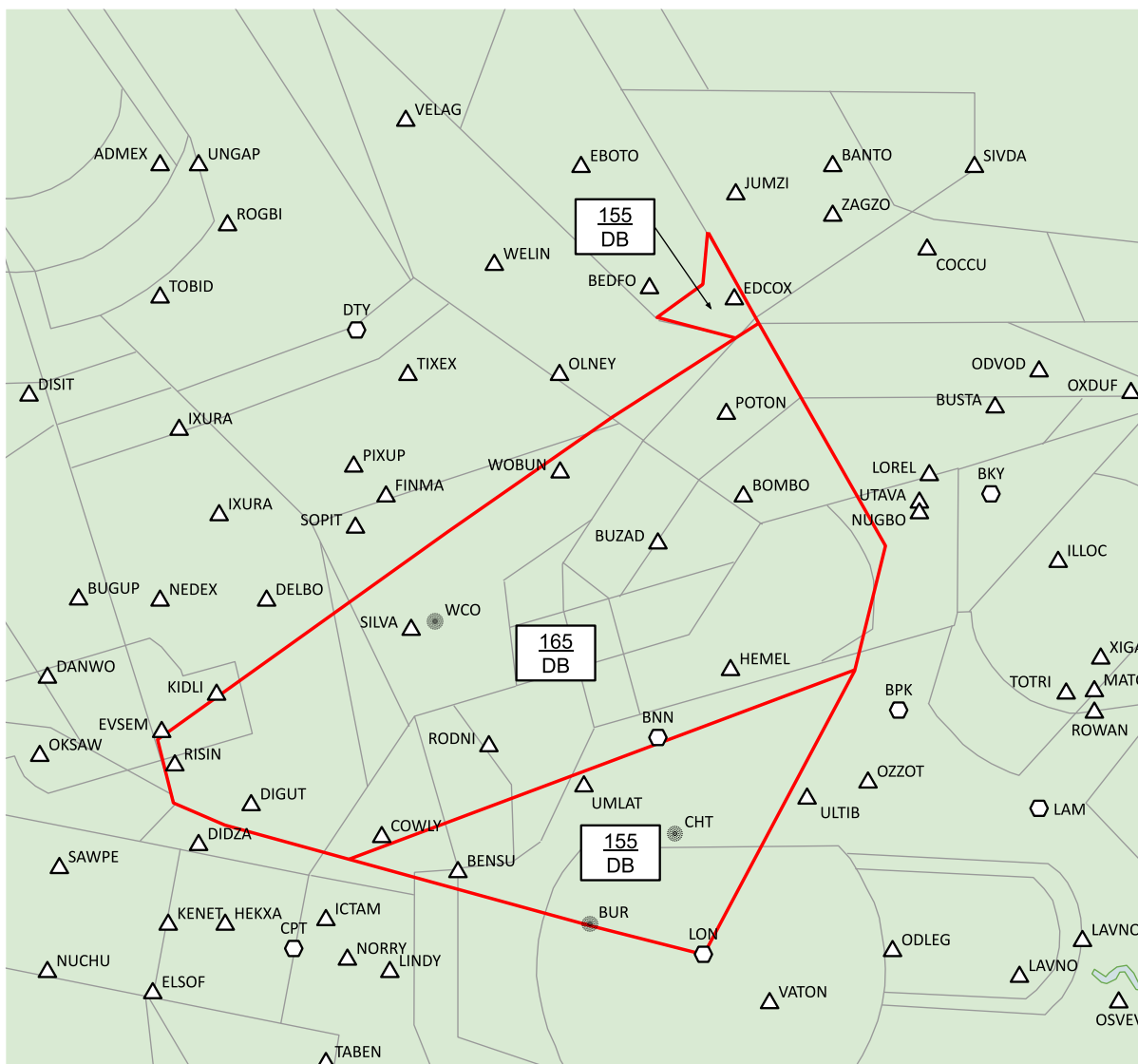
Unless specified otherwise, all flights require a release from the receiving London Terminal Control sector (LTC). This should be obtained by the AIR controller prior to allowing the aircraft to enter the runway. Where AIR is also required to obtain a release from the approach/radar controller, they shall request this release only and the approach/radar controller shall obtain the onward release from LTC and agree (if required) who will receive the aircraft departure. Unless otherwise specified, a release is valid for 5 minutes.

Chapter 3 TC North West (TC NW)

3.1 Area of Responsibility

TC North West (TC NW) covers the area of the LTMA to the northwest of Heathrow, with an upper limit of FL155 south of BNN, and FL165 to the north of BNN. TC NW is responsible for both arrivals into the Heathrow Group to BNN, and Essex Group to LOREL.

Figure LTC-2 – London TC North West Area of Responsibility



3.1.1 Sector Frequency

TC NW sector operates on frequency 121.280 MHz.

3.2 Standing Agreements

3.2.1 LTC Standing Agreements

3.2.1.1 TC SW

From TC SW to TC NW

From	Agreement	Conditions
Solent Group	FL100 lvl TC N/S boundary	Positioned in accordance with the “standard north” departure out of Solent CTA: SAM-Q41-NORRY
EGLF, Wessex Group	FL100 lvl TC N/S boundary	
Essex Group	FL130	Via SILVA (FL170-)

From TC NW to TC SW

From	To	Agreement	Conditions
EGGW, EGWU, Thames Group	-	MSL lvl 11 NM NE of CPT	(Notes 1, 2 & 3)
-	EGHI	FL110 lvl RISIN	(Note 4)
-	EGLF, Wessex Group	FL110 lvl DIGUT	(Note 5)
-	EGLF, Wessex Group	FL110 lvl CPT	Inbounds from the east. Speed 250 knots or less. (Note 5)

Note 1: When Heathrow are on Easterly operations, traffic is not to be turned south before CPT.

Note 2: If TC NW effects coordination with TC SW to transfer the traffic direct to AC West in accordance with the TC SW / AC West Standing Agreement, TC SW shall ensure that the traffic is free of conflicts within TC SW airspace.

Note 3: When traffic permits, Thames Group departures via CPT should be coordinated a higher level with TC SW/AC Worthing.

Note 4: TC NW shall endeavour to position these aircraft 10 NM in trail and on, or to the west of, the RISIN-NUBRI track.

Note 5: TC NW shall provide a minimum of 10 NM in trail between successive arriving aircraft operating under this agreement.

3.2.1.2 TC NE

From TC NE to TC NW

From	Agreement	Conditions
EGLC, EGMC	MSL lvl BPK	

From TC NW to TC NE

To	Agreement	Conditions
EGSS, EGSC	↓ FL130	(Notes 1 & 2)
EGGW	↓ FL130	(Notes 3 & 4)
EGMC	MSL lvl 5 NM before BPK	(Note 1)

Note 1: Aircraft transferred on a radar heading are **not** RFT until within the confines of TC NE’s airspace.

Note 2: This traffic is **not** RFD without prior coordination with TC NW.

Note 3: This traffic is released for right turns only while in TC Midlands' airspace.

Note 4: TC NW will coordinate with TC Midlands when ZAGZO inbounds are above the standard descent profile.

From SS FIN (TC Stansted) to TC NW

From	Agreement	Conditions
EGSS	FL80 (or FL90 when MSL is FL90)	Via UTAVA/NUGBO SIDs. Cross the eastern edge of N601 at MSL or above. (See Note)

Note: Traffic is RFC within TC NE airspace subject to known traffic.

3.2.1.3 TC Midlands

From TC Midlands to TC NW

To	Agreement	Conditions
EGLL	FL150 lvl SOPIT	(Notes 1 & 2)
EGWU	FL150 lvl 5 NM before SOPIT	(Notes 1 & 2)
Essex Group (excl. EGGW), EGMC	FL150 lvl FINMA	(Notes 1, 3 & 4)
EGGW	FL150 lvl FINMA	(Notes 1, 3, 4 & 5)
EGLF, Wessex Group	FL150 lvl NEDEX	(Notes 6, 7 & 8)
Solent Group	FL150 lvl BUGUP	(Notes 6, 7 & 8)

Note 1: TC Midlands may transfer an aircraft to TC NW on a radar heading to maintain **3 NM** lateral separation, constant or increasing, between these inbounds. The aircraft is to be instructed to report the heading on transfer of communications.

Note 2: EGLL and EGWU arrivals via BNN are **not** RFT until south of DTY, where they are released for left turns **only**.

Note 3: Wherever possible, TC Midlands shall endeavour to position EGGW (ZAGZO) arrivals to the east of EGSS/EGSC (LOREL) arrivals.

Note 4: Essex Group arrivals are RFD subject to any northbound Solent Group and EGLF, Wessex Group departures. Such flights are released for left turns **only**.

Note 5: TC NW may turn EGGW ZAGZO arrivals to the left only but must remain south of the FINMA-WOBUN track. TC NW will coordinate with TC Midlands when ZAGZO inbounds are either above the standard descent profile or are routed north of the FINMA-WOBUN track.

Note 6: Transfer of control from TC Midlands to TC NW should take place in sufficient time to allow TC NW to descend these aircraft further to FL110 level RISIN/DIGUT.

Note 7: TC Midlands shall endeavour to stream these aircraft at least 10 NM in trail.

Note 8: Aircraft transferred on a radar heading are **not** RFT.

From TC NW to TC Midlands

From	Agreement	Conditions
Heathrow Group	↑ FL140	(Notes 9 & 10)
Essex Group	↑ FL120	(Note 10)
Thames Group	↑ FL140	(Note 10)

Solent Group, EGLF, Wessex Group

↑ FL140

(Note 10)

Note 9: When split from TC NE, TC NW must not climb Heathrow ULTIB departures (09L/R) above FL110 until 3 NM west of the VATON-BPK track.

Note 10: TC NW shall endeavour to position these aircraft towards the east side of the Daventry corridor.

From TC Midlands to TC SW (through TC NW airspace)

To	Agreement	Conditions
(EGKK)	(FL150 lvl KIDLI)	'Skipped' to TC SW. (Note 11)

Note 11: Aircraft cannot be descended or vectored off track until within TC SW airspace.

3.2.2 LAC Standing Agreements

3.2.2.1 AC Worthing

From TC NW to AC Worthing

From	Agreement	Conditions
EGSS	FL160 lvl 11 NM before CPT	(Notes 1, 2 & 3)

Note 1: Aircraft are to be positioned between BUR and CPT.

Note 2: When TC NW and TC Midlands are different controllers, AC Worthing shall coordinate climb – if necessary – within TC Midlands' airspace.

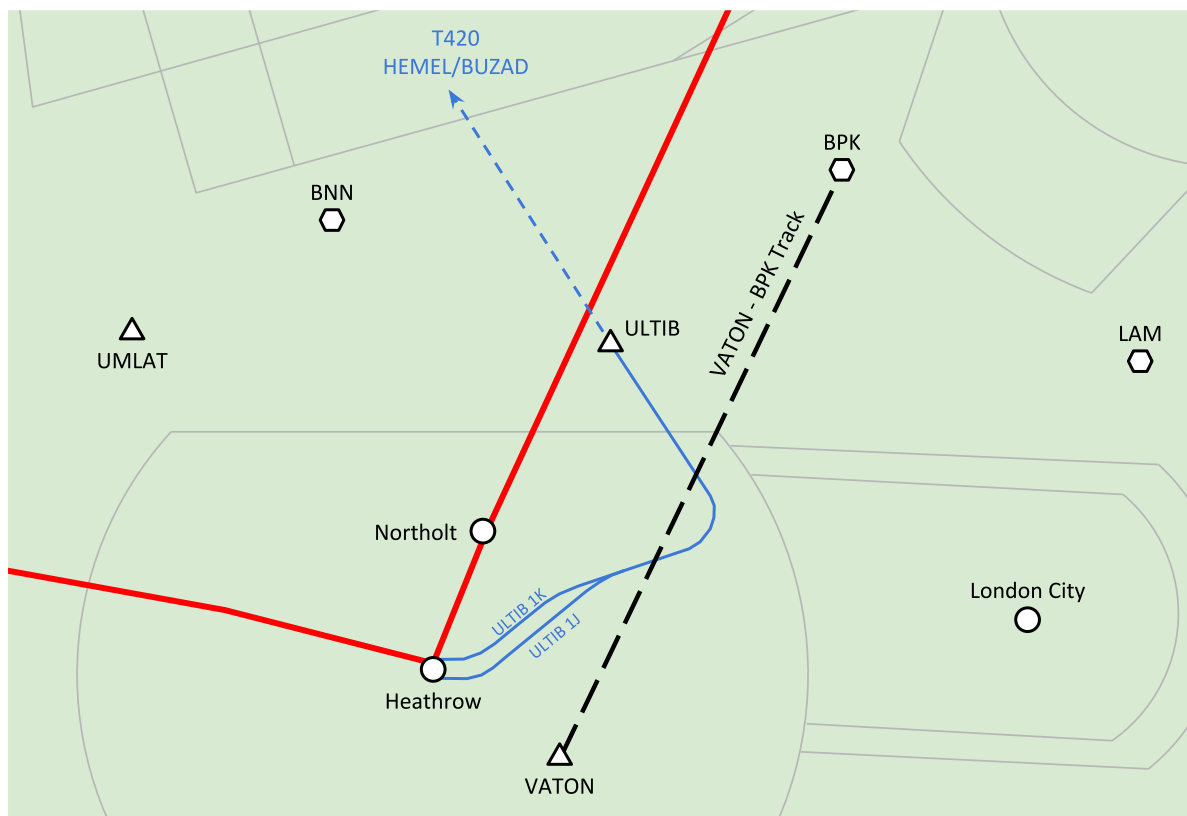
Note 3: TC NW is responsible for ensuring separation between this traffic and potentially conflicting Solent/Farnborough and Wessex Group/LTMA departures to TC Midlands within all TC NW airspace. If the departures via CPT are observed to have vacated FL160, then TC Midlands are subsequently responsible for ensuring separation from potentially conflicting northbound departures transferred from TC NW.

3.2.2.2 Climb Restrictions for EGLL ULTIB SIDs to TC NW

Heathrow UMLAT/ULTIB departures will be transferred directly from LL AIR Departures to TC NW, following their SID.

When split from TC NE, TC NW **must not climb** Heathrow ULTIB departures above FL110 until west of the VATON-BPK track.

Figure LTC-3 – TC NW climb restrictions on ULTIB SIDs



3.3 Other Airfields

3.3.1 Brize Group

There are no standing outbound agreements between Oxford ADC/APC and London TC.

Oxford APC will request a departure release and joining clearance from TC NW for Oxford outbounds to Heathrow, Essex & Thames Groups routing via WCO.

Brize Group and Kemble arrivals are to be individually coordinated with Brize APC at a maximum of FL100.

Further Oxford (EGTK) procedures are set out in APT Chapter 14 | Oxford (EGTK).

3.4 Holding Procedures

3.4.1 Heathrow Holding

BNN Hold

BNN (Bovingdon)	RNAV hold, 1.5-minute legs
Axis	116°
Direction	RIGHT hand
Holding Levels	MSL+1 – FL170
Speed	Maximum 220 kts IAS up to FL140 Standard ICAO holding speeds FL140+

Note 1: TC Midlands will retain control over aircraft holding BNN at FL150 – FL170.

If the BNN stack should become full, additional holding should be carried out at WCO. WCO is located approximately 17 NM northwest of BNN. Due to its proximity, the two stacks are not considered separated.

In order to ensure sufficient separation between the LAM and BNN stacks, TC NW should allocate **FL150** as maximum available level in the BNN hold, should the LAM hold become full.

TC NW should then prompt TC Midlands to initiate holding at WCO, from FL160 – FL190.

3.4.2 Essex Holding

Aircraft inbound to London Stansted or Cambridge shall be instructed to hold at LOREL in the first instance by TC Stansted, contained within the TC NE sector. Should the LOREL stack become full, additional holding should be carried out at **BOMBO** for traffic via LISTO 1L, FINMA 1L and SILVA 1L STARS.

Aircraft inbound to London Luton shall be instructed to hold at ZAGZO in the first instance by TC Luton, contained within the TC NE sector. Should the ZAGZO stack become full, additional holding should be carried out at **WOBUN** for traffic via LISTO 1N, FINMA 1N and SILVA 1N STARS.

BOMBO Hold

For aircraft inbound to London Stansted or Cambridge from the north or west.

BOMBO	RNAV Hold, 5 NM legs
Axis	091°
Direction	LEFT hand
Holding Levels	FL80 – FL140
Speed	Maximum 220 kts IAS

Note: The BOMBO hold is separated from the LOREL hold. TC NW will retain control of the BOMBO stack.

WOBUN Hold

For aircraft inbound to London Luton from the north or west.

WOBUN	RNAV Hold, 5 NM legs
Axis	083°
Direction	LEFT hand
Holding Levels	FL90 – FL140
Speed	Maximum 220 kts IAS

Note: The WOBUN hold is separated from the LOREL and BNN hold, but not separated from the BOMBO or WCO holds at any level. TC NW will retain control of the WOBUN stack.

3.4.3 High Level Holding

In the event of aircraft requiring to hold at or above FL120, TC NW will retain control of the aircraft until a lower level is available, unless otherwise coordinated with the appropriate Approach Control Unit. It is the responsibility of the Approach Control Unit to notify TC NW when FL110 or below becomes available.

3.5 Coordination with Adjacent Units, Sectors and Airfields

Gatwick arrivals routing from the north/northwest via KIDLI are subject to a Standing Agreement between TC Midlands and TC SW of FL150 level by KIDLI. This traffic may penetrate TC NW's airspace, and TC Midlands will endeavour to position it to the west of the traffic transferred to TC NW.

3.5.1 Coordination of Holding Aircraft

TC NW shall notify AC Dover when holding at BNN or BOMBO above FL120.

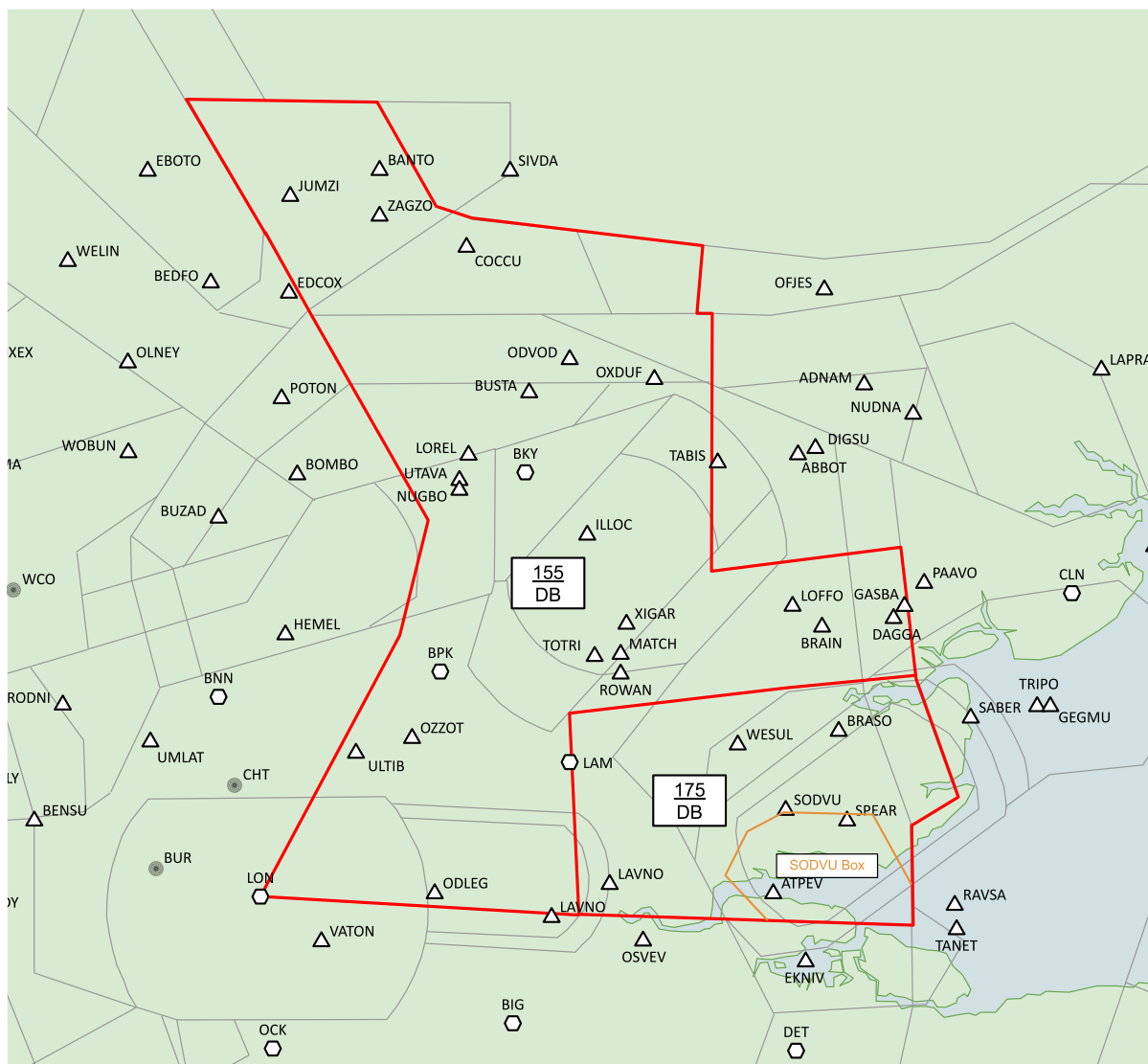
TC NE shall notify TC NW when FL140 or below is available in the LOREL hold.

Chapter 4 TC North East (TC NE)

4.1 Area of Responsibility

TC North East (TC NE) cover the area to the northeast LTMA to the northeast of Heathrow, with an upper limit of FL155 to the north, and FL175 in the southeast. TC NE is responsible for both departures and arrivals into Heathrow Group to LAM, and Essex Group to ABBOT and some LOREL arrivals from the south.

Figure LTC-4 – London TC North East Area of Responsibility



4.1.1 Sector Frequency

TC NE sector operates on frequency 118.825 MHz.

4.1.2 Delegated Airspace

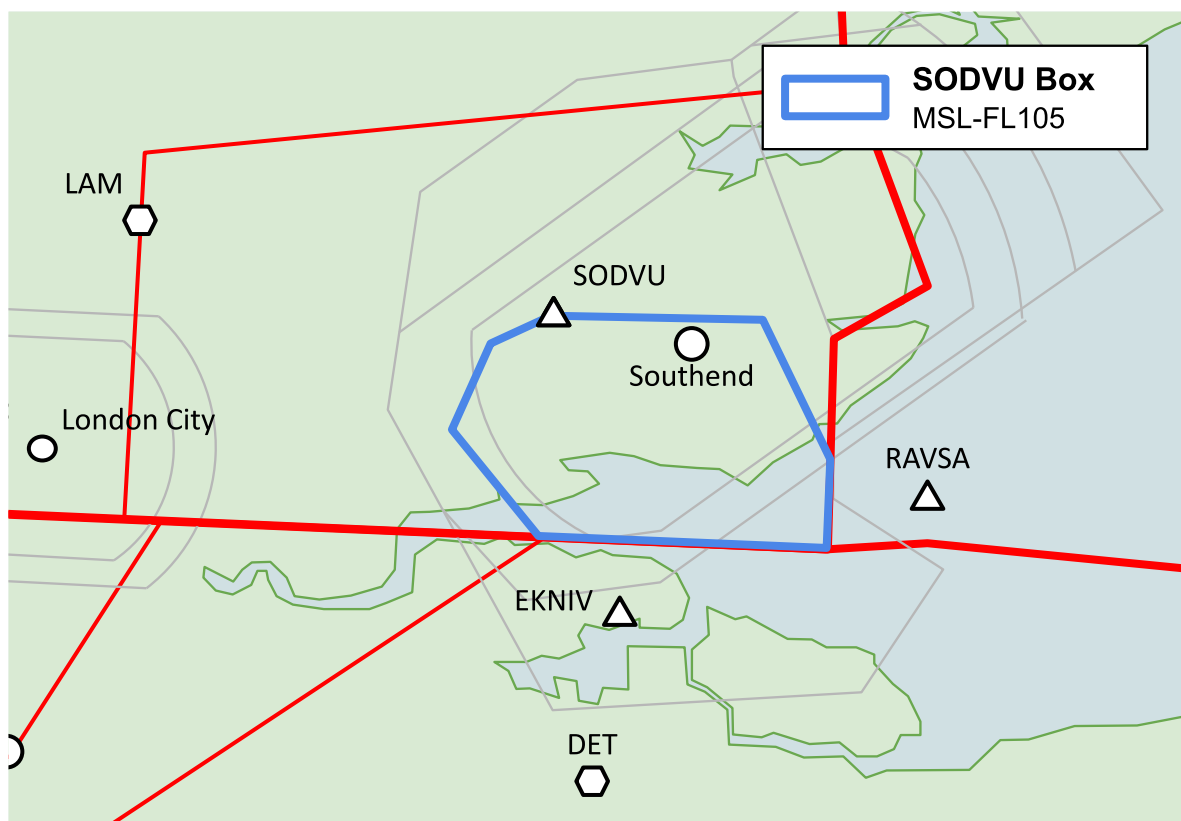
4.1.2.1 SODVU Box

The SODVU Box, pictured below in Figure LTC-5, is established as a permanent delegation of airspace from TC North East to TC South East. It sits above the Thames RMA from MSL and extends up to FL105.

Thames departures via DET / EKNIV may be climbed by TC SE to FL100 without coordination with TC NE.

Both TC NE and TC Heathrow shall ensure that traffic remains at least 3 NM from the SODVU Box. The published LAM hold does not track within 3 NM of the box, and so is deemed separated.

Figure LTC-5 – SODVU Box



4.2 Standing Agreements

4.2.1 LTC Standing Agreements

4.2.1.1 TC NW

From TC NW to TC NE

To	Agreement	Conditions
EGSS, EGSC	FL130 lvl 8 NM before BKY	(Notes 1 & 2)
EGGW	↓ FL130	(Notes 3 & 4)
EGMC	MSL lvl 5 NM before BPK	(Note 1)

Note 1: Aircraft transferred on a radar heading are **not** RFT until within the confines of TC NE's airspace.

Note 2: This traffic is **not** RFD without prior coordination with TC NW.

Note 3: This traffic is released for right turns only while in TC Midlands' airspace.

Note 4: TC NW will coordinate with TC Midlands when ZAGZO inbounds are above the standard descent profile.

From TC NE to TC NW

From	Agreement	Conditions
EGLC, EGMC	MSL	Via BPK

4.2.1.2 TC SE

From TC SE to TC NE

From	Via	Agreement	Conditions
EGKK, EGKB	FRANE	↑ FL130	Positioned on a heading toward, or west of DAGGA, separated against the LAM and BRASO holding areas.

From TC NE to TC SE

From	Via	Agreement	Conditions
Essex Group, EGWU	DET	↑ MSL	Clean of LAM inbounds to LL/WU (Notes 1, 2 & 3)

Note 1: Departures via DET from the Essex Group are not available between 0600-2300 (0500-2200 summer). This does not apply to positioning flights from these airfields to Gatwick and EGSS departures routing west via LYD.

Note 2: All traffic from the Essex Group and EGWU is subject to individual coordination. Before issuing a departure release, TC NE is to coordinate with TC SE to determine if the aircraft can be accepted by TC SE.

Note 3: Traffic via DET must be coordinated with Thames before climbing above 5000 ft or must otherwise avoid the Thames RMA.

4.2.1.3 TC East

From TC East to TC NE

To	Agreement	Conditions
EGGW	FL140 lvl OFJES	
EGLL	FL160 lvl SABER	(Notes 1 & 2)
EGWU	FL160 lvl 5 NM before SABER	(Notes 1 & 2)

Note 1: TC NE is responsible for ensuring separation against Gatwick FRANE departures.

Note 2: These aircraft are not to be descended into Thames's airspace/RMA without prior coordination with TC Thames.

From TC NE to TC East

From	Agreement	Conditions
Heathrow Group	↑ FL150	(Note 1)
EGGW	↑ FL150	(Notes 1 & 2)
EGSS	↑ FL110	(Notes 1 & 2)
EGLC	↑ FL110	(Note 1)
EGKK, EGKB	↑ FL170	(Note 1)

Note 1: Traffic shall be positioned to remain north of the DB-FL175 area of TC NE (at least 3 NM north of the SABER-LAM track).

Note 2: Traffic displaying 'Dx' intention codes, excluding DET departures (via Dover) shall be transferred on a radar heading.

4.2.2 LAC Standing Agreements

4.2.2.1 AC Dover

From AC Dover to TC NE

To	Agreement	Conditions
Essex Group	↓ FL160	Not RFD until TC N/S boundary. (Notes 1 & 2).

Note 1: AC Dover shall endeavour to present traffic to TC NE at least 5 NM in trail. Aircraft are to be on own navigation between VATON-OZZOT/BPK track to ensure separation from the LAM and BNN holds.

Note 2: Aircraft should be transferred in good time to be able to reach FL150 by OZZOT (EGGW) or FL140 by BPK (EGSS/EGSC).

4.3 Holding Procedures

4.3.1 Heathrow Holding

Heathrow traffic should be instructed to hold at Lambourne (LAM).

LAM (Lambourne)	RNAV Hold, 1-minute legs (1.5-minute legs FL150+)
Axis	263°
Direction	LEFT hand
Holding Levels	MSL+1 – FL170
Speed	Maximum 220 kts IAS

Note 1: FL130 is unavailable in the LAM hold, to provide a level to cross Gatwick northbound departures if unable to climb.

Note 2: Separation exists between aircraft established in the BIG and LAM holding areas up to and including FL150.

If the LAM stack should become full, additional holding should be carried out at BRASO. BRASO is situated on the standard arrival, approximately 20 NM east of LAM. Due to its proximity, they are not considered to be separated.

TC East will retain control of the BRASO stack, as the lowest available level is FL180. It is the responsibility of TC NE to notify TC East when FL170 in the LAM hold becomes available.

4.3.2 Essex Holding

London Stansted and Cambridge traffic should be instructed to hold at LOREL. Should the LOREL stack become full, additional holding should be carried out at **BOMBO** (TC NW) or **VATON** (AC Dover).

LOREL	RNAV Hold, 4 NM legs
Axis	187°
Direction	LEFT hand
Holding Levels	MSL+1 – FL140 (minimum FL90)
Speed	Maximum 220 kts IAS

London Luton traffic should be instructed to hold at ZAGZO. Should the ZAGZO stack become full, additional holding should be carried out at **WOBUN** (TC NW) or **VATON** (AC Dover)

ZAGZO	RNAV Hold, 1-minute legs
Axis	149°
Direction	RIGHT hand
Holding Levels	MSL+1 – FL140 (minimum FL80)
Speed	Maximum 220 kts IAS

The BOMBO and WOBUN stacks are separated from the LOREL stack, but not from each other. TC NW will retain control of the BOMBO and WOBUN stacks. It is the responsibility of TC NE to notify TC NW when FL140 or below is available in the LOREL stack.

4.3.3 High Level Holding

In the event of aircraft requiring to hold at FL120 or above, TC NE will retain control of the aircraft until a lower level is available, unless otherwise coordinated with the appropriate Approach Control Unit. It is the responsibility of the Approach Control Unit to notify TC NE when FL110 or below becomes available.

4.4 Coordination with Adjacent Units, Sectors and Airfields

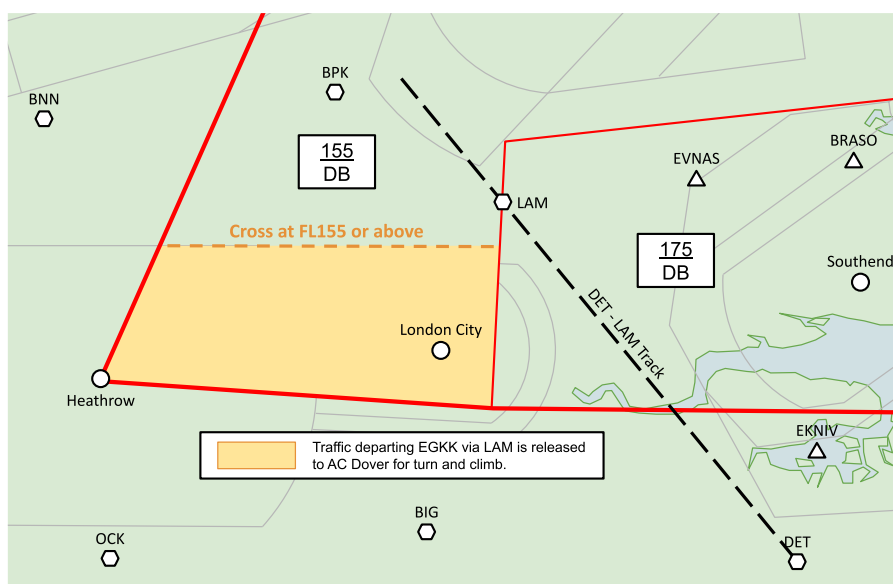
4.4.1 Temporary Level Agreement at LAM Holding Area

The vertical limits of the LAM holding area may be increased temporarily to FL210 subject TC NE coordinating with AC Dover. If AC Dover permits a temporary agreement with TC NE, TC NE must inform TC East and agree upon a new level agreement for Heathrow inbound. Aircraft holding at BRASO are not separated from aircraft holding at LAM.

4.4.2 Gatwick LAM Departures

This information is included for reference, since Gatwick LAM departures are to be permitted into TC NE’s airspace under the control of AC Dover between the TC N/S boundary and abeam the northern edge of the London CTR between FL130 and FL155 (see Figure LTC-6).

Figure LTC-6 – TC NE release area for KK LAM Departures



This delegation is valid for Gatwick departures via LAM **only** and shall not be interpreted as a general operational delegation between TC NE and AC Dover.

4.4.2.1 TC SE to AC Dover

From	Via	Agreement	Conditions
EGKK	LAM	FL130 lvl TC N/S boundary	(See Note)

Note: To be positioned west of the DET - LAM track. Due to the potential confliction with the LAM hold, aircraft which do not achieve FL130 by the TC N/S boundary will be coordinated with both TC NE and AC Dover.

4.4.2.2 AC Dover to TC Midlands

From	Via	Agreement	Conditions
EGKK	LAM	↑ FL190	To be positioned east of the Midlands Radar Gate. (See Note)

Note: Traffic must cross abeam the northern edge of the London CTR at FL155 or above to leave TC NE airspace. AC Dover will coordinate with TC NE if this cannot be achieved.

4.4.3 Oxford (EGTK)

Oxford inbounds are to be offered to TC NW at a maximum of FL150.

4.4.4 Coordination of Holding Aircraft

TC NE shall notify AC Dover when holding at LAM at FL120 and above.

TC NE shall notify TC NW and AC Dover when FL140 or below is available in the LOREL hold.

TC East will notify TC NE when holding at ABBOT at FL130 and above.

Chapter 5 TC South West (TC SW)

5.1 Area of Responsibility

TC South West (TC SW) cover the area of the LTMA to the southwest of Heathrow and Gatwick, with an upper limit of FL175 to the south and FL155 and FL115 to the west. TC SW is responsible for both departures and arrivals into Heathrow, Gatwick, and the Solent Group.

Figure LTC-7 – London TC South West Area of Responsibility



5.1.1 Sector Frequency

The TC SW sector operates on frequency 133.180 MHz.

5.2 Standing Agreements

5.2.1 LTC Standing Agreements

5.2.1.1 TC NW

From TC NW to TC SW

From	To	Agreement	Conditions
EGGW, EGWU, Thames Group	-	MSL lvl 11 NM NE of CPT	(Notes 1, 2 & 3)
-	EGHI	FL110 lvl RISIN	(Note 4)
-	EGLF, Wessex Group	FL110 lvl DIGUT	(Note 5)
-	EGLF, Wessex Group	FL110 lvl CPT	Inbounds from the east. Speed 250 knots or less. (Note 5)

Note 1: When Heathrow are on Easterly operations, traffic is not to be turned south before CPT.

Note 2: If TC NW effects coordination with TC SW to transfer the traffic direct to AC West in accordance with the TC SW / AC West Standing Agreement, TC SW shall ensure that the traffic is free of conflicts within TC SW airspace.

Note 3: When traffic permits, EGLC and EGKB CPT departures should be coordinated a higher level with TC SW/AC Worthing.

Note 4: TC NW shall endeavour to position these aircraft 10 NM in trail and on, or to the west of, the RISIN-NUBRI track.

Note 5: TC NW shall provide a minimum of 10 NM in trail between successive arriving aircraft operating under this agreement.

From TC SW to TC NW

From	Agreement	Conditions
Solent Group	FL100 lvl TC N/S boundary	Positioned in accordance with the "standard north" departure out of Solent CTA: SAM-Q41-NORRY
EGLF, Wessex Group	FL100 lvl TC N/S boundary	
Essex Group	FL130	Via SILVA (FL170-)

5.2.1.2 TC SE

From TC SW to TC SE

To	Agreement	Conditions
Thames Group	↓ FL130	KATHY and SAM 1C STARs EVEXU – SOXUX

5.2.1.3 TC Midlands

From TC Midlands to TC SW

To	Agreement	Conditions
EGKK	FL150 lvl KIDLI	(See Note)

Note: TC SW **must not** issue descent below FL150 or deviate from route until within TC SW airspace, regardless of sector configuration.

5.2.2 LAC Standing Agreements

5.2.2.1 AC Worthing

From AC Worthing to TC SW

To	Agreement	Conditions
Heathrow Group	FL130 lvl HAZEL	
EGKK	FL130 lvl GWC/TELTU	
Essex Group	↓ FL130	Via SILVA (FL170-)
EGLF, Wessex Group	FL110 lvl ABSAV / 10 NM before RUDMO	
Thames Group	FL130 lvl BIDVA	

From TC SW to AC Worthing

From	Agreement	Conditions
Heathrow Group, EGKK, EGGW, EGLF, Wessex Group	↑ FL150	Via SAM. (See Note)
Heathrow Group, EGKK, EGGW, EGLF, Wessex Group, Solent Group	↑ FL170	Via SITET, XAMAB, XIDIL. (Notes 1 & 2)

Note 1: TC SW shall endeavour to position traffic according to their Intention Code.

Note 2: AC Worthing is responsible for separation between this traffic and GODLU/GEGMU arrivals via NETVU.

5.2.2.2 AC Dover

From AC Dover to TC SW

To	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL180 lvl 5 NM before ELDAX	(See Note)
Solent Group, EGLF, Wessex Group	FL180 lvl 15 NM before WAFFU	(See Note)
Solent Group	FL160 lvl 5 NM before OCK	
EGTK	FL160 lvl 35 NM before CPT / FL160 lvl 5 NM after GOXUL	

Note: When AC Worthing and AC Dover are split, this traffic is **not** RFT or RFD and must be kept level through AC Worthing airspace.

From TC SW to AC Dover

From	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL170 lvl OCK	Via OCK-KOBBI (RFL175+)
EGLF, Wessex Group	FL170 lvl OTSID	Via OTSID-BIG (RFL165+)

5.2.2.3 AC West

From AC West to TC SW

To	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL120 lvl NUCHU	Not RFT until passing NUCHU. (See Note)
Heathrow Group, EGKK	FL140 lvl SIRIC	Not RFT until passing SIRIC

Note: West shall ensure traffic is given route clearance to join the correct STAR. For EGLF/Wessex Group airfields: NUCHU-REFQI-GOBNU-CPT1V. For Solent Group airfields: NUCHU-NUBRI-BUGUP1S.

From TC SW to AC West

From	Agreement	Conditions
Heathrow Group, EGKK, EGGW, Thames Group	↑ FL150	TC SW should endeavour to transfer on own navigation to DIDZA/OKSAW
Solent Group, EGLF, Wessex Group	↑ FL130	TC SW should endeavour to transfer on own navigation to SAWPE

Traffic entering the systemised route structure in AC West should be transferred in accordance with the following priority:

1. In trail (with speeds as appropriate)
2. With vertical separation (coordinating higher/lower where appropriate)
3. Lateral separation (using radar headings).

5.2.3 External Standing Agreements

None.

5.3 Holding Procedures

5.3.1 Heathrow Holding

OCK Hold

OCK (Ockham)	RNAV Hold, 1-minute legs
Axis	328°
Direction	RIGHT hand
Holding Levels	MSL – FL150
Speed	Maximum 220 kts IAS

Note: Separation exists between aircraft established in the OCK and BIG holding areas up to and including FL150. However, the WILLO and OCK are separated up to and including FL140 only.

If the OCK stack should become full, additional holding should be carried out at either BILNI, KATHY or DOMUT to the south (AC Worthing), or at an appropriate en-route holding facility (typically OCTIZ) within the AC West sector for arrivals from the west. It is the responsibility of TC SW to coordinate with AC Worthing/West when FL150 or below is available in the OCK hold.

5.3.2 Gatwick Holding

WILLO Hold

WILLO	RNAV Hold, 5.1 NM legs
Axis	283°
Direction	LEFT hand
Holding Levels	MSL – FL150
Speed	Maximum 220 kts IAS

Note: Separation exists between aircraft established in the WILLO and TIMBA holding areas up to and including FL150. However, the WILLO and OCK are separated up to and including FL140 only.

If the WILLO stack should become full, additional holding should be carried out at KATHY, DOMUT and BILNI, as appropriate. AC Worthing will retain control of these holding areas. It is the responsibility of TC SW to notify AC Worthing when FL150 or below is available in the WILLO hold.

5.3.3 Solent Holding

PEPIS Hold

PEPIS	RNAV Hold, 1-minute legs
Axis	003°
Direction	RIGHT hand
Holding Levels	FL70 – FL100
Speed	Maximum 220 kts IAS

If the PEPIS stack should become full, additional holding should be carried out at an appropriate en-route holding area, preferably within AC London South sector's airspace.

RUDMO Hold

For aircraft inbound to Southampton/Bournemouth via SAM from ELDAX.

RUDMO	RNAV Hold, 1-minute legs
Axis	276°
Direction	LEFT hand
Holding Levels	FL80 – FL110
Speed	Maximum 210 kts IAS

5.3.4 High Level Holding

In the event of aircraft requiring holding at FL120 or above, TC SW will retain control of the aircraft until a lower level is available, unless otherwise coordinated with the appropriate Approach Control Unit. It is the responsibility of the Approach Control Unit to notify TC SW when FL110 or below becomes available.

5.4 Coordination with Adjacent Units, Sectors and Airfields

5.4.1 Easterly EGLL CPT Departure Procedure

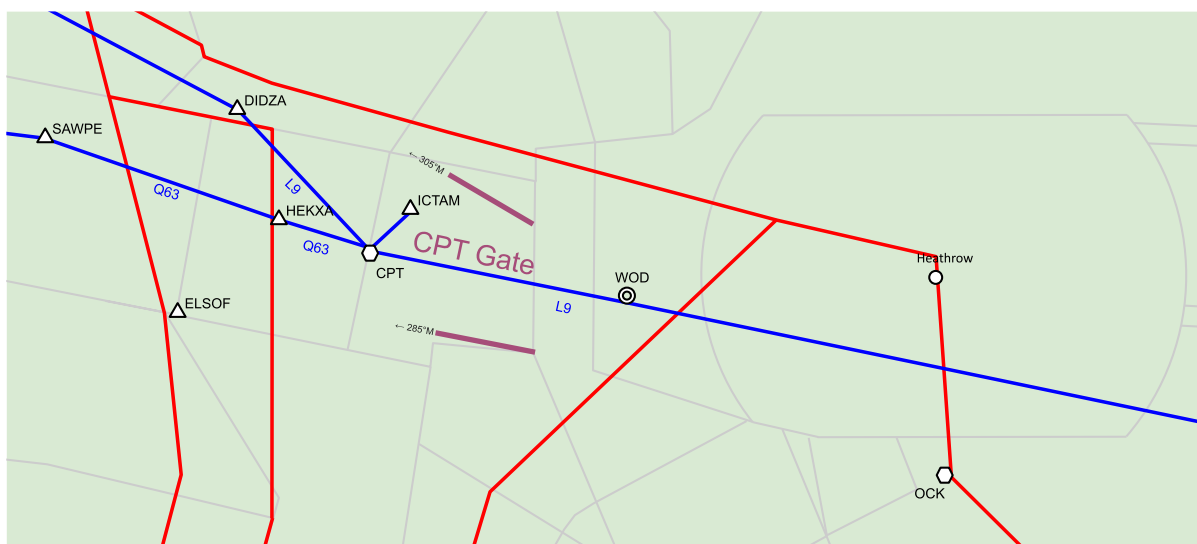
LL INT South is required to take control of aircraft departing easterly CPT Departures, which conflict with the intermediate or final approach pattern.

LL AIR Departures will transfer the aircraft to LL INT South who shall identify, validate, and verify the traffic.

LL INT South shall transfer CPT departures to TC SW by silent handover, subject to the following conditions:

- The aircraft is at or above MSL+1 by the western edge of the Heathrow easterly RMA.
- The aircraft is presented to TC SW on a radar heading, positioned through *the CPT gate* (see Figure LTC-8).
- The heading should, subject to traffic, position the departure towards the northern side of the ATS route L9/Q63 but must not track the aircraft into TC NW airspace.
- LL INT South shall ensure that the aircraft is at 4000 ft or above abeam WOD.

Figure LTC-8 – Compton (CPT) Gate



The heading allocated by LL INT South must ensure that a minimum of 3 NM separation is maintained from other traffic on intermediate and final approach under control of LL INT North or FIN directors.

If a departure is unable to meet the terms of this Standing Agreement: either the level restriction or lateral positioning through the CPT radar gate, LL INT South must coordinate with TC SW. Where possible, this should take place prior to abeam WOD. TC SW is responsible for separation against all traffic outside of the LL RMA.

Note 1: TC SW shall not alter the assigned heading until the aircraft is **at or above MSL+1** or has passed abeam WOD.

Note 2: In very low pressure, when MSL+1 is FL100, consideration should be given to suspending either the Solent outbound and EGLF, Wessex Group outbound Standing Agreements or the Heathrow CPT Easterly Departure Standing Agreement.

5.4.2 Shoreham (EGKA)

5.4.2.1 Inbound Procedures

At least 10 minutes before the ETA for SHM, TC SW is to pass an estimate to Shoreham.

TC SW will obtain an acceptance level at SHM (commonly 3200 ft), the Gatwick QNH and the contact frequency for Shoreham. TC SW will clear the aircraft to leave controlled airspace by descent or at a convenient reporting point.

TC SW is to resolve any potential inbound/outbound conflicts in agreement with Shoreham.

5.4.2.2 Outbound Procedures

Requests for clearances to join controlled airspace are made to TC SW. The clearance from TC SW will include the instruction to remain outside controlled airspace, SSR code and the contact frequency. TC SW will be passed an ETD and the ATD will only be passed if it differs from the ETD by more than 3 minutes.

If the flight will remain outside controlled airspace routing south or east, Shoreham will pass the details to London Information (or other active controllers as deemed appropriate).

5.4.3 Coordination of Holding Aircraft

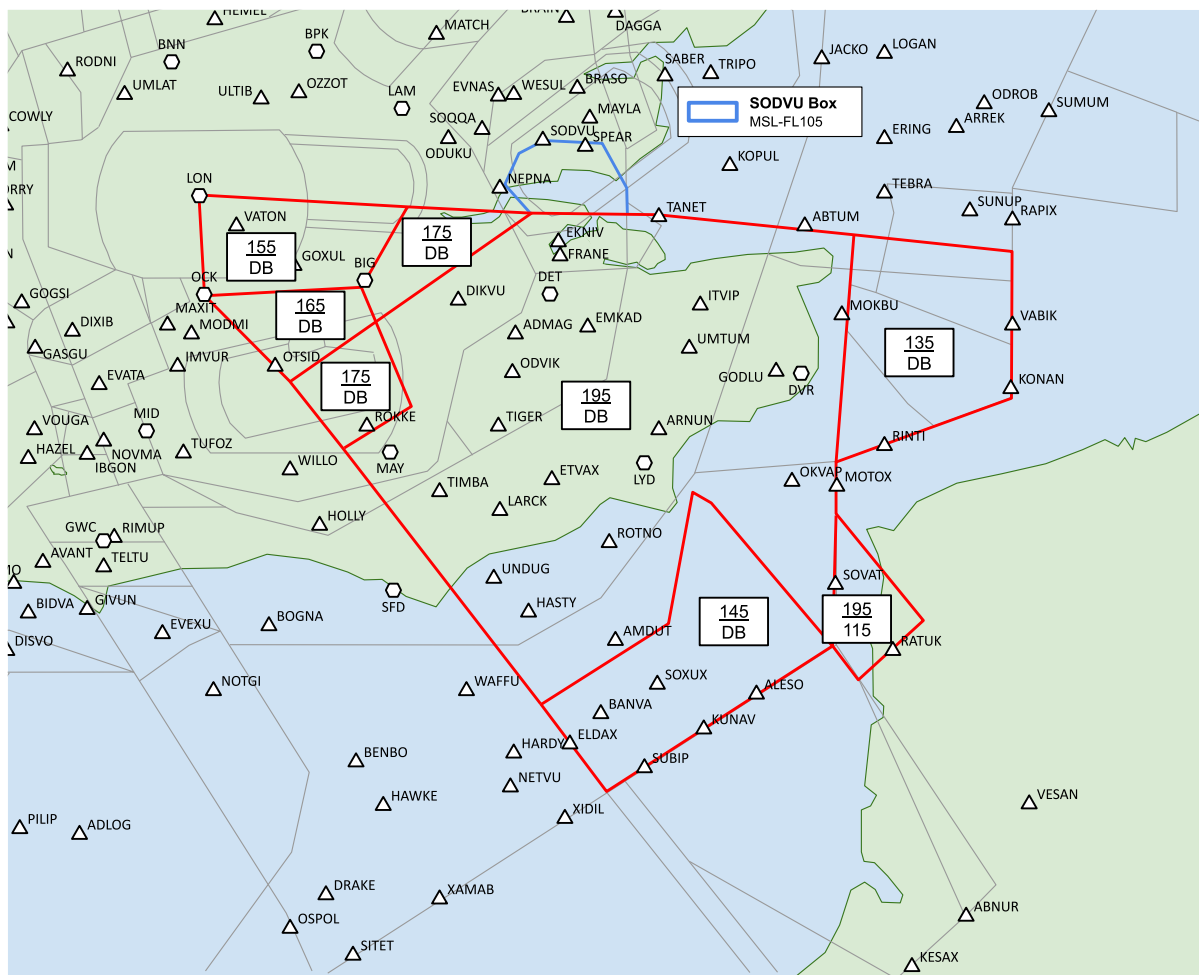
TC SW shall notify AC Worthing when TIMBA is holding at FL130 and above. TC SW and AC Worthing shall then suspend the Standing Agreement of FL130 lvl GWC/TELTU. Temporary routing and level shall be agreed upon.

Solent APC will inform TC SW when inbound EGHH/EGHI aircraft are required to hold at SAM at 6000 ft QNH and above. Holding at SAM below 6000 ft may be executed without reference to TC SW.

Chapter 6 TC South East (TC SE)

6.1 Area of Responsibility

Figure LTC-9 – London TC South East Area of Responsibility



6.1.1 Sector Frequency

TC SE operated on frequency 120.530 MHz.

6.1.2 Delegated Airspace

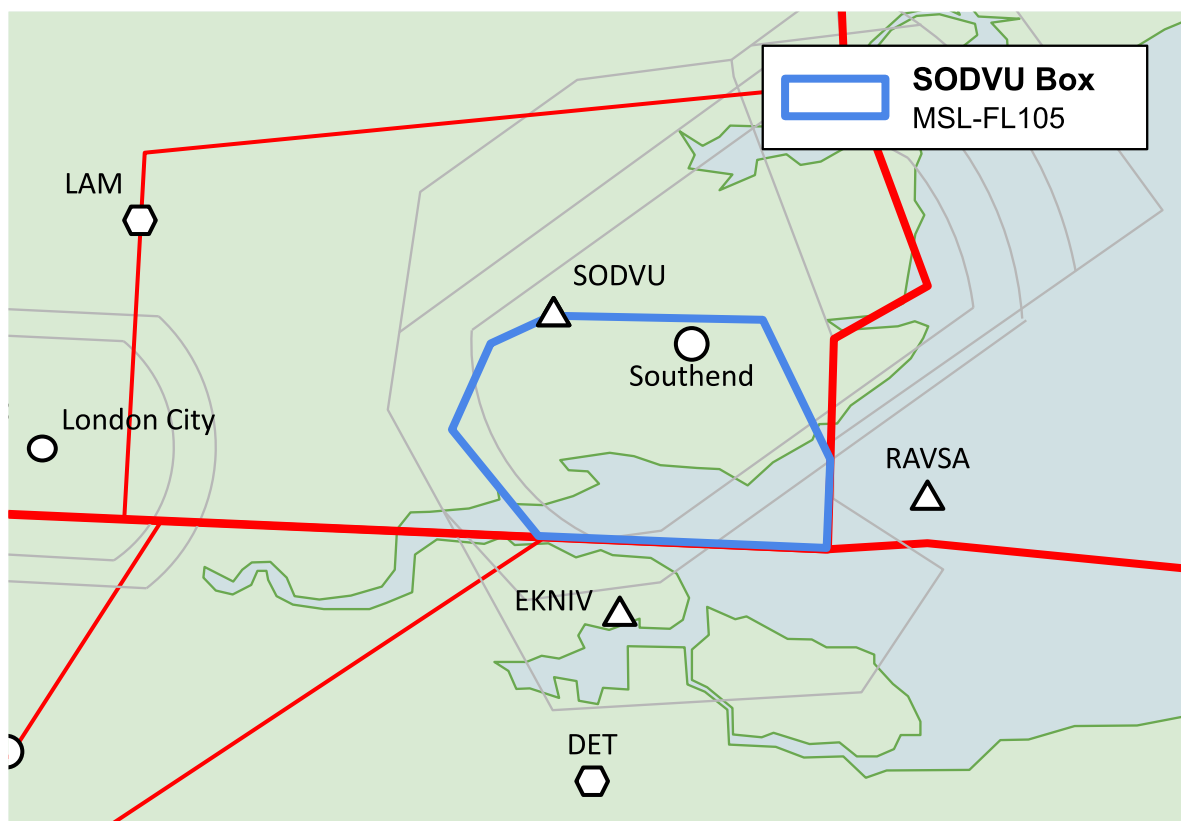
6.1.2.1 SODVU Box

The SODVU Box, pictured below in Figure LTC-10, is established as a permanent delegation of airspace from TC North East to TC South East. It sits above the Thames RMA from MSL and extends up to FL105.

Thames departures via DET / EKNIV may be climbed by TC SE to FL100 without coordination with TC NE.

Both TC NE and TC Heathrow shall ensure that traffic remains at least 3 NM from the SODVU Box. The published LAM hold does not track within 3 NM of the box, and so is deemed separated.

Figure LTC-10 – SODVU Box



6.2 Standing Agreements

6.2.1 LTC Standing Agreements

6.2.1.1 TC SW

From TC SW to TC SE

To	Agreement	Conditions
Thames Group	↓ FL130	KATHY and SAM 1C STARs EVEXU – SOXUX

6.2.1.2 TC NE

From TC NE to TC SE

From	Via	Agreement	Conditions
Essex Group, EGWU	DET	↑ MSL	Clean of LAM inbounds to LL/WU (<i>Notes 1, 2 & 3</i>)

Note 1: Departures via DET from the Essex Group are not available between 0600-2300 (0500-2200 summer). This does not apply to positioning flights from these airfields to Gatwick and EGSS departures routing west via LYD.

Note 2: All traffic from the Essex Group and EGWU is subject to individual coordination. Before issuing a departure release, TC NE is to coordinate with TC SE to determine if the aircraft can be accepted by TC SE.

Note 3: Traffic via DET must be coordinated with Thames before climbing above 5000 ft or must otherwise avoid the Thames RMA.

From TC SE to TC NE

From	Via	Agreement	Conditions
EGKK, EGKB	FRANE	↑ FL130	Positioned on a heading toward, or west of DAGGA, separated against the LAM and BRASO holding areas.

6.2.1.3 TC East

From TC East to TC SE

To	Agreement	Conditions
EGKK	FL140 lvl ABTUM	

6.2.2 LAC Standing Agreements

6.2.2.1 AC Dover

From AC Dover to TC SE

To	Agreement	Conditions
Thames Group	FL160 lvl BIG	(See Note)
Heathrow Group	FL180 lvl ETVAX	
EGKK	FL160 lvl AMDUT	

Note: Traffic must not enter TC SE airspace prior to BIG.

From TC SE to AC Dover

From	Agreement	Conditions
EGKK	FL130 lvl TC N/S boundary	(Notes 1 & 2)
Heathrow Group, EGKK	↑ FL180	(Note 3)
Thames Group	↑ FL170	Departures via DVR
EGSS	↑ FL180	Night Only , Departures via DVR

Note 1: To be positioned on a radar heading west of the DET - LAM track. Due to the potential conflict with the LAM hold, aircraft which do not achieve FL130 by the TC N/S boundary must be coordinated with both TC NE and AC Dover.

Note 2: Traffic must cross the northern edge of the London CTR at FL155 or above to leave TC NE airspace. AC Dover must coordinate with TC NE if this cannot be achieved.

Note 3: This traffic must be climbed such that it does not enter Dover's airspace prior to transfer of communications.

6.2.2.2 AC Worthing

From AC Worthing to TC SE

To	Level	Conditions
Thames Group	FL140 lvl NETVU	
EGKK	FL140 lvl NETVU	The NEVIL 1G STAR is not available for flight planning

From TC SE to AC Worthing

From	Level	Conditions
Thames Group, EGSS	FL190 lvl WOR/DVR boundary	Via LYD/HASTY. (See Note).

Note: Released for right turns only.

6.2.3 External Standing Agreements

6.2.3.1 Paris North (295-)

From Paris North to TC SE

To	Agreement	Conditions
Thames Group	FL190 lvl RATUK	RFD to FL120 north of VESAN

6.2.3.2 Brussels West (FL245-)

From TC SE to Brussels West

To	Agreement	Conditions
EBOS, EBKT, EBFN	FL80 - FL110 lvl KONAN	(Notes 1 and 2)
EBOS, EBKT, EBFN	FL110 level VABIK	(Note 2)

Note 1: Traffic may be transferred at even or odd levels.

Note 2: During easterly runway operations at EBOS, Brussels West may request transfer directly to Ostend Approach. London shall not descend traffic outside of controlled airspace.

From Brussels West to TC SE

To	Agreement	Conditions
EGKK	Maximum FL120 lvl KOK	

6.3 Holding Procedures

6.3.1 Heathrow Holding

BIG Hold

BIG (Biggin)	RNAV Hold, 1.5-minute legs
Axis	301°
Direction	RIGHT hand
Holding Levels	MSL+1 – FL150
Speed	Maximum 220 kts IAS up to FL140 Standard ICAO Holding Speeds at FL150

Note: The OCK and BIG holds are separated up to and including FL150.

TIGER Hold

For aircraft inbound to London Heathrow via Biggin.

TIGER	RNAV Hold, 1.5-minute legs
Axis	315°
Direction	RIGHT hand
Holding Levels	FL150 – FL240
Speed	Standard ICAO Holding Speeds

Note: The TIGER hold is not separated from the BIG hold, and as such, the lowest available holding level is FL160.

6.3.2 Gatwick Holding

TIMBA Hold

TIMBA	RNAV Hold, 1-minute legs
Axis	308°
Direction	RIGHT hand
Holding Levels	MSL – FL150
Speed	Maximum 220 kts IAS

Note: The WILLO and TIMBA holds are separated up to and including FL150.

If the TIMBA stack should become full, additional holding should be carried out at AMDUT for arrivals via KUNAV, and ARNUN for arrivals via TEBRA / KONAN. TC SE will retain control of both holding areas.

AMDUT Hold

For aircraft inbound to Gatwick via TIMBA from KUNAV **only**.

AMDUT	RNAV Hold, 1-minute legs
Axis	312°
Direction	RIGHT hand
Holding Levels	FL160 – FL190
Speed	Maximum 240 kts IAS

Note: Traffic in the AMDUT hold will be retained by AC Dover. TC South East shall 'call on' traffic from AC Dover, who will transfer the aircraft at/cleared to FL160.

ARNUN Hold

For aircraft inbound to Gatwick via TIMBA from TEBRA or KONAN.

ARNUN	RNAV Hold, 1-minute legs
Axis	216°
Direction	RIGHT hand
Holding Levels	FL100 – FL140
Speed	Maximum 220 kts IAS

6.3.3 Thames Holding

GEGMU Hold

For aircraft inbound to Southend via STARs terminating at GEGMU. Additional holding may be carried out at OKVAP/GODLU.

GEGMU	RNAV Hold, 1-minute legs
Axis	263°
Direction	RIGHT hand
Holding Levels	4000 ft – 6000 ft
Speed	Maximum 195 kts IAS

GODLU Hold

GODLU	RNAV Hold, 1-minute legs
Axis	309°
Direction	RIGHT hand
Holding Levels	FL80 – FL120
Speed	Maximum 210 kts IAS

OKVAP Hold

OKVAP	RNAV Hold, 1-minute legs
Axis	001°
Direction	LEFT hand
Holding Levels	FL130 – FL150
Speed	Maximum 220 kts IAS

6.4 Coordination with Adjacent Units, Sectors and Airfields

6.4.1 Brussels ACC

Sectorisation, separation and silent handover conditions are as described in LAC 3.4.2 Brussels ACC.

6.4.1.1 Transfer of Control and Communication

6.4.1.1.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L9 / Q70	VABIK / KONAN	VABIK / KONAN	VABIK / KONAN

6.4.1.1.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L9	KONAN	KONAN	Between KOK and KONAN

6.4.2 Lydd (EGMD)

6.4.2.1 Inbound Procedures

TC SE will coordinate with Lydd ADC/APC with an estimate and position of the inbound aircraft.

Normally only altitudes on the Lydd QNH will be allocated for inbound aircraft. The entry altitude for Lydd Runway 21 procedures is 3200 ft (Lydd QNH). The lowest holding altitude is 3200 ft.

The highest holding level is FL50. Levels above this will be coordinated with TC SE.

6.4.2.2 Outbound Procedures

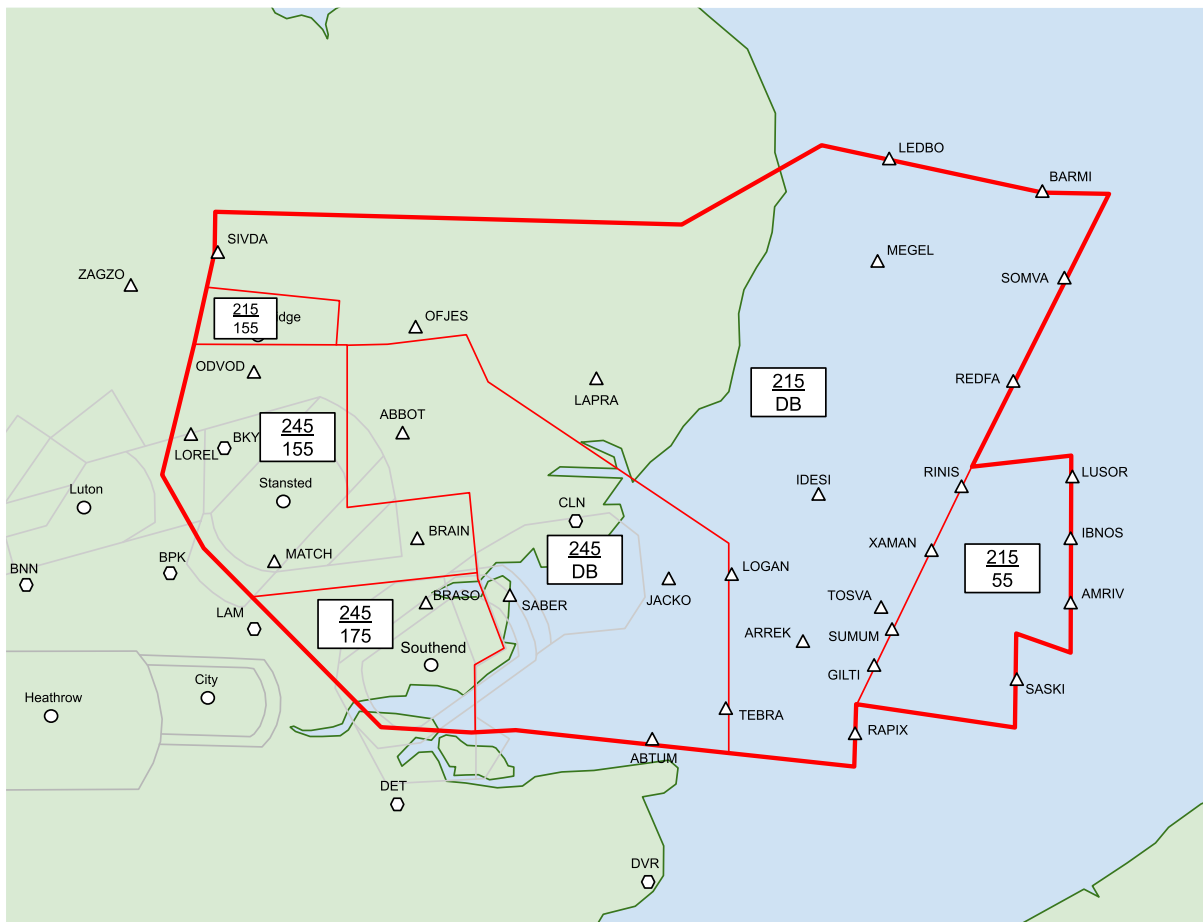
Lydd ADC is to request clearance to join controlled airspace from TC SE giving Callsign, Route and Destination.

Chapter 7 TC East (TC E)

7.1 Area of Responsibility

TC East is an upper-level Terminal Control sector. It covers the area to the north and northeast of the LTMA, adjacent to the boundary with Amsterdam (EHAA) FIR and Brussels (EBBU) FIR. It extends up to FL215 in the eastern part, and FL245 in the area over the TC NE sector.

Figure LTC-11 – London TC East Area of Responsibility

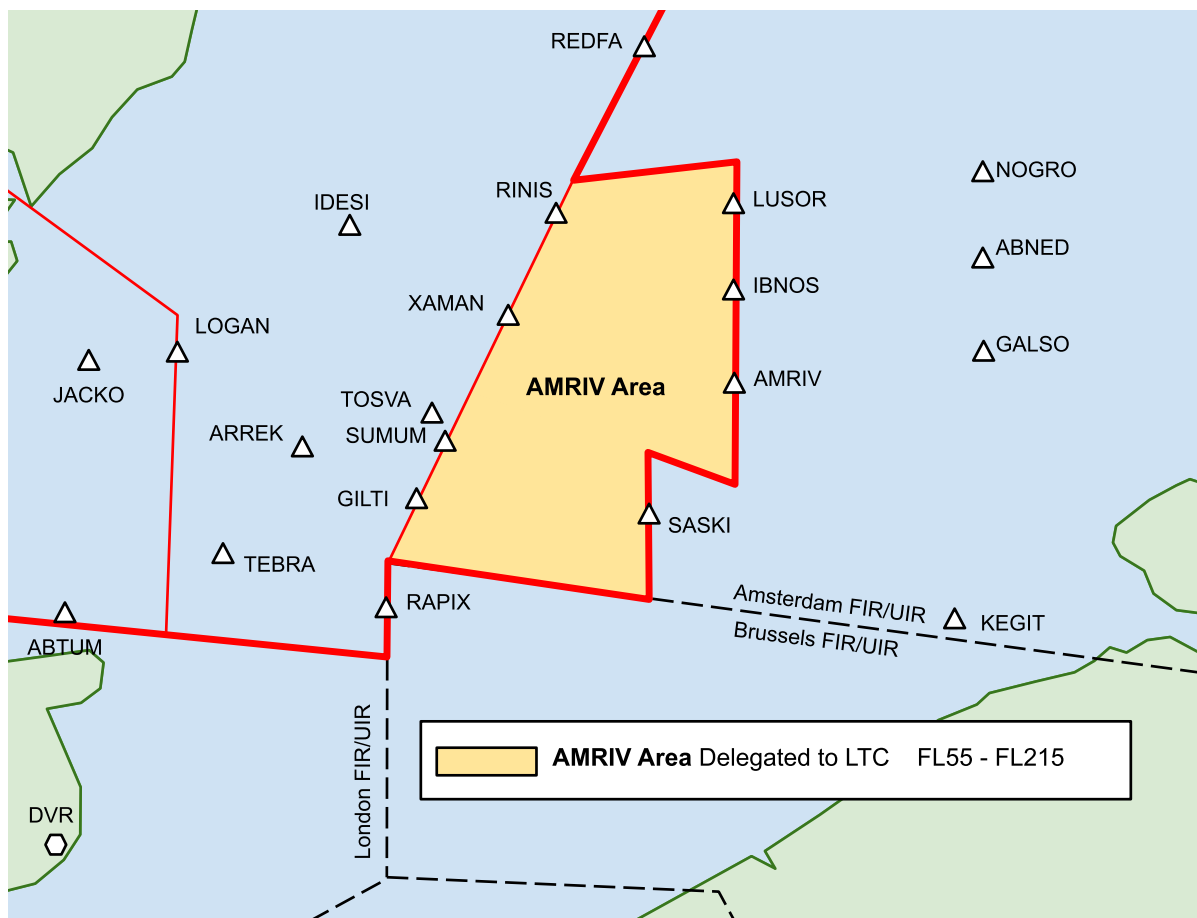


7.1.1 Sector Frequency

TC East operated on frequency 121.230 MHz.

7.1.2 Delegated Airspace

Figure LTC-12 – Delegation of Airspace to London TC East within the Amsterdam FIR



7.2 Standing Agreements

7.2.1 LTC Standing Agreements

7.2.1.1 TC North East

From TC NE to TC East

From	Agreement	Conditions
Heathrow Group	↑ FL150	(Note 1)
EGGW	↑ FL150	(Notes 1 & 2)
EGSS	↑ FL110	(Notes 1 & 2)
EGLC	↑ FL110	(Note 1)
EGKK, EGKB	↑ FL170	(Note 1)

Note 1: Traffic shall be positioned to remain north of the DB-FL175 area of TC NE (at least 3 NM north of the SABER-LAM track).

Note 2: Traffic displaying 'Dx' intention codes (via Dover) shall be transferred on a radar heading.

From TC East to TC NE

To	Agreement	Conditions
EGGW	FL140 lvl OFJES	
EGLL	FL160 lvl SABER	(Notes 1 & 2)
EGWU	FL160 lvl 5 NM before SABER	(Notes 1 & 2)

Note 1: TC NE is responsible for ensuring separation against Gatwick FRANE departures.

Note 2: These aircraft are not to be descended into Thames airspace/RMA without prior coordination with TC Thames.

7.2.1.2 TC SE

From TC East to TC SE

To	Agreement	Conditions
EGKK	FL140 lvl ABTUM	

7.2.2 LAC Standing Agreements

7.2.2.1 AC Daventry

From AC Daventry to TC East

To	Agreement	Conditions
Thames Group (excl. EGMC)	FL220 lvl ODVOD	

7.2.2.2 AC Clacton

From AC Clacton to TC East

To	Agreement	Conditions
Essex Group	FL220 lvl MEGEL	
Essex Group	FL220 lvl RINIS / XAMAN / TOSVA / 15 NM before IDESI	
Thames Group	FL220 lvl MOMIC	
Thames Group	FL220 lvl INLOD	

Heathrow Group, Brize Group, EGTK, Solent Group, EGLF, Wessex Group	FL250 lvl LOGAN	
EGKK	FL220 lvl ODROB	Via P7
EGKK	FL220 lvl BLIXY / SUNUP	Via Y4, Q63, L610

From TC East to AC Clacton

From	Agreement	Conditions
Heathrow Group, EGKK, EGKB, EGGW, EGLF, Wessex Group	↑ FL230	
EGSS, EGSC, Thames Group (excl. EGKB)	↑ FL210	

7.2.2.3 AC Dover

From TC East to AC Dover

From	Agreement	Conditions
EGSS	FL200 lvl ABTUM	FPL via CLN-DVR (Notes 1 & 2)
EGGW	FL200 lvl TC East/AC Dover boundary	FPL via MATCH-DVR (Notes 1 & 2)

Note 1: TC East shall not position aircraft east of ABTUM without prior coordination with AC Dover.

Note 2: Traffic transferred to AC Dover is released for **right** turns only.

To	Agreement	Condition
Solent Group	FL210 lvl 20 NM before UMBUR	(See Note)
EGLF, Wessex Group, Brize Group, EGTK	FL210 lvl 15 NM before LAM	(See Note)

Note: Traffic RFD to FL180 only, regardless of sector configuration.

7.2.3 External Standing Agreements

7.2.3.1 Amsterdam West (FL245-)

To	Agreement	Conditions
Haamstede Group	FL210 lvl REDFA	(See Note)

Note: This traffic is released for descent to FL190 10 NM before REDFA and released for left turns, provided it crosses the FIR boundary no more than 5 NM north/south of REDFA.

7.2.3.2 Brussels West (FL245-)

From Brussels West to TC East

From	Agreement	Condition
EBOS, EBFN	Maximum FL200	Via SASKI

7.3 Holding Procedures

7.3.1 Heathrow Holding Procedures

Should the LAM hold become full, holding shall take place at BRASO (TC East) and further, LOGAN (AC Clacton).

BRASO Hold

For aircraft inbound to London Heathrow and Northolt.

BRASO	RNAV Hold, 1.5-minute legs
Axis	263°
Direction	LEFT hand
Holding Levels	FL180 – FL240
Speed	Maximum 240 kts IAS

7.3.2 Essex Group Holding Procedures

ABBOT Hold

For aircraft inbound to London Stansted and Cambridge.

ABBOT	RNAV Hold, 1-minute legs
Axis	265°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL80) – FL140
Speed	Maximum 220 kts IAS

LAPRA Hold

For aircraft inbound to London Stansted, and Cambridge via ABBOT.

LAPRA	RNAV Hold, 1.5-minute legs
Axis	244°
Direction	RIGHT hand
Holding Levels	FL150 – FL210
Speed	Maximum 240 kts IAS

MUCTE Hold

For aircraft inbound to London Luton via ZAGZO.

MUCTE	RNAV Hold, 1.5-minute legs
Axis	277°
Direction	RIGHT hand
Holding Levels	FL150 – FL210
Speed	Standard ICAO Holding Speeds up to FL200 Maximum 250 kts IAS at FL210

7.3.3 Thames Holding Procedures

JACKO Hold

JACKO	RNAV Hold, 1-minute legs
Axis	264°
Direction	LEFT hand
Holding Levels	FL80 – FL140
Speed	Maximum 210 kts IAS

ROPMU Hold

For aircraft inbound to London City/Biggin Hill via JACKO from MCT, WAL or HON.

ROPMU	RNAV Hold, 1-minute legs
Axis	097°
Direction	RIGHT hand
Holding Levels	FL160 – FL210
Speed	Maximum 220 kts IAS

7.4 Coordination with Adjacent Units, Sectors and Airfields

7.4.1 Coordination of Holding Aircraft

TC East shall notify AC Dover and TC SE when holding at BRASO.

TC East shall notify TC NE when holding at ABBOT at FL130 and above.

TC East shall notify TC NE when holding at LAPRA.

7.4.2 Coordination with AC North Sea

7.4.2.1 Eastbound LTMA Traffic via LEDBO

All LTMA Group departures via LEDBO (M604) transferred on their own navigation or on a heading are released for turns, subject to known traffic. If coordinated at a level below their RFL, this traffic is also released for climb.

7.4.3 Amsterdam ACC

Sectorisation, separation and silent handover conditions are as described in LAC 5.4.1.

7.4.3.1 Transfer of Control and Communication

7.4.3.1.1 Traffic Leaving London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L620 / M183 / M197 / P137	REDFA	REDFA	At or before REDFA

7.4.3.1.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
M40 / L980 / Z344 / Q63	LUSOR / IBNOS / AMRIV	NOGRO / ABNED	At or before NOGRO / ABNED

7.4.4 Brussels ACC

Sectorisation, separation and silent handover conditions are as described in LAC 5.4.3 Brussels ACC.

7.4.4.1 Transfer of Control and Communication**7.4.4.1.1 Traffic Leaving London**

Route	Coordination Point	Transfer of Control	Transfer of Communications
L179	SASKI	SASKI	SASKI

7.4.4.1.2 Traffic Entering London

Route	Coordination Point	Transfer of Control	Transfer of Communications
L179	SASKI	SASKI (<i>Note 1</i>)	20 NM east of SASKI
L610	RAPIX	RAPIX (<i>Note 2</i>)	20 NM east of SASKI

Note 1: Aircraft are RFT after passing 5 NM before SASKI (right turns only for aircraft on L610). This must not position aircraft south of the L610 centreline until the aircraft has passed RAPIX.

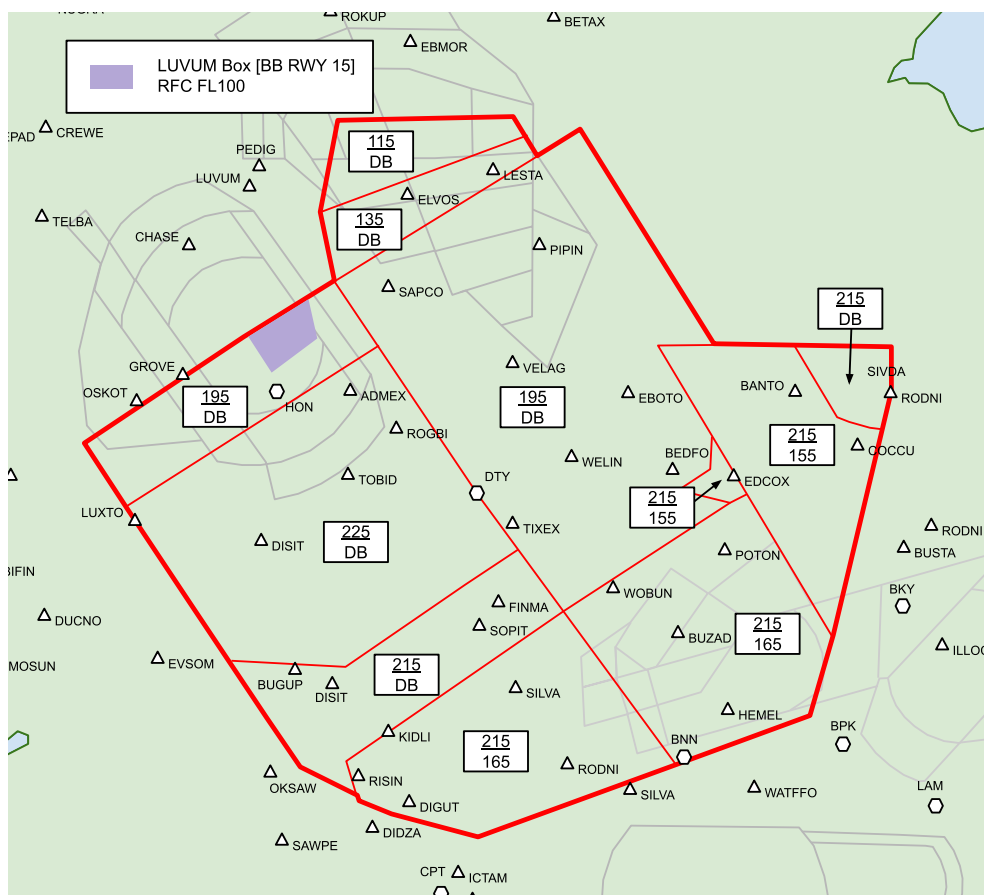
Note 2: Traffic transferred from Brussels ACC and London AC Clacton to London TC East is released for descent to FL110 west of BULAM.

Chapter 8 TC Midlands (TC M)

8.1 Area of Responsibility

TC Midlands is an upper-level Terminal Control sector beneath the AC Daventry sector. It covers the area north and northwest of the LTMA up to the boundary with PC Southeast. It sits over the TC Northwest sector, covering airspace from FL155 or FL165 to FL215. To the northwest, it controls airspace from the designated base up to the AC Daventry sector, with the sector ceiling between FL195 and FL225.

Figure LTC-13 – London TC Midlands Area of Responsibility



8.1.1 Sector Frequency

TC Midlands is operated on frequency 121.030 MHz.

8.1.2 Delegated Airspace

8.1.2.1 LUVUM Box

The LUVUM Box, as pictured above, is established when Runway 15 is in use at Birmingham.

Birmingham LUVUM departures from Runway 15 may be climbed by PC Southeast to FL100 without coordination with TC Midlands.

8.2 Standing Agreements

8.2.1 LTC Standing Agreements

8.2.1.1 TC NW

From TC NW to TC Midlands

From	Agreement	Conditions
Heathrow Group	↑ FL140	(Note 1)
Essex Group	↑ FL120	(Note 1)
Thames Group	↑ FL140	(Note 1)
Solent Group, EGLF, Wessex Group	↑ FL140	(Note 1)

Note 1: TC NW shall endeavour to position these aircraft towards the east side of the Daventry corridor.

From TC Midlands to TC NW

To	Agreement	Conditions
EGLL	FL150 lvl SOPIT	(Notes 2 & 3)
EGWU	FL150 lvl 5 NM before SOPIT	(Notes 2 & 3)
Essex Group (excl. EGGW), EGMC	FL150 lvl FINMA	(Notes 2, 4 & 5)
EGGW	FL150 lvl FINMA	(Notes 2, 4, 5 & 6)
EGLF, Wessex Group	FL150 lvl NEDEX	(Notes 7, 8 & 9)
Solent Group	FL150 lvl BUGUP	(Notes 7, 8 & 9)

Note 2: TC Midlands may transfer an aircraft to TC NW on a radar heading to maintain **3 NM** lateral separation, constant or increasing, between these inbounds. The aircraft is to be instructed to report the heading on transfer of communications.

Note 3: EGLL and EGWU arrivals via BNN are **not** RFT until south of DTY, where they are released for left turns **only**.

Note 4: Wherever possible, TC Midlands shall endeavour to position EGGW (ZAGZO) arrivals to the east of EGSS/EGSC (LOREL) arrivals.

Note 5: Essex Group arrivals are RFD subject to any northbound Solent Group and EGLF, Wessex Group departures. Such flights are released for left turns **only**.

Note 6: TC NW may turn EGGW ZAGZO arrivals to the left only but must remain south of the FINMA-WOBUN track. TC NW will coordinate with TC Midlands when ZAGZO inbounds are either above the standard descent profile or are routed north of the FINMA-WOBUN track.

Note 7: Transfer of control from TC Midlands to TC NW should take place in sufficient time to allow TC NW to descend these aircraft further to FL110 level RISIN/DIGUT.

Note 8: TC Midlands shall endeavour to stream these aircraft at least 10 NM in trail.

Note 9: Aircraft transferred on a radar heading are **not** RFT.

8.2.1.2 TC SW

From TC Midlands to TC SW

To	Agreement	Conditions
EGKK	FL150 lvl KIDLI	(See Note)

Note: Aircraft cannot be descended until within TC SW airspace, unless coordination has been effected with TC NW.

8.2.2 LAC Standing Agreements

8.2.2.1 AC Daventry

From TC Midlands to AC Daventry

From	Agreement	Conditions
EGLL, Essex Group, EGLC, EGMC	FL190 lvl TIMPO / PIPIN	
Solent Group, EGLF, Wessex Group, EGKB	↑ FL210	(See Note)

Note: Traffic with an RFL of FL200 may be transferred climbing to this level.

From AC Daventry to TC Midlands

To	Agreement	Conditions
Solent Group, EGLF, Wessex Group	FL200 lvl PEPUL	
EGKK	FL200 lvl DISIT	
EGLL, EGWU	FL200 lvl TOBID	
Essex Group, EGMC	FL200 lvl ROGBI	

8.2.2.2 AC Dover

From AC Dover to TC Midlands

To	Agreement	Conditions
Midlands Group	FL220 lvl HEMEL	Positioned through the Midlands Radar Gate.

From	Agreement	Conditions
EGKK	↑ FL190	Positioned east of the Midlands Radar Gate. (See Note)

Note: Traffic must cross the northern edge of the London CTR at FL155 or above to leave TC NE airspace. AC Dover shall coordinate with TC NE if this cannot be achieved.

8.2.2.3 AC Worthing

From TC Midlands to AC Worthing

From	Agreement	Conditions
EGNX	↑ FL220	
EGBB, EGBE, EGTK and EGSC	FL190 lvl COWLY / 10 NM before CPT	

8.2.2.4 AC Clacton

From TC Midlands to AC Clacton

From	Agreement	Conditions
Midlands Group, EGTK	FL210 lvl SIVDA	

8.2.2.5 AC West

From AC West to TC Midlands

To	Agreement	Conditions
Heathrow Group	FL180 IMI FITBO	FITBO 1H STAR is not available for flight planning. (See Note)

Note: This traffic is **not** RFD and is released for left turns **only** within West airspace.

8.2.3 MPC Standing Agreements

None.

8.2.4 External Standing Agreements

None.

8.3 Holding Procedures

8.3.1 Heathrow Holding Procedures

When the BNN hold for Heathrow traffic becomes full, TC NW will request onward holding at WCO, then subsequent holding shall happen at HON.

HON Hold

The HON hold sits within TC Midlands airspace up to FL195. However, due to the interaction with PC Southeast, holding should normally take place at and above FL200 in AC Daventry for traffic with RFL>195.

HON	RNAV Hold, 1.5-minute legs
Axis	144°
Direction	LEFT/RIGHT hand (Note 1)
Holding Levels	FL150 – FL350
Speed	Maximum 240 kts IAS

Note 1: Below FL200, the direction of pattern is LEFT hand, FL200 and above is RIGHT hand.

Note 2: PC Southeast must be informed when holding is taking place at HON.

WCO Hold

When the Bovingdon (BNN) hold is full, TC NW may instruct TC Midlands to hold aircraft inbound London Heathrow at Westcott (WCO).

WCO	RNAV Hold, 1.5-minute legs
Axis	188°
Direction	RIGHT hand
Holding Levels	FL90 – FL200
Speed	Maximum 220 kts IAS up to and including FL140 Standard ICAO Holding Speeds FL150 and above

8.4 Coordination with Adjacent Units, Sectors and Airfields

8.4.1 Midlands Inbounds

The Midlands Radar Gate is 9 NM wide, aligned parallel to ATS route T420. AC Dover will position traffic to the Midlands Group airports *through* the Midlands Radar Gate.

Traffic may be on its own navigation, or on a radar heading (See *Note*) providing it passes through the confines of the Radar Gate. Traffic to EGNX should be positioned east of traffic to EGBB.

Note: Traffic transferred on radar headings are **not** RFT until they have entered TC Midlands airspace.

Figure LAC-14 – Midlands Radar Gate



8.4.2 LTMA Inbounds

PC Southeast will endeavour to position inbounds to the London TMA according to their destination.

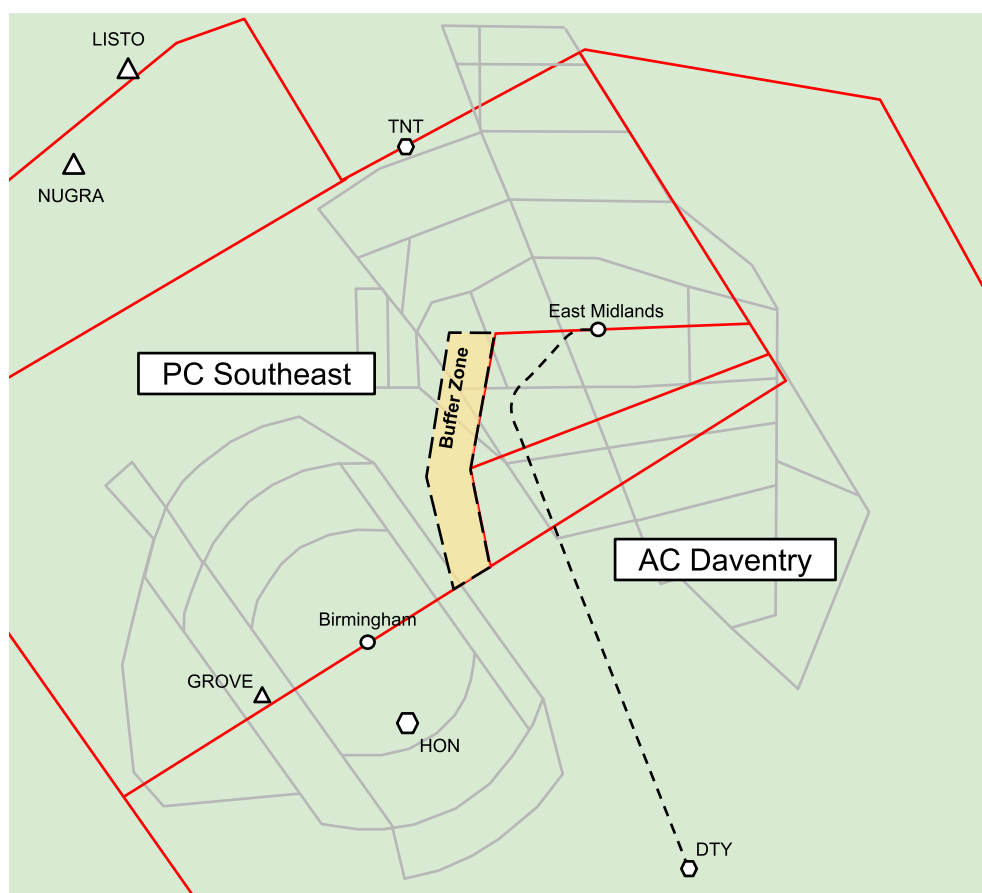
Routing/Destination						
← West	HON (Honiley VOR)					East →
Solent Group, EGLF, Wessex Group	EGKK	BNN Arrivals	EGMC	LOREL Arrivals	EGGW	JACKO Arrivals

8.4.3 Midlands Buffer Zone

The 3 NM wide Midlands Buffer Zone is established to ensure that radar separation is maintained between northbound Birmingham (Runway 15) departures being controlled by PC Southeast, and southbound departures from East Midlands under the control of TC Midlands.

The base of the Buffer Zone is coincident with the designated base of CAS. However, it does not exist where it overlaps with the Birmingham and East Midlands CTAs, neither laterally nor vertically.

Figure LAC-15 – Midlands Buffer Zone



8.4.3.1 East Midlands Runway 27 in use

Whenever Runway 27 is in use at East Midlands, PC Southeast shall ensure that aircraft remain on, or west of the western edge of the Buffer Zone as detailed above.

8.4.3.2 East Midlands Runway 09 in use

Whenever Runway 09 is promulgated as the runway in use, PC Southeast have full use of the revised airspace, i.e., to the eastern edge of the Buffer Zone as detailed above. East Midlands ATC shall also not permit departures off Runway 27 without prior coordination with PC Southeast.

MPC

MANCHESTER PRESTWICK CONTROL - MPC

MPC | MANCHESTER PRESTWICK CONTROL

Chapter 1 General Operating Procedures

1.1 Altimeter Setting Procedures

1.1.1 Transition Altitude

The transition altitude in the Manchester TMA is 5000 ft.

1.1.2 Transition Level and Minimum Stack Level

QNH	Transition Altitude	
	5000 ft	
	Transition Level (TL)	Minimum Stack Level (MSL)
1060		
1050	FL50	FL60
1049		
1032	FL55	FL60
1031		
1013	FL60	FL60
1012		
995	FL65	FL70
994		
977	FL70	FL70
976		
959	FL75	FL80
958		
940	FL80	FL80

Note: The classification of 1013 hPa as 'high pressure' in the above table differs from MATS Part 1 (CAP 493).

1.1.2.1 Change to MSL Procedure

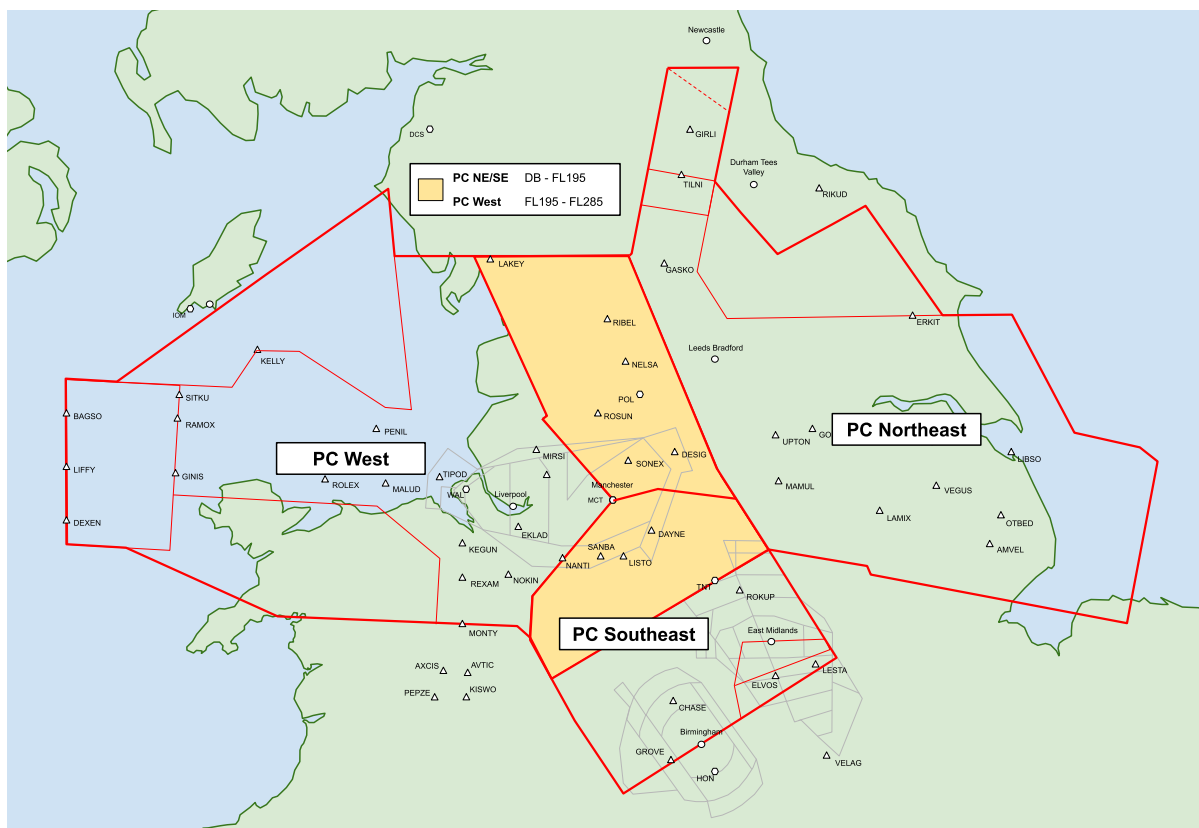
When the pressure changes across an MSL boundary:

- The first APC/Enroute controller to notice the change shall notify all affected units who also refer to the MSL.
- The first controller shall coordinate the agreement of an effective time that is at least 5 minutes from the time the pressure change was noticed.

Aircraft operating at the old MSL are deemed separated from aircraft operating at the Transition Altitude until the new MSL is agreed to be in effect.

1.2 MPC Airspace

Figure MPC-1 – MPC Area of Responsibility Overview



Manchester Prestwick Control (MPC) is divided into three sectors: PC West, PC Northeast and PC Southeast. PC provides services to both Terminal Control, and Area Control (en-route) traffic. Areas of Responsibility are detailed in their respective sections.

‘Manchester Prestwick Control’ (MPC) is a VATSIMism caused by the closure of the Manchester Area Control Centre (ACC) in 2010, when the controllers of this airspace moved to NATS Prestwick ACC.

Although the RTF callsign is “Scottish Control”, and the logon callsigns being with MAN, in order to avoid confusion with Manchester Airport ADC/APC controllers, coordination callsigns of “PC Bandbox”, “PC West” and “PC East” etc. were deemed most appropriate.

1.2.1 Designated Sectors

Sector	Coordination Callsign	VATSIM Callsign	Frequency
MPC West	PC West	MAN_W_CTR	128.050
MPC Northeast	PC Northeast	MAN_NE_CTR	135.700
MPC Southeast	PC Southeast	MAN_SE_CTR	134.425
MPC East	PC East	MAN_E_CTR	133.800
MPC Bandbox	PC Bandbox	MAN_CTR	133.200

Note: Relief callsigns shall be determined by the addition of a **second** underscore between the middle identifier (or prefix in the case of the Bandbox callsign) and the suffix (CTR).

For example:

MAN_CTR → MAN__CTR
 MAN_NE_CTR → MAN_NE__CTR

1.3 MPC Sector Bandboxing/Splitting Procedures

MAN_CTR PC Bandbox 133.200 MHz	MAN_E_CTR PC East 133.800 MHz	MAN_NE_CTR PC Northeast 135.715 MHz
		MAN_SE_CTR PC Southeast 134.430 MHz
MAN_W_CTR PC West 128.055 MHz		

1.4 General Procedures

1.4.1 Route Restrictions

The table below lists the maximum cruising level available for outbounds and inbounds between certain airfields and adjacent sectors/centres.

From	To	Maximum Cruising Level
MTMA Group	LTMA Group	FL190
MTMA Group	Belfast Group	FL240
MTMA Group	Dublin Group	FL260
Belfast Group	MTMA Group and Midlands Group	FL250
Belfast Group	EGNJ, EGVN, EGNT and EGSB	FL270
Dublin Group	Midlands Group, EGNJ, EGNV, EGNT and EGSB	FL270
Dublin Group	MTMA Group	FL230

1.4.2 Initial Route Clearance

PC Controllers shall issue route clearance (including STARs) in accordance with [GEN 1.1](#). See [Annex A](#) for a list of STARs.

Chapter 2 General Coordination Regulation

2.1 Standing Agreement

The majority of traffic entering and leaving MPC airspace is subject to Standing Agreement. Standing agreements are also used extensively internally between the MPC sectors. See [GEN 5.1](#).

2.1.1 Individual Coordination

All traffic not subject to a Standing Agreement must be individually coordinated between sectors.

2.2 Major Aerodromes

Traffic to and from the major aerodromes within, or adjacent to, MPC sectors are subject to the procedures defined for each airfield in the APT | Airports section.

2.3 Minor Aerodromes

Other minor aerodromes without listed procedures will require individual coordination of both arrivals and departures.

2.4 Coordination of Stack Levels Between MPC and APC

Each MPC sector is responsible for any stacks within its airspace, as defined in the relevant sections. The MPC sector will 'feed' arrivals into the top of the stack. The respective Aerodrome's Approach Control Unit have been delegated the responsibility from the bottom of the stack.

Unless otherwise specified, if significant holding is taking place, the appropriate PC sector will retain those aircraft above FL120, transferring them to the relevant approach control unit as they descend to FL110 or below, in the hold.

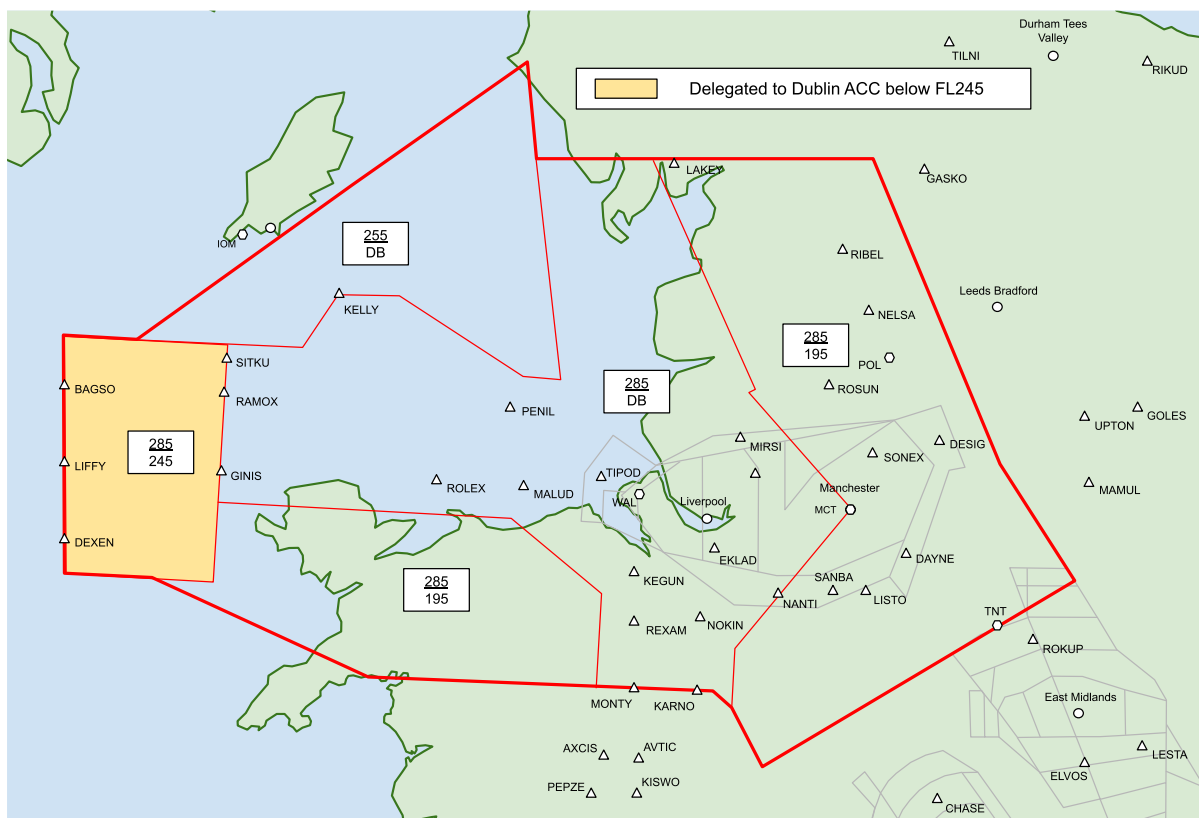
Holding should not be allowed to extend beyond the upper limit of the PC sector. It may be necessary to keep some levels vacant, to enable overflights to transit through the stack area. Additional holding should take place at the designated en-route hold.

Chapter 3 PC West

3.1 Area of Responsibility

PC West (PC W) covers the area of the MTMA to the west, with an upper limit of FL285. PC West is responsible for both departures and arrivals into Manchester, Liverpool, as well as initial sequencing for arrivals from the north into the Midlands Group.

Figure MPC-2 – PC West Area of Responsibility



3.1.1 Sector Frequency

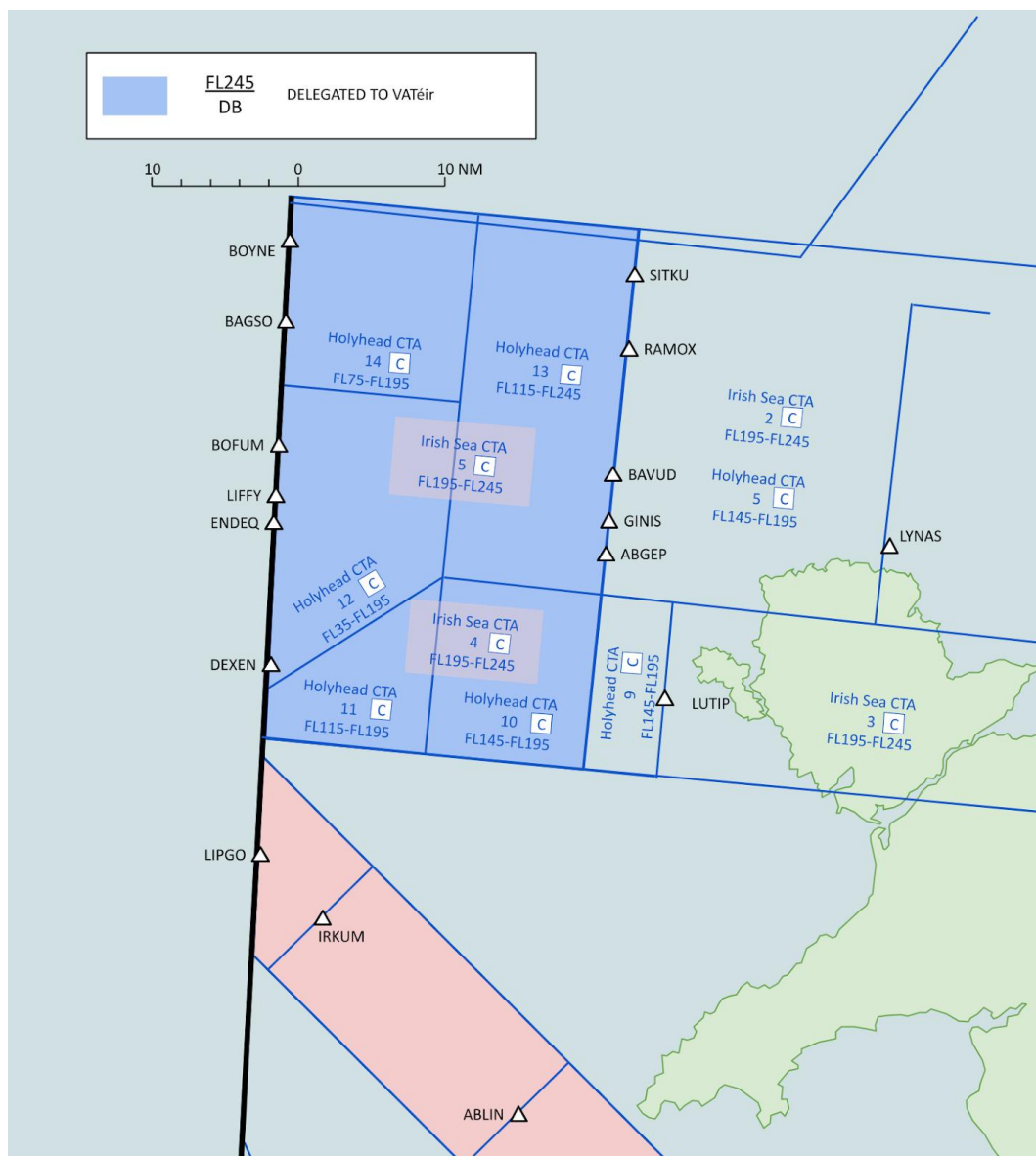
PC West operates on frequency 128.050 MHz.

3.1.2 Delegated Airspace

3.1.2.1 To Dublin ACC – Irish Sea and Holyhead CTAs

From the declared base (DB) to FL245 in the blue area shown in Figure MPC-3 (a combination of Holyhead CTAs 10, 11, 12, 13 & 14, and Irish Sea CTAs 4 & 5), ATS is delegated from PC West to Dublin.

Figure MPC-3 – Delegation of airspace in the Irish Sea from PC West



3.1.3 Deemed Separations

All traffic operating simultaneously on Q37 and Q36 **below FL245** are deemed separated between BOFUM-DONAX and ENDEQ-ALAVA.

No separation exists between traffic operating on the L975 and traffic on either the Q37/Q36. Separation between traffic on these routes shall be managed tactically by ATC.

3.2 Standing Agreements

3.2.1 Internal PC Agreements

3.2.1.1 PC Northeast to PC West

From	Agreement	Conditions
EGNT	FL210 lvl GASKO	Positioned on a heading to the west of the P18 centreline. Released for right-hand turns only.
EGNV	↑ FL190	Positioned on a heading to the west of the P18 centreline.

To	Agreement	Conditions
Midlands Group	FL270 lvl 5 before BEGAM	Positioned on or west of the RAPUM-BEGAM track (UP16).

3.2.1.2 PC Southeast to PC West

From	To	Agreement	Conditions
-	EGGP	FL100 lvl NANTI	RFD to MSL. (See Note)
EGBB, EGBE	-	FL190 lvl 5 NM before NANTI/EVSON	
EGNX	-	FL190 lvl 10 NM before WHI	Via ASNIP
Midlands Group	-	FL190 lvl 25 NM before POL	Traffic to be positioned east of PEDIG-POL.

Note: When Runway 05L/R is in use at EGCC, PC Southeast shall ensure this traffic is vectored to remain clear of the Manchester 05L/R RMA.

3.2.1.3 PC West to PC Northeast

From	To	Agreement	Conditions
-	EGNM	FL150 lvl 5 NM before BARTN	
-	EGNT	FL260 lvl POL	(U)N57, (U)N601
-	EGNV	FL200 lvl POL	(U)N57, (U)N601
EGGP, EGNR	-	↑ FL90	(See Note)

Note: When Runway 05L/R is in use at EGCC, PC West shall ensure this traffic is vectored to remain clear of the Manchester 05L/R RMA.

3.2.1.4 PC West to PC Southeast

From	To	Agreement	Conditions
-	Midlands Group	FL200 lvl MCT	FL190 or below 10 NM south of MCT. (Note 1)
-	Midlands Group	FL200 lvl abeam NOKIN / 25 NM before CREWE	(Note 2)
EGGP, EGNR	-	↑ FL90	(Notes 3 & 4)

Note 1: Traffic to be positioned over the MCT unless coordinated with PC Southeast.

Note 2: Traffic to BB/NX above FL195 should file via AMPIT not WAL. 25 NM before CREWE therefore only remains an agreement on VATSIM for incorrect flight planning.

Note 3: When Runway 05L/R is in use at EGCC, PC West shall ensure this traffic is vectored to remain clear of the Manchester 05L/R RMA.

Note 4: Traffic RFL FL200+ may be positioned by PC West towards VIDOK or the Honiley Radar Gate without coordination.

3.2.2 External Standing Agreements

3.2.2.1 AC Daventry

From PC West to AC Daventry

From	Agreement	Conditions
EGNM, EGNH, EGNJ	↑ FL280	

3.2.2.2 AC Lakes

From AC Lakes to PC West

To	Agreement	Conditions
Dublin Group	↓ FL290	Via (U)L70, M144, M145.
EGCC	↓ FL290	Via MALUD.
Midlands Group	FL290 lvl ROLEX/BAGIT/DONAX	Via (U)L975, (U)Y124, Q37.

From PC West to AC Lakes

From	Agreement	Conditions
EGNM	FL280 lvl PENIL	
Dublin Group RFL290+	FL280 lvl DONAX/ROLEX/ALAVA/BAGIT	

3.2.2.3 AC West

From AC West to PC West

To	Via	Agreement	Conditions
EGCC, EGNH, EGNO, EGNM	P16 (RNAV1)	FL200 lvl AXCIS	To cross MONTY at FL190 or below
EGCC, EGNH, EGNO, EGNM	N864	FL200 lvl AVTIC	To cross MONTY at FL190 or below
EGGP, EGNR	P16 (RNAV1)	FL180 lvl PEPZE	
EGGP, EGNR	N864	FL180 lvl KISWO	
EGNT, EGNV, EGNJ	N864	FL280 lvl AVTIC	RFD to FL260. (Note 1)

Note 1: This traffic may be offered to AC Lakes at higher levels/the RFL during quieter periods.

From	Agreement	Conditions
Severn Group, EGTE	FL280 lvl AVTIC	(Note 2)

Note 2: Severn Group/EGTE departures with RFL285+ should be offered at higher levels to AC Lakes, particularly when PC West and AC Lakes are split.

From PC West to AC West

From	To	Agreement	Conditions
EGNM	-	FL270 lvl KARN0	RFC
MTMA Group	-	↑ FL190	

Traffic entering the systemised route structure in AC West should be transferred in accordance with the following priority:

1. In trail (with speeds as appropriate)
2. With vertical separation (coordinating higher/lower where appropriate)
3. Lateral separation (using radar headings).

3.2.2.4 Scottish TMA (ScTMA) – Talla

From PC West to ScTMA Talla

From	Agreement	Conditions
EGNM	↑ FL180	

3.2.2.5 ScAC Rathlin

From ScAC Rathlin to PC West

From	To	Agreement	Conditions
EGAA and EGAC (RFL270+)	-	FL270 lvl 5 NM before SOSIM	Positioned between KELLY and SOSIM
-	MTMA Group, EGNH, EGNO and EGNM	FL270 lvl MAKUX	
-	Midlands Group	FL270 lvl MAKUX	

From PC West to ScAC Rathlin

From	Agreement	Conditions
MTMA Group, EGNH and EGNO	FL260 lvl KELLY/LUSOD	Positioned on the north side of (U)L10. (See Note)

Note: PC West should notify STC Antrim (255-) of traffic unable to achieve FL260 level 10 NM before KELLY and ascertain whether they wish to work the traffic.

3.2.2.6 ScAC Deancross

From ScAC Deancross to PC West

To	Agreement	Conditions
Midlands Group and EGNJ	↓ FL270	

From PC West to ScAC Deancross

From	Agreement	Conditions
MTMA Group	↑ FL280	(See Note)

Note: PC West shall notify ScTMA Talla (255-) of traffic unable to achieve FL260 before the sector boundary between PC West & Talla and ascertain whether they wish to work the traffic.

3.2.2.7 Dublin Upper North (FL125-245)

From Dublin Upper North to PC West

From	Agreement	Conditions
Dublin Group	↑ FL230	Via BOFUM/LIFFY/ENDEQ. (Notes 1 & 2)
Dublin Group	↑ FL230	Via DEXEN. (Note 2)

Note 1: Traffic is released for right turns only. PC West may elect to turn traffic into the DEXEN Buffer, but in doing so will accept responsibility for separation against Y124 traffic.

Note 2: When Dublin and Shannon are split, traffic is **not** RFC without coordination with Shannon (LIFFY) sector.

From PC West to Dublin Upper North

To	Agreement	Conditions
Dublin Group	↓ FL180	(Notes 1 & 2)

Note 1: When Runway 10L/R is in use at Dublin, traffic should be descending FL180 at approximately RIMVU (M145) / OGTUG (M144). When Runway 28L/R is in use, traffic should be descending FL180 inbound to SITKU (M145) / RAMOX (M144) and handed to Dublin ACC **in good time**.

Note 2: PC Isle of Man shall ensure that simultaneous arrivals via M145 and M144 are separated at the point of transfer.

3.2.2.8 Shannon LIFFY (FL245+)

From Shannon LIFFY to PC West

To	Agreement	Conditions
EGGP, EGNR, EGNE, EGNH, EGNM, EGNO	FL270 IM BOFUM/LIFFY	(See Note)

Note: During busy periods and when Lakes/PC West are split, EGCC inbounds may also be transferred directly to PC West at FL270 (skipping Lakes) on request to Shannon.

From PC West to Shannon LIFFY

From	Agreement	Conditions
MTMA Group, EGNH, EGNO	FL280 IM RAMOX	(See Note)

Note: Traffic is released for climb to FL330 after passing RAMOX, subject to known traffic. Traffic transferred on a radar heading is **not** RFT until passing RAMOX.

3.3 Coordination with Adjacent Units, Sectors and Airfields

3.3.1 EGCC Vectoring of Outbounds Subject Inbounds ('Turn and Burn')

The 'Turn and Burn' procedures at Manchester allow early climb of departures by vectoring low-level against inbound traffic released to Manchester APC. This is achieved by vectoring inside the SID tracks to lengthen the point of conflict and thus climb departures over inbounds. They are most useful between the following pairings:

- **Runway 23L/R:** MIRSI/ROSUN inbounds vs. POL/SONEX departures
- **Runway 05L/R:** ROSUN inbounds vs. ASMIM departures

Before vectoring departing traffic on the SIDs above, the PC controller must consider that:

- Vectoring of departures should not occur until they pass the noise abatement altitude of the relevant NPR profile, as defined in the table below.
- Removing the speed restriction may have the adverse effect of widening the turn radius, so controllers are advised not to do so until the required turn has been observed.
- The effects of wind will need to be considered in selecting a suitable heading that ensures separation from inbound traffic.
- Climb above the SID altitude should be given in the turn to ensure that the departure is able to climb above the inbound traffic.
- Although Manchester APC controllers should be aware of this technique, and as such be vectoring inbounds to allow it to be used safely, the RMAs are ultimately established for the purpose of vectoring inbounds. Thus, when it appears that Manchester APC is operating very close to the southern extremity of their RMA (see APT 9.2), prior coordination must be effected between the PC sector and APC to agree a plan of action for the departing traffic.

Noise Preferential Routes (NPR) apply to all departing jet aircraft. Except when required for safety reasons, deviation from the NPRs is not permitted until aircraft have passed the following altitudes:

SID	Runway	Altitude
EKLAD/KUXEM	23L/R	3000 feet
SONEX/POL	23L/R	4000 feet
LISTO/SANBA	23L/R	5000 feet
ASMIM/DESIG/POL	05L/R	4000 feet
LISTO	05L/R	5000 feet

The use of the phrase "on passing altitude 4,000 feet turn right heading", for example, is permitted.

3.3.2 Coordination with AC Daventry

3.3.2.1 Northbound Traffic

Daventry may transfer LTMA, Solent, Farnborough and Wessex Group departures that have been coordinated below their RFL on a heading to PC West. PC West must not alter the track of any aircraft transferred on a heading before the aircraft enters their airspace unless coordination is effected with Daventry.

3.3.2.2 Slow Climbing LTMA, Solent, Farnborough and Wessex Group Departures

Traffic outbound from LTMA, Solent, Farnborough and Wessex Group airfields that is unable to reach FL290 by abeam TNT will be coordinated by AC Daventry with PC West.

PC West shall either:

- Request that the traffic be transferred directly to AC Lakes, released for climb.
- Request to work the traffic climbing to FL280.
- Request to work the traffic climbing to an intermediate level below FL280.

3.3.2.3 Southbound Traffic

To assist with integrating and streaming LTMA inbounds, AC Lakes and PC West may coordinate opposite direction levels with Daventry (i.e. even levels).

All traffic transferred from PC West to Daventry should be level at the coordinated level by the sector boundary unless otherwise coordinated.

3.3.3 Coordination with ScAC Rathlin

3.3.3.1 Traffic Positioning

Westbound traffic on the L10 ATS route should be positioned by PC West on a heading towards or north of KELLY prior to transfer to Rathlin.

Eastbound traffic will be positioned by Rathlin on a heading towards or south of INKOB prior to transfer to PC West.

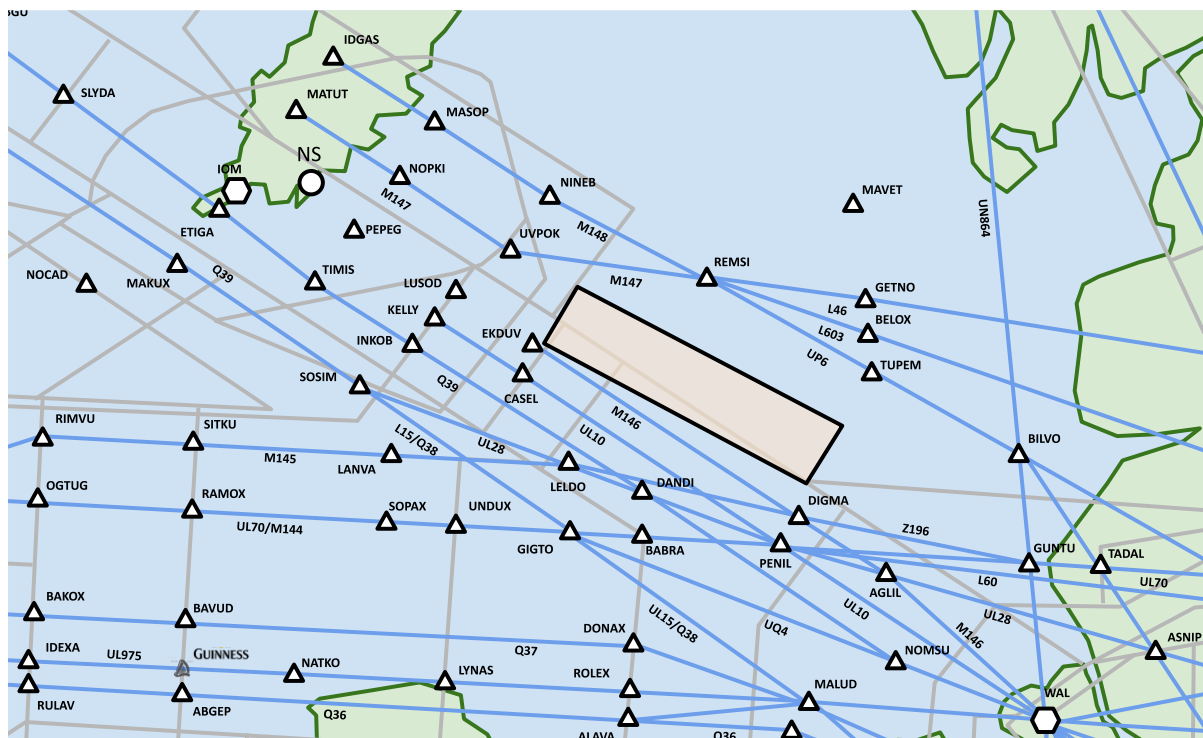
3.3.3.2 The REMSI Buffer Zone

The REMSI Buffer Zone (see Figure MPC-4 below) is established to ensure separation between southbound traffic from the Belfast TMA versus traffic inbound to the Belfast TMA via REMSI.

PC West shall ensure that Manchester TMA Group outbounds climbing FL260 will not enter the REMSI Buffer Zone.

The buffer may be displayed on the controller scope under **Display Settings** → **Stars** → **REMSI Buffer**.

Figure MPC-4 – REMSI Buffer Zone



3.3.3.3 Level Agreements

From ScAC Rathlin to PC West

To	Via	Max Level
Belfast TMA departures to EGNJ, EGNT, EGNV and EGSH	Q38/L15	FL270

3.3.4 Dublin & Shannon ACCs

3.3.4.1 Sectorisation

3.3.4.1.1 Dublin ACC

Dublin ACC is split into a North sector and a South sector, each of which is further divided vertically at FL125. The boundary between the Dublin ACC North sector and South sector is aligned along the extended centrelines of Dublin Runway 10R/28L.

The coverage priority (left to right) for Dublin ACC sectors at the interface with PC West is as follows:

Dublin Lower North (DB-FL125)

EIDW_2_CTR 132.575 MHz	Dublin Upper North
----------------------------------	---------------------------

Dublin Upper North (FL125-FL245)

EIDW_1_CTR 129.175 MHz	Shannon LIFFY – Upper
----------------------------------	------------------------------

Dublin Lower South (DB-FL125)

EIDW_4_CTR 120.750 MHz	Dublin Lower North
----------------------------------	---------------------------

Dublin Upper South (FL125-FL245)

EIDW_3_CTR 135.650 MHz	Dublin Upper North
----------------------------------	---------------------------

3.3.4.1.2 Shannon ACC

Although Shannon have defined a day-to-day configuration of the high-level airspace, they use a dynamic sectorisation above FL245 that varies according to the particular traffic demands. The airspace can also be split vertically at FL355; when this occurs, the sector from FL245-FL355 (that interfaces with PC West) will be referred to as ‘Upper’, with the sector above FL355+ referred to as ‘Super’.

Shannon ACC will advise London of the current sector configuration and frequencies if different from the configuration detailed below.

The coverage priority (left to right) for the Shannon ACC sector at the interface with PC West is as follows:

Shannon LIFFY – Upper (FL245-FL355)

EISN_E_CTR 131.150 MHz	EISN_CTR 131.150 MHz
----------------------------------	--------------------------------

3.3.4.2 Level or Route Revisions

Any change to the level or routing of an aircraft are to be coordinated (which can be via electronic coordination) by the transferring controller, with acknowledgement received or agreement reached prior to transfer of communications.

3.3.4.3 Transfer of Control and Communication

3.3.4.3.1 Dublin ACC

UK ATS Route	Coordination Point	Transfer of Control	Transfer of Communications	
			From London ACC to Dublin ACC	From Dublin ACC to London ACC
M145	BAGSO	SITKU	SITKU	N/A
M144 / (U)L70	BAGSO	BAGSO	RAMOX	N/A
Q37	BOFUM	BAVUD	N/A	BAVUD
(U)L975	LIFY	GINIS	N/A	GINIS
Q36	ENDEQ	ABGEP	N/A	ABGEP
(U)Y124	DEXEN	5 NM before LUTIP (Note 1)	N/A	5 NM before LUTIP

Note 1: Traffic south of the UY124 centreline shall not be climbed by London unless it is at least 5 NM from the northern edge of the L18.

3.3.4.3.2 Shannon ACC

UK ATS Route	Coordination Point	Transfer of Control	Transfer of Communications	
			From London ACC to Shannon ACC	From Shannon ACC to London ACC
M144 / (U)L70	BAGSO	BAGSO	RAMOX	N/A
Q37	BOFUM	BOFUM (Note 1)	N/A	Abeam DUB
(U)L975	LIFY	LIFY (Note 1)	N/A	Abeam DUB
Q36	ENDEQ	ENDEQ (Note 1)	N/A	Abeam DUB
(U)Y124	DEXEN	DEXEN (Notes 1, 2 & 3)	N/A	Abeam DUB

Note 1: Eastbound traffic transferred to PC West through BOFUM/LIFY/ENDEQ is RFT (up to a maximum of 45°) within 25 NM of the respective coordination point.

Note 2: Eastbound traffic transferred to PC West through DEXEN is released for **left** turn only (up to a maximum of 45°) when within 25 NM of DEXEN.

Note 3: Traffic south of the UY124 centreline shall not be climbed by PC West unless it is at least 5 NM from the northern edge of the L18.

3.3.4.4 Level Planning

For Standing Agreements, see [MPC 3.2.2.7](#) & [3.2.2.8](#).

3.3.4.5 Reduced Longitudinal Separation

A reduced minimum longitudinal separation of 3 minutes may be applied between aircraft on the same or crossing tracks, at the same level, climbing, or descending. The transferring unit in each case must radar monitor the separation and ensure that the actual distance between aircraft is no less than 20 NM.

3.3.4.6 Silent Handover (Silent Transfer of Radar Control)

The conditions for Silent Handover are as per GEN 5.6.2, except for the additional procedures set out below.

3.3.4.6.1 Silent Handover for Aircraft on Parallel Headings and/or Speed Control

In addition to the above conditions being met, aircraft may be transferred between London ACC and Dublin/Shannon ACC, in both directions, on parallel headings and with speed control provided that:

- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading, but this is not reported, they shall ascertain whether they are on a heading or own navigation before altering the heading.

3.3.4.7 RAMOX Buffer Zone

The RAMOX Buffer Zone (see Figure MPC-5 below) is established up to FL245 to ensure separation between traffic operating on the M144/M145 ATS routes against traffic on the Q36/Q37/L975 ATS routes. PC West or Dublin shall coordinate with the other controller where any breach of the buffer zone is required.

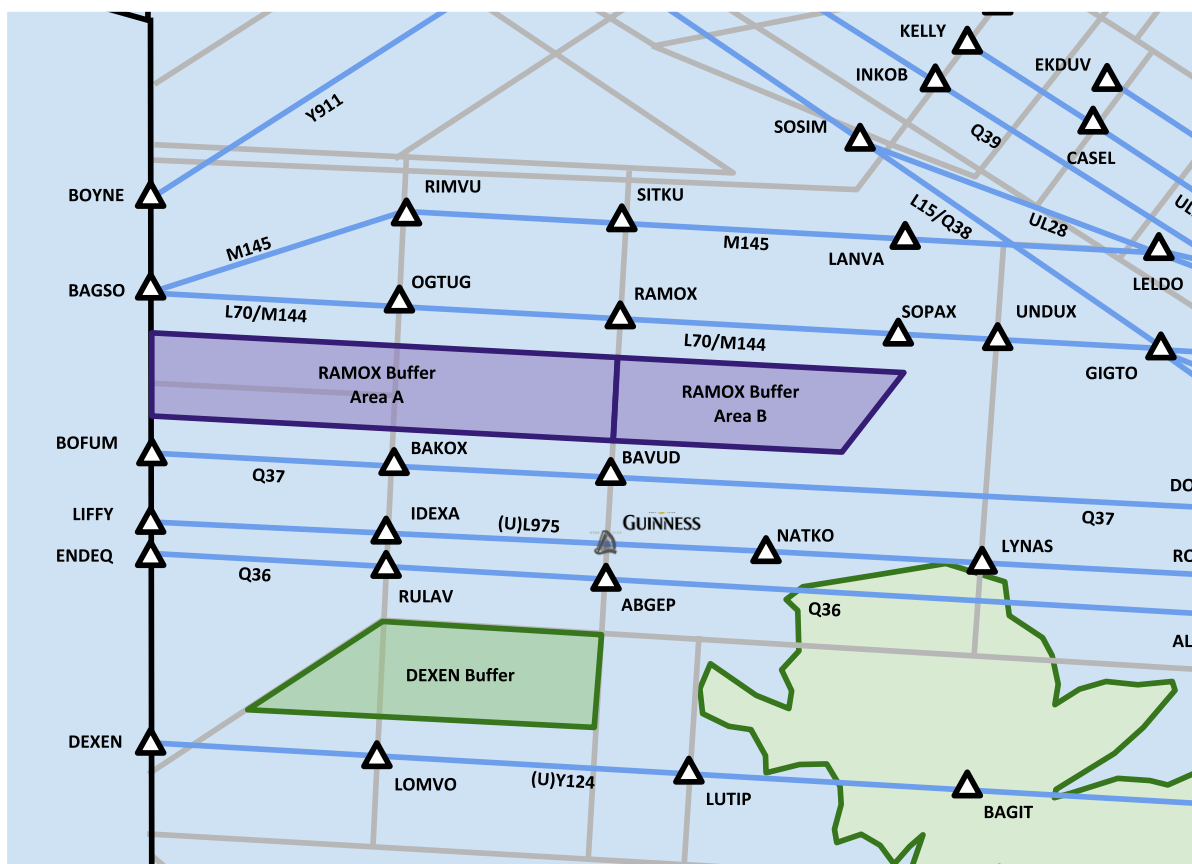
PC West must ensure both Area A and Area B are displayed at all times: **Display Settings → Stars → RAMOX Buffer Area A & RAMOX Buffer Area B.**

3.3.4.8 DEXEN Buffer Zone

The DEXEN Buffer Zone (see Figure MPC-5 below) is established between DEXEN and LUTIP up to FL245 to ensure separation between traffic operating on the Y124 ATS route against traffic operating on the Q36/Q37/L975 ATS routes. PC West or Dublin shall coordinate with the other controller where any breach of the buffer zone is required.

PC West **must** ensure the buffer is always displayed: **Display Settings → Stars → DEXEN Buffer.**

Figure MPC-5 – RAMOX and DEXEN Buffer Zones



3.3.5 Blackpool (EGNH)

3.3.5.1 Inbound Procedures

Blackpool inbounds will be routed in accordance with the table below:

Via WAL	Inbound routing will be WAL – ESTRY – EGNH . <i>Note: ESTRY is not a published hold, and therefore traffic will not be held at this point.</i>
Via POL	PC West will request an inbound level from Blackpool APC.
Via DCS	PC West will not control this traffic.
From West	If planned at FL55 and above, PC West will be responsible for the flights <ul style="list-style-type: none"> - PC West will pass an estimate (including the SSR code) to Blackpool APC. - PC West will request an inbound level from Blackpool APC. When clear of conflicts, the traffic will be transferred to Blackpool APC.

3.3.5.2 Outbound Procedures

The outbound routing via WAL will be as follows:

Departure	Route
Blackpool	EGNH – ESTRY – WAL

Blackpool will request clearances with the relevant PC Sector as follows:

- **Joining via WAL** – PC West
- **Joining via POL** – PC Northeast
- **Joining via DCS** – ScTMA

3.3.6 Hawarden (EGNR)

3.3.6.1 Inbound Procedures

All inbounds will route to KEGUN.

Via	Route
(U)N601/P6	LESTA – TNT – NANTI – KEGUN (KEGUN 2A)
N57/T420/Q4	TNT – NANTI – KEGUN (KEGUN 2B)
N57(Y53)/M605	PEDIG – NANTI – KEGUN (KEGUN 2C)
(U)N864	MONTY – KEGUN
(U)L975 <i>Eastbound</i>	LYNAS – WAL – TORGO – KEGUN
(U)L10 <i>Eastbound</i>	IOM – WAL – TORGO – KEGUN
(U)L612	CROFT – WAL – TORGO – KEGUN
(U)L975 <i>Westbound</i>	DESIG – WAL – TORGO – KEGUN

PC West will pass the inbound estimate, including the SSR code, on Hawarden inbounds to Liverpool APC, who will pass it on to Hawarden ADC.

PC West will transfer Hawarden inbounds to Liverpool APC descending to MSL.

3.3.6.2 Outbound Procedures

Hawarden ADC will request a clearance by PC West. PC West will provide Hawarden ADC with a full clearance, including the SSR code.

Hawarden ADC will advise PC West of the aircraft start up, the requested Standard Outbound Clearance and the departure runway, along with the estimated time of departure.

- **“REXAM 5” Departure Runway 22:** Off Runway 22 climb on track to REXAM to 5000 ft Hawarden QNH. Take off subject Radar with PC West Sector.
- **“REXAM 5” Departure Runway 04:** Off Runway 04 turn immediately right on track to REXAM remaining clear of the Manchester CTA and climb to 4000 ft Hawarden QNH. On crossing the WAL 167 radial, climb to 5000 ft Hawarden QNH. Take off subject Radar with PC West Sector.

Direction of Flight	Route	
South (N864/N862)	REXAM	Climbing initially to the lowest available level in the CTA.
Southeast (L10)	NANTI	Climbing initially to altitude 3000 ft QNH, then higher with PC West.
All other routes (via WAL)	WAL	Climbing initially to altitude 4000 ft QNH, then higher with PC West.

3.4 Holding Procedures

MIRSI Hold

MIRSI	RNAV Hold, 1-minute legs
Axis	061°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL60) – FL140
Speed	Maximum 230 kts IAS

Note: The MIRSI hold is separated from ROSUN hold up to and including FL140.

TIPOD Hold

For aircraft holding at TIPOD and KEGUN, PC West shall retain aircraft at and above FL90. When lower levels become available, they shall descend aircraft to the lowest level and release it to Liverpool APC.

TIPOD	RNAV Hold, 1-minute legs
Axis	117°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL70) – FL100
Speed	Maximum 210 kts IAS

KEGUN Hold

KEGUN	RNAV Hold, 1-minute legs
Axis	003°
Direction	LEFT hand
Holding Levels	MSL (Minimum FL70) – FL100
Speed	Maximum 210 kts IAS

Note 1: PC West and Liverpool APC should note that the KEGUN hold is also used for Hawarden (EGNR) inbound, which Liverpool APC will control.

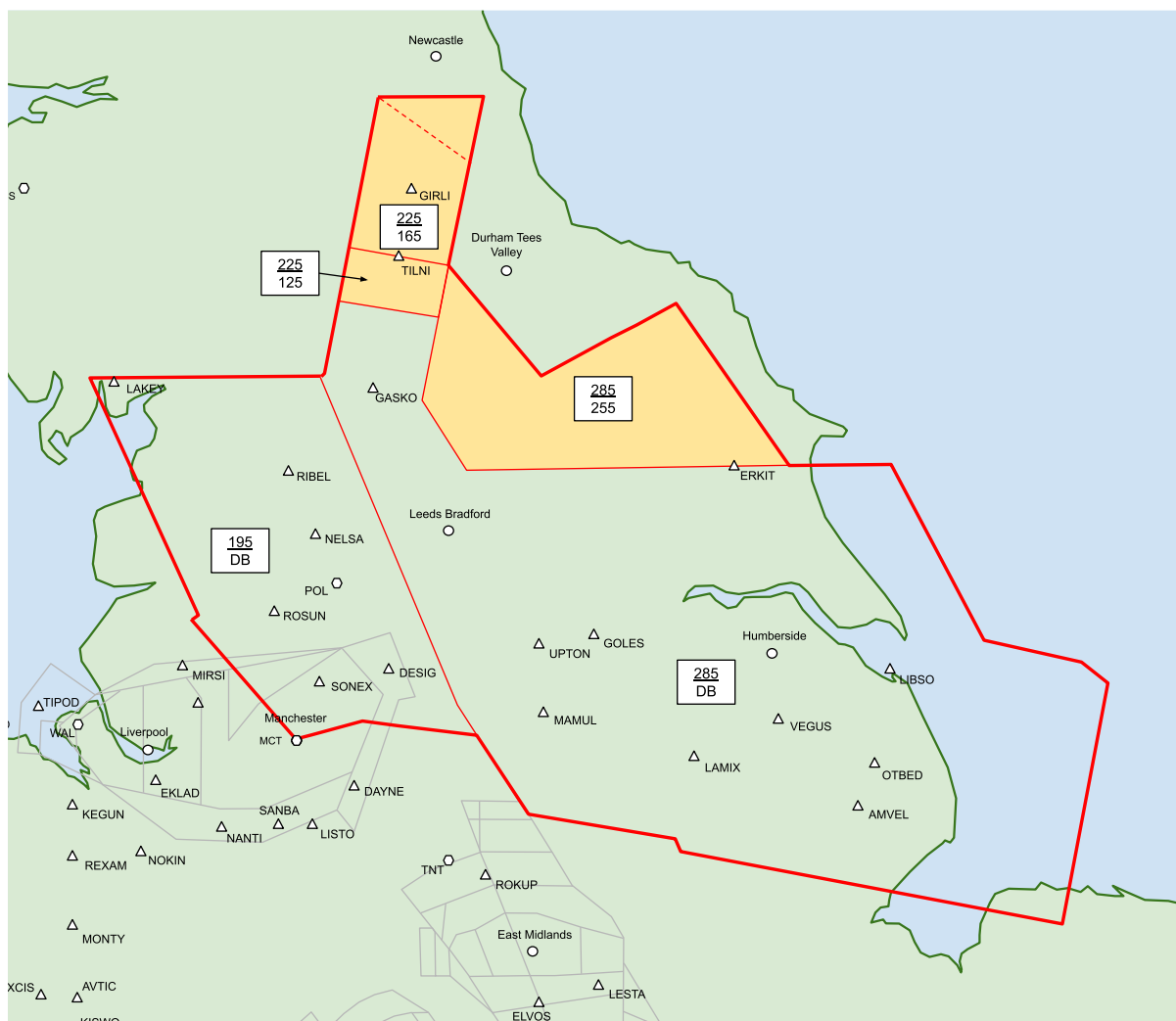
Note 2: When holding takes place at KEGUN outside of 2000-0700 local (the hours of NITON CTA-2), Liverpool must radar monitor holding aircraft as a high priority task, else arrange to hold at TIPOD.

Chapter 4 PC Northeast

4.1 Area of Responsibility

PC Northeast (PC NE) covers the area of the MTMA to the east, with an upper limit of FL195 to the west, and FL285 to the east. PC NE is responsible for both departures and arrivals to/from the east for MTMA aerodromes, as well as for Newcastle, Teesside, Humberside, and Leeds Bradford.

Figure MPC-6 – PC Northeast Area of Responsibility



4.1.1 Sector Frequency

PC Northeast operates on frequency 135.700 MHz.

4.2 Standing Agreements

4.2.1 Internal MPC Agreements

4.2.1.1 PC West to PC Northeast

From	To	Agreement	Conditions
-	EGNM	FL150 lvl 5 NM before BARTN	
-	EGNT	FL260 lvl POL	Via (U)N57, (U)N601
-	EGNV	FL200 lvl POL	Via (U)N57, (U)N601
EGGP and EGNR	-	↑ FL90	(See Note)

Note: When Runway 05L/R is in use at EGCC, PC West will vector clear of the Manchester 05L/R RMA.

4.2.1.2 PC Northeast to PC West

From	Agreement	Conditions
EGNT	FL210 lvl GASKO	Positioned on a heading to the west of the P18 centreline. Released for right-hand turns only.
EGNV	↑ FL190	Positioned on a heading to the west of the P18 centreline.

To	Agreement	Conditions
Midlands Group	FL270 lvl 5 before BEGAM	Positioned on or west of the RAPUM-BEGAM track (UP16).

4.2.2 External Standing Agreements

From AC Daventry to PC Northeast

To	Agreement	Conditions
EGNT, EGNV	FL280 lvl BETAX	
EGNT, EGNV	FL280 lvl 25 NM before MAMUL	

4.2.2.1 AC North Sea

From AC North Sea to PC Northeast

To	Agreement	Conditions
EGCC, EGNH, EGNO and EGNM	FL290 lvl OTBED	Traffic positioned on a heading to the north of Y70 centreline. (Note 1)
EGGP, EGNR and Midlands Group	FL290 lvl VEGUS	Traffic positioned on a heading to the north of Y70 centreline. (Note 1)
EGNT and EGNV	FL290 lvl NALAX	(Note 3)
EGNT and EGNV	FL290 lvl 15 NM before MITSO	(Note 3)
EGNJ	FL240 lvl 10 NM before SUPEL	Traffic positioned on the centreline of Y70.
MTMA and Midlands Group	FL290 lvl LIBSO	(Notes 2 & 3)

Note 1: If AC North have a number of inbounds routing via Y70 to PC Northeast, they will endeavour to position traffic so that Midlands Group traffic will be north of MTMA traffic, which will be north of EGNM traffic.

Note 2: If transferred on a heading, traffic is **not** RFT until within the confines of PC Northeast's airspace.

Note 3: Traffic positioned at least 5 NM from the edge of any active parts of the EG D323 complex.

From PC Northeast to AC North Sea

From	Agreement	Conditions
EGNJ	↑ FL230	Via Y70, L603. (See Note) Traffic with RFL250+ shall be transferred on a heading to the south of Y70 centreline.
MTMA Group, Midlands Group, EGNM, EGNH, EGNO, EGNT, EGNV	↑ FL280	Cross AMVEL FL250+. Via L603. (See Note)
MTMA and Midlands Group	FL280 lvl LIBSO	Via (U)L975/UT29. (See Note)

Note: If transferred on a heading, this traffic is **not** RFT until within the confines of North Sea's airspace.

4.2.2.2 ScAC South

From ScAC South to PC Northeast

To	Agreement	Conditions
EGSH	FL270 lvl ERKIT	RFD within PC Northeast (incl. delegated airspace).
EGNM	FL230 lvl TILNI	
MTMA, EGNH and EGNO	FL250 lvl TILNI	
Midlands Group	FL280 lvl RAPUM	

From PC Northeast to ScAC South

From	Agreement	Conditions
MTMA, Midlands Group, EGNH and EGNO	FL270 lvl ARSAT/TILNI	Via UP17/(U)P18. (See Note)
EGNM and EGCM	FL270 lvl UNTAL	(See Note)

Note: Positioned to the east of the TILNI-NATEB track.

4.2.2.3 ScTMA – Talla

From PC Northeast to ScTMA Talla

To	Agreement	Conditions
EGNC	FL140 lvl SHAPP	

4.2.2.4 ScTMA – Galloway

From ScTMA Galloway to PC Northeast

To	Agreement	Conditions
MTMA and EGNM	FL200 lvl LAKEY	RFD. (See Note).

Note: Traffic must be descended to FL190 or below by 10 NM after LAKEY to remain clear of PC West.

4.3 Coordination with Adjacent Units, Sectors and Airfields

4.3.1 EGCC Vectoring of Outbounds Subject Inbounds ('Turn and Burn')

The 'Turn and Burn' procedures at Manchester allow early climb of departures by vectoring low-level against inbound traffic released to Manchester APC. This is achieved by vectoring inside the SID tracks to lengthen the point of conflict and thus climb departures over inbounds. They are most useful between the following pairings:

- **Runway 23L/R:** MIRSI/ROSUN inbounds vs. POL/SONEX departures
- **Runway 05L/R:** ROSUN inbounds vs. ASMIM departures

Before vectoring departing traffic on the SIDs above, the PC controller must consider that:

- Vectoring of departures should not occur until they pass the noise abatement altitude of the relevant NPR profile, as defined in the table below.
- Removing the speed restriction may have the adverse effect of widening the turn radius, so controllers are advised not to do so until the required turn has been observed.
- The effects of wind will need to be considered in selecting a suitable heading that ensures separation from inbound traffic.
- Climb above the SID altitude should be given in the turn to ensure that the departure is able to climb above the inbound traffic.
- Although Manchester APC controllers should be aware of this technique, and as such be vectoring inbounds to allow it to be used safely, the RMAs are ultimately established for the purpose of vectoring inbounds. Thus, when it appears that Manchester APC is operating very close to the southern extremity of their RMA (see APT 9.2), prior coordination must be effected between the PC sector and APC to agree a plan of action for the departing traffic.

Noise Preferential Routes (NPR) apply to all departing jet aircraft. Except when required for safety reasons, deviation from the NPRs is not permitted until aircraft have passed the following altitudes:

SID	Runway	Altitude
EKLAD/KUXEM	23L/R	3000 feet
SONEX/POL	23L/R	4000 feet
LISTO/SANBA	23L/R	5000 feet
ASMIM/DESIG/POL	05L/R	4000 feet
LISTO	05L/R	5000 feet

The use of the phrase "on passing altitude 4,000 feet turn right heading", for example, is permitted.

4.3.2 Teesside (EGNV)

4.3.2.1 Inbound Procedures

PC Northeast shall pass an inbound estimate to Teesside APC advising them of the GASKO time and the SSR Code. Teesside APC will not pass an SSR code to PC Northeast. Traffic is to be transferred on the existing SSR Code for Teesside APC to change once it has left CAS.

Inbound aircraft approaching via P18 (from the South/Southwest) will be transferred from PC Northeast to Teesside APC:

From	To	Standard Inbound Release	Conditions
PC NE	Teesside APC	↓ FL140	Positioned on a heading to the east side of the P18 centreline, parallel to the edge of the CTA.

Note 1: Inbound traffic at or below FL130 will be individually coordinated with Teesside APC.

Note 2: Transfer of control (i.e., the Inbound Release Point) will be 10 DME before GASKO.

In the event that Teesside APC need to vector the aircraft towards the centreline of P18, they may do so but only once it has reached FL130.

4.3.2.2 Outbound Procedures

Teesside APC shall coordinate with PC Northeast to obtain the SSR code when the aircraft calls for its clearance. At this time, Teesside APC will advise PC Northeast sector of an estimated airborne time.

If this time changes by 5 minutes or more, Teesside APC must inform PC Northeast of the new time.

From	To	Standard Inbound Release	Conditions
Teesside APC	PC NE	↑ FL130, RFC	Joining CAS on track GASKO. Transferred from Teesside APC passing FL110 (See Note).

Note: Traffic will be transferred from Teesside APC to PC Northeast clean of all known traffic. If a higher level is required, Teesside APC will coordinate an alternative higher level with PC Northeast.

4.3.3 Humberside (EGNJ)

4.3.3.1 Inbound Procedures

PC Northeast will pass an estimated for either GOLES or OTBED.

To	Via	Standing Agreement	Condition
EGNJ	GOLES	↓ FL90	RFT/RFD on passing GOLES.
EGNJ	OTBED	↓ FL180	Traffic to route: SUPEL - OTBED - KIM

PC Northeast will pass Humberside details of any known conflicting traffic beneath Y70.

4.3.3.2 Outbound Procedures

Westbound

Humberside departures will route to **join CAS on track GOLES**.

Humberside will request a joining clearance with PC Northeast with an estimated time of departure. Humberside will pass revisions of 3 minutes or more to PC Northeast.

Eastbound

Humberside departures will route to join CAS on track OTBED or SUPEL.

Humberside will request a joining clearance with PC Northeast with an estimated time of departure. Humberside will pass revisions of 3 minutes or more to PC Northeast.

4.3.4 Norwich (EGSH)

4.3.4.1 Inbound Procedures

Via L602 and L603

When the Norwich inbound traffic is passing UMBEL and no later than OTR on L602 (southbound) or passing MAMUL and no later than LAMIX on L603 (eastbound), PC Northeast will contact Norwich Approach to advise them of the aircraft's position. There is no requirement to pass flight details.

Norwich Approach will then give PC Northeast an SSR code.

Norwich Approach will ascertain whether there is any conflicting military traffic operating south of Y70. If there is, Norwich Approach will undertake the necessary coordination with London Military to ensure that the military traffic will not come into conflict with the inbound traffic.

4.3.4.2 Outbound Procedures

Norwich will contact PC Northeast to notify them of the expected departure time of the relevant flight. They will also notify the PC NE sector should this time change by 5 minutes.

Swanwick Military will initially work the outbounds who have filed to operate at FL250 or above, northbound via L602, and will request a joining clearance from PC NE.

In the absence of Swanwick Mil, Norwich APC will request a joining clearance from PC NE after departure.

4.4 Holding Procedures

ROSUN Hold

ROSUN	RNAV Hold, 1-minute legs
Axis	172°
Direction	RIGHT hand
Holding Levels	MSL (minimum FL70) – FL140
Speed	Maximum 230 kts IAS

Note 1: ROSUN is separated from MIRSI up to and including FL140.

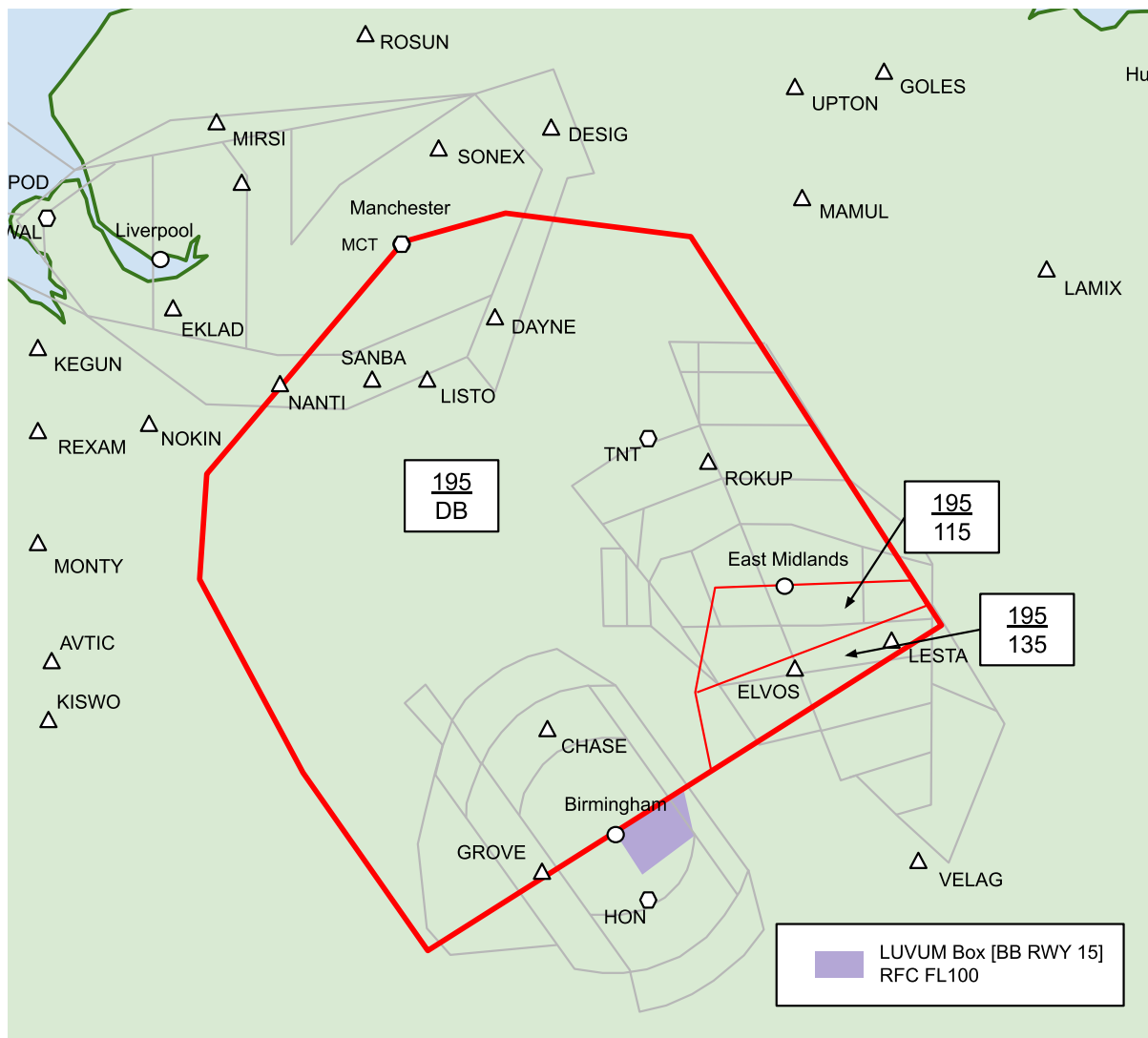
Note 2: Aircraft entering the ROSUN hold from POL route POL - BURNI - ROSUN. (BURNI is the initial entry fix for aircraft entering the ROSUN hold from the POL direction.)

Chapter 5 PC Southeast

5.1 Area of Responsibility

PC Southeast (PC SE) covers the area of the MTMA to the south, with an upper limit of FL195. PC SE is responsible southbound arrivals/departures to/from the majority of the MTMA.

Figure MPC-7 – PC Southeast Area of Responsibility



5.1.1 Sector Frequency

PC Southeast operates on frequency 134.425 MHz.

5.1.2 Delegated Airspace

5.1.2.1 LUVUM Box

The LUVUM Box, pictured above in Figure MPC-7, is established when Runway 15 is in use at Birmingham.

Birmingham LUVUM departures from Runway 15 may be climbed by PC Southeast to FL100 without coordination with TC Midlands.

5.2 Standing Agreements

5.2.1 Internal MPC Agreements

5.2.1.1 PC West to PC Southeast

From	To	Agreement	Conditions
-	Midlands Group	FL200 lvl MCT	FL190 or below 10 NM south of MCT. (Note 1)
-	Midlands Group	FL200 lvl abeam NOKIN / 25 NM before CREWE	(Note 2)
EGGP, EGNR	-	↑ FL90	(Notes 3 & 4)

Note 1: Traffic to be positioned over the MCT unless coordinated with PC Southeast.

Note 2: Traffic to BB/NX above FL195 should file via AMPIT not WAL. 25 NM before CREWE therefore only remains an agreement on VATSIM for incorrect flight planning.

Note 3: When Runway 05L/R is in use at EGCC, PC West shall ensure this traffic is vectored to remain clear of the Manchester 05L/R RMA.

Note 4: Traffic with RFL FL200+ may be positioned by PC West towards VIDOK or the Honiley Radar Gate without coordination.

5.2.1.2 PC Southeast to PC West

From	To	Agreement	Conditions
-	EGGP, EGNR	FL100 lvl NANTI	RFD to MSL. (See Note)
EGBB, EGBE	-	FL190 lvl 5 NM before NANTI/EVSON	
EGNX	-	FL190 lvl 10 NM before WHI	
Midlands Group	-	FL190 lvl 25 NM before POL	Traffic to be positioned east of PEDIG-POL.

Note: When Runway 05L/R is in use at EGCC, PC Southeast shall ensure this traffic is vectored to remain clear of the Manchester 05L/R RMA.

5.2.2 External Standing Agreements

5.2.2.1 AC Daventry

From PC Southeast to AC Daventry

From	Agreement	Conditions
MTMA Group	FL190 lvl 10 NM before HON	(Notes 1 & 2)

Note 1: PC Southeast **must** coordinate with TC Midlands if an aircraft is unable to achieve FL190 level 10 NM before HON.

Note 2: For traffic positioning requirements, see MPC 5.3.1.

From AC Daventry to PC Southeast

To	Agreement	Conditions
MTMA Group	FL200 lvl ELVOS / LESTA / 25 NM before TNT	(Notes 1, 2 & 3)
EGNM, EGNH, EGNO	FL200 lvl 10 NM before TNT	(Notes 1, 2 & 3)
EGNM, EGNH, EGNO	FL200 lvl EMBOR	(Notes 1, 2 & 3)
EGNJ	FL200 lvl 25 NM before EVSON	(Notes 1, 2 & 3)

Note 1: Aircraft transferred on a radar heading are **not** RFT.

Note 2: PC Southeast is to ensure that this traffic is given timely descent to ensure it does not enter PC West's airspace.

Note 3: If an aircraft is unable to achieve the Standing Agreement, it is AC Daventry's responsibility to coordinate with PC Southeast **and** PC West (if required).

5.3 Coordination with Adjacent Units, Sectors and Airfields

5.3.1 Coordination with TC Midlands and AC Daventry

5.3.1.1 LTMA Inbounds

In order to assist the flow of traffic through TC Midlands, PC Southeast shall endeavour to position inbounds to the London TMA according to their destination.

Routing/Destination						
← West	HON (Honiley VOR)					East →
Solent Group, EGLF, Wessex Group	EGKK	BNN Arrivals	EGMC	LOREL Arrivals	EGGW	JACKO Arrivals

5.3.1.2 Aircraft Departing EGCC and EGGP with an RFL FL200+

AC Daventry will not alter speed of an aircraft transferred from PC Southeast until the aircraft is within the confines of AC Daventry airspace. Where published, the speed profile is to be maintained until the flight passes FL260 unless separation may be compromised.

Intention Codes: H9-H6/JC/H, E/E2, V6-V & P

PC Southeast shall position aircraft with these intention codes through the ‘Honiley Radar Gate’ (see Figure LAC-17) either on own navigation (See Note) or on a radar heading. A maximum of two aircraft may be transferred abreast through the gate at any one time without coordination. PC Southeast shall endeavour to ensure subsequent aircraft are at least 10 NM in trail.

From	Intention Code	Agreement
EGCC, EGGP, EGNR	H9-H6/JC/H, E/E2, V6-V & P	Through the ‘Honiley Radar Gate’

Note: Aircraft may be positioned on its own navigation to either CPT/GWC/MID/WOD/VIDOK (depending on geographical intention code) provided this takes the aircraft through the radar gate.

Figure MPC-8 – Honiley Radar Gate



Intention Codes: D3-D, C3-1, EB, AM and AS

PC Southeast shall position departures from EGCC, EGGP and EGNR with these intention codes outside the radar gate. PC Southeast should endeavour to consider other AC Daventry traffic when transferring these aircraft outside of the confines of the radar gate.

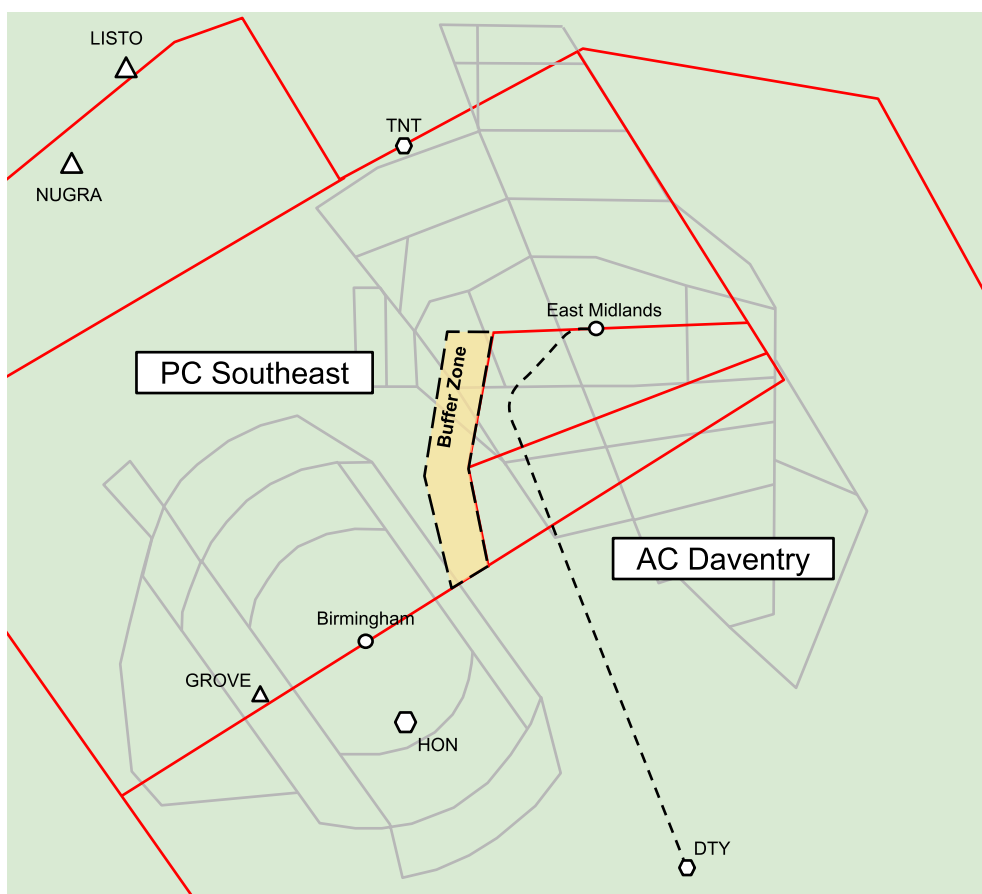
Note: Traffic with intention codes Dx should be positioned west of traffic with intention codes Cx.

5.3.1.3 Midlands Buffer Zone

The 3 NM wide Midlands Buffer Zone is established to ensure that radar separation is maintained between northbound Birmingham (Runway 15) departures being controlled by PC Southeast, and southbound departures from East Midlands under the control of TC Midlands.

The base of the Buffer Zone is coincident with the designated base of CAS. However, it does not exist where it overlaps with the Birmingham and East Midlands CTAs, neither laterally nor vertically.

Figure MPC-9 – Midlands Buffer Zone



5.3.1.3.1 East Midlands Runway 27 in use

Whenever Runway 27 is in use at East Midlands, PC Southeast shall ensure that aircraft remain on, or west of the western edge of the Buffer Zone as detailed above.

5.3.1.3.2 East Midlands Runway 09 in use

Whenever Runway 09 is promulgated as the runway in use, PC Southeast have full use of the revised airspace, i.e., to the eastern edge of the Buffer Zone as detailed above. East Midlands ATC shall also not permit departures off Runway 27 without prior coordination with PC Southeast.

5.4 Holding Procedures

DAYNE Hold

DAYNE	RNAV Hold, 1-minute legs
Axis	311°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL70) – FL140
Speed	Maximum 230 kts IAS

Note 1: Traffic holding at DAYNE at FL140 is not separated from traffic holding en-route at TNT VOR at FL140.

Note 2: Aircraft must adhere to the TMA inbound speed restrictions to satisfy holding requirements. Controllers should allow sufficient time for aircraft to reduce from speed restrictions above 250 kts IAS.

APT

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Chapter 1 London Heathrow (EGLL)

1.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
LL INT N	LLN	119.730	Heathrow Director	Heathrow INT North
LL INT S	LLS	134.980	Heathrow Director	Heathrow INT South
LL FIN	LLF	120.400	Heathrow Director	Heathrow Final
LL AIR S	LLT	118.505	Heathrow Tower	Heathrow AIR South
LL AIR N	LLTN	118.705	Heathrow Tower	Heathrow AIR North
LL GMC 2	LLG	121.705	Heathrow Ground	Heathrow GMC 2
LL GMC 3	LL3	121.855	Heathrow Ground	Heathrow GMC 3
LL GMC 1	LL1	121.905	Heathrow Ground	Heathrow GMC 1
LL GMP	LLD	121.980	Heathrow Delivery	Heathrow GMP

LL INT North will be the first APC controller to login. LL FIN must be online before LL INT South may log on. LL AIR must be open before FIN is opened.

1.2 Area of Responsibility

TC Heathrow is responsible for the London CTR and airspace delegated to it by TC. The Heathrow directors shall vector aircraft from release point to final approach. When online, Thames Director shall assume responsibility for traffic operating low-level with the London CTR.

LL AIR S shall decide the runway configuration in use. Westerly configuration operates a runway alternation scheme. Easterly configuration is for 09R for departures, 09L for arrivals. VATSIM does not strictly follow night-time single runway operations, though this can be simulated by the controllers.

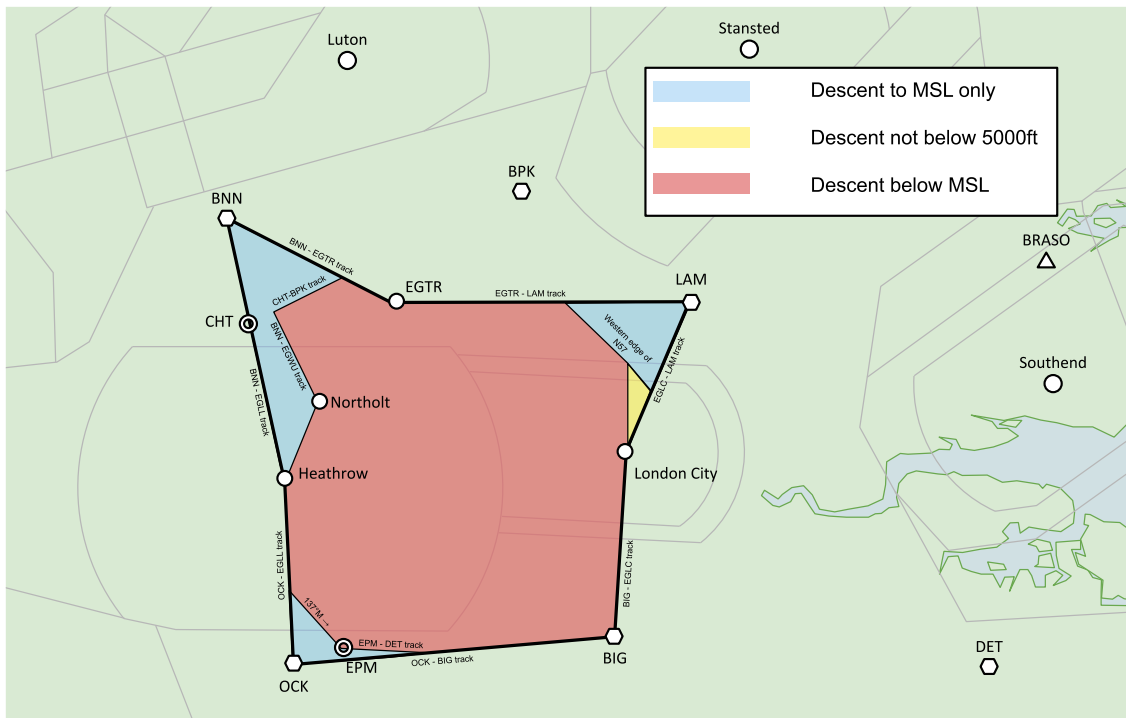
1.2.1 Minimum Stack Level

Heathrow operates using the London MSL, common to most London TMA aerodromes. This is based off the Heathrow QNH and a transition altitude of 6000 ft.

1013 hPa is considered high pressure in the London TMA (i.e., MSL is FL70).

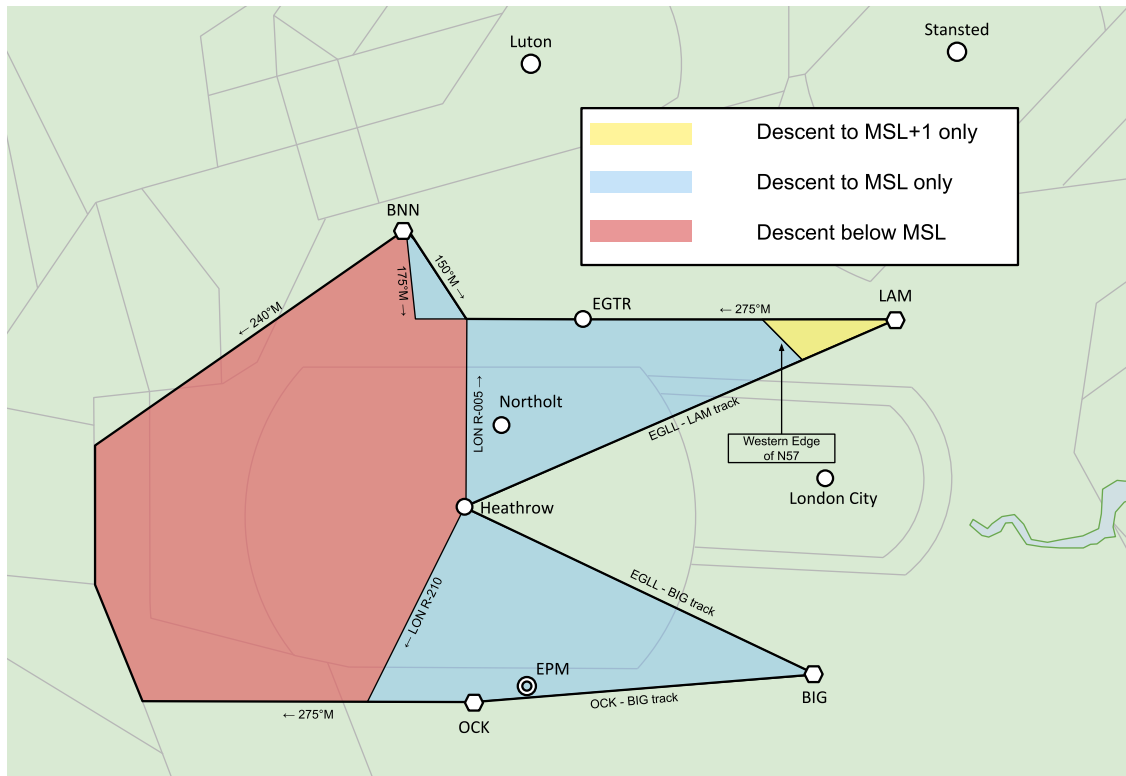
Westerly RMA

Figure APT-1 – Heathrow Westerly RMA



Easterly RMA

Figure APT-2 – Heathrow Easterly RMA



1.3 Procedures for Inbound Aircraft

1.3.1 Inbounds via LAM

Traffic is released from TC NE to Heathrow at MSL+1 at LAM or next available level (transfer to LL INT North). Holding at LAM is permitted at MSL+1 to FL120 and FL140 to 150. TC NE will retain traffic from FL120 and above. FL130 is to be kept clear at LAM.

Traffic to Heathrow from EGSS will be routed via the LAM departure at 5000 ft. Allocated level and release will be subject to individual coordination.

1.3.2 Inbounds via BNN

Traffic is released from TC NW to Heathrow at MSL+1 at BNN or next available level (transfer to LL INT North). Holding at BNN is permitted from MSL+1 to FL150. TC NW will retain traffic from FL120 and above.

Traffic to Heathrow from EGGW will be routed to BNN via non-SID departures. Level will be subject to individual coordination.

1.3.3 Inbounds via BIG

Traffic is released from TC SE to Heathrow at MSL+1 at BIG or next available level (transfer to LL INT South). Descent to MSL is permitted on contact. Holding at BIG is permitted at MSL to FL150. TC SE will retain traffic from FL120 and above.

Traffic to Heathrow from EGKK will be routed to BIG via a standard instrument departure and subject to release from TC SE. Level will be subject to individual coordination.

1.3.4 Inbounds via OCK

Traffic is released from TC SW at Heathrow at MSL+1 at OCK or next available level (transfer to LL INT South). Descent to MSL is permitted on contact. Holding at OCK occurs at MSL to FL150. TC SE will retain traffic from FL120 and above.

1.3.5 Descent Before Release Point

1.3.5.1 Westerly Operations: Descent Restrictions

Fix	Descent to MSL	Descent below MSL
LAM	After LAM, within RMA	Western edge of N57
BNN	After BNN, within RMA	SE of CHT-BPK track and east of track from BNN to EGWU
BIG	On contact	After BIG within RMA
OCK	On contact	East of track 317° from EPM

1.3.5.2 Easterly Operations: Descent Restrictions

Fix	Descent to MSL	Descent below MSL
LAM	Western edge of N57	LON R005°
BNN	After BNN, within RMA	West of BNN R175°
BIG	On contact	West of LON R210°
OCK	On contact	West of LON R210°

1.3.6 Vectoring before release point

Under standard releases, no traffic is to be vectored before the release point.

1.4 Procedures for Departing Aircraft

Heathrow departures will be transferred directly from LL AIR Departures to the appropriate TC departures Controller, following their cleared SID.

Via	Restrictions	First Sector
BPK		TC NE
CPT 3F/3G		TC SW
CPT 4K/5J	Not in use	-
DET		TC SE
GOGSI/GASGU	(See Note)	TC SW
MAXIT/MODMI	(See Note)	TC SW
UMLAT/ULTIB	(See Note)	TC NW

Note: In the situation where a pilot files a first waypoint inappropriate for the runway in use, the ideal situation is for ADC to issue a clearance and re-routing. However, especially in busy traffic situations, it is acceptable to simply clear on the correct departure and for TC to vector or re-route once airborne.

1.4.1 Easterly EGLL CPT Departure Procedure

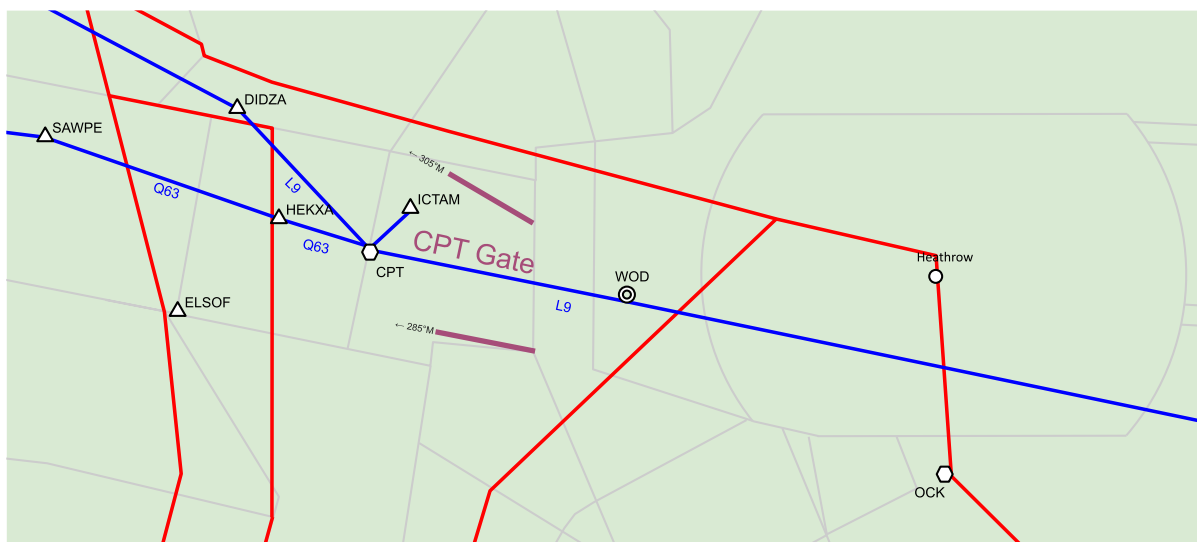
LL INT South is required to take control of aircraft departing easterly CPT Departures, which conflict with the intermediate or final approach pattern.

LL GMP shall clear these aircraft to fly heading 220 at LON DME 2 (09R) / LON DME 1.5 (09L), climbing to altitude 6000 ft. LL AIR Departures will transfer the aircraft to LL INT South who shall identify, validate, and verify the traffic.

LL INT South shall transfer CPT departures to TC SW by silent handover, subject to the following conditions:

- Climbing to or at MSL+1, must achieve MSL+1 by the western edge of the Heathrow easterly RMA.
- The aircraft is presented to TC SW on a radar heading, positioned through *the CPT gate* (see Figure APT-3).
- The heading should, subject to traffic, position the departure towards the northern side of the ATS route L9/Q63 but must not track the aircraft into TC NW airspace.
- LL INT South shall ensure that the aircraft is at 4000 ft or above abeam WOD.

Figure APT-3 – Compton (CPT) Gate



The heading allocated by LL INT South must ensure that a minimum of 3 NM separation is maintained from other traffic on intermediate and final approach under control of LL INT North or FIN directors.

If a departure is unable to meet the terms of this Standing Agreement: either the level restriction or lateral positioning through the CPT radar gate, LL INT South must coordinate with TC SW. Where possible, this should take place prior to abeam WOD. TC SW is responsible for separation against all traffic outside of the LL RMA.

Note 1: TC SW shall not alter the assigned heading until the aircraft is **at or above MSL+1** or has passed abeam WOD.

Note 2: In very low pressure, when MSL+1 is FL100, consideration should be given to suspending either the Solent outbound and EGLF, Wessex Group outbound Standing Agreements or the Heathrow CPT Easterly Departure Standing Agreement.

Chapter 2 London Gatwick (EGKK)

2.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
KK INT	KKR	126.825	Gatwick Director	Gatwick INT
KK FIN	KKF	118.950	Gatwick Director	Gatwick FIN
KK SPT	KKS	126.825	-	Gatwick Support
KK AIR	KKT	124.230	Gatwick Tower	Gatwick AIR
KK GMC	KKG	121.805	Gatwick Ground	Gatwick GMC
KK GMP	KKD	121.955	Gatwick Delivery	Gatwick GMP

2.2 Area of Responsibility

KK INT and FIN are responsible for the Gatwick CTR/CTA and the RMA delegated to them by TC. The RMA is dependent on the runway in use, with easterly operations seeing an extension to the west.

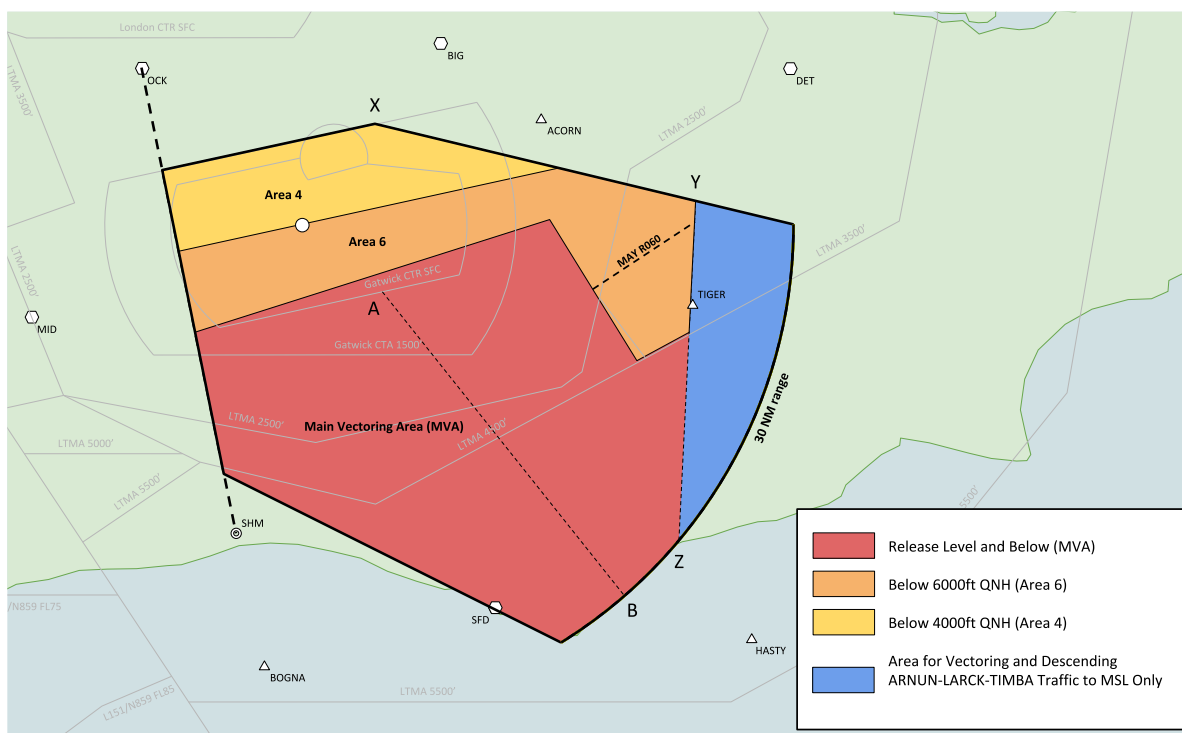
The X-Y-Z line bounds both RMAs to the eastern border and is common to both RMAs. The RMA is comprised of:

- Main Vectoring Area (MVA) – delegated at MSL and below
- Area 6 – 6000 ft and below
- Area 4 – 4000 ft and below
- Area 5 – 5000 ft and below (during easterly operations only).

The 30 NM range is defined from EGKK and east of points Y and Z and is used for vectoring without descent for specified arrivals (see below).

Westerly RMA

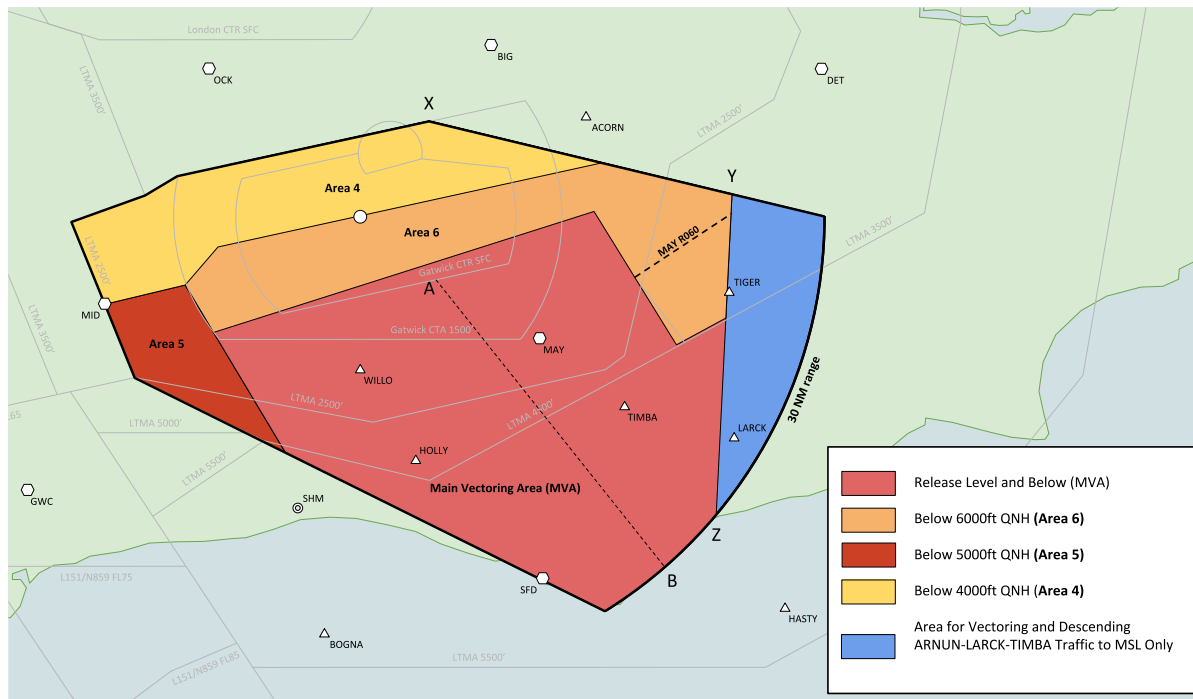
Figure APT-4 – Gatwick Westerly RMA



The RMA for westerly operations (26L/26R active) is bounded at the western edge by the SHM-OCK line. Area 4 and 6 are similarly bounded by this line.

Easterly RMA

Figure APT-5 – Gatwick Easterly RMA



During easterly operations, the MVA is bounded to the east of a line 5 NM east from MID to BOGNA. Area 4 is extended to below the extended centreline.

2.2.1 Minimum Stack Level

Gatwick operates using the London MSL, common to most London TMA aerodromes. This is based off the Heathrow QNH and a transition altitude of 6000 ft.

1013 hPa is considered high pressure in the London TMA (i.e., MSL is FL70).

2.3 Procedures for Inbound Aircraft

2.3.1 Arrivals to TIMBA

All arrivals to TIMBA are worked by TC SE and released at MSL+1 or next available level. MSL at TIMBA is delegated to KK INT.

The release point is TIMBA and all inbounds are coordinated via an abbreviated release (electronic or otherwise). TC SE shall retain traffic from FL120 and above if holding at TIMBA. Traffic may hold from MSL to FL150.

2.3.2 Arrivals via WILLO

All arrivals to WILLO are worked by TC SW and released at MSL+1 or next available level. MSL at WILLO is delegated to KK INT.

The release point is WILLO and all inbounds are coordinated via an abbreviated release (electronic or otherwise). TC SW shall retain traffic from FL120 and above if holding WILLO. Traffic may hold from MSL to FL150.

2.3.2.1 Abbreviated release at GWC/TELTU

Where traffic conditions allow, TC SW may issue an abbreviated release at TELTU/GWC. This abbreviated release may not be issued electronically, with traffic transferred with an electronic release prior to GWC/TELTU assumed to be released at WILLO. The release shall typically be communicated as:

Example: "TELTU release, BAW123 at 9"

When issued, traffic may be vectored after GWC/TELTU, but must remain east of the GWC-MID or TELTU-MID track. Descent is permitted to the base of CAS and traffic may enter Area 5 above 5000 ft; however, it shall not enter Area 4 above 4000 ft. Once the traffic has entered the RMA, it must be vectored according to normal restrictions; this includes meeting the vertical restrictions of Area 5 if the traffic is vectored first into the MVA.

2.3.3 Descent before release point

Fix and Release		Condition
TIMBA via LARCK	(east)	Transfer of communication
TIMBA	(south)	Transfer of communication
Via HOLLY	(west)	Transfer of communication

Further descent according to the confines of the RMA.

Traffic via ARNUN/LARCK (east) may be vectored into Area 6 south of the MAY R-060 and descended to 6000 ft or below, to facilitate early vectoring to 26L/R. Such traffic may not cross north of the MAY R-060 until 6000 ft or below and is not permitted to cross the X-Y-Z line to the east.

2.3.4 Vectoring before release point

Regardless of runway in use, inbound traffic may be vectored at and above MSL prior to reaching the release point, provided the traffic remains within the Gatwick RMA. Traffic released to Gatwick is only permitted to be vectored within the confines of the RMA, except for the MAY R-060 rule above and if under the terms of a less restrictive release. Traffic may not cross the A-B line above MSL.

Fix and Release		Condition
TIMBA via LARCK	(east)	West of X-Y-Z line or within 30 NM range
TIMBA	(south)	West of X-Y-Z line or within 30 NM range
Via HOLLY	(west)	<u>Westerly operations:</u> SHM-OCK line <u>Easterly operations:</u> 5 NM east of MID-BOGNA track

2.4 Procedures for Departing Aircraft

All standard Gatwick SIDs are released free flow unless otherwise coordinated.

Via	Restrictions	Release	First Sector
BOGNA/HARDY	0600-2300 local time		TC SW
SFD (26L)	2300-0600 local time		TC SW
SFD (08R)			KK FIN (Note 1)
TIGER/DAGGA	Agreement KK FIN & LTC SE	TC SE & KK FIN	KK FIN (Note 2)
WIZAD	Agreement KK FIN & LTC SE	KK FIN	KK FIN (Note 2)

Note 1: SFD departures on easterly operations are transferred to KK FIN after departure who will identify, verify, and climb to MSL (subject to traffic). These shall be handed clear of conflict of all traffic released to Gatwick, thus RFC.

Note 2: TIGER/DAGGA/WIZAD SIDs are relief SIDs routing towards LAM/CLN/DVR respectively, via the Gatwick RMA. Use of these SIDs is subject to agreement of both KK INT/FIN and TC SE. After departure, this traffic is worked by KK FIN and transferred to TC SE at SID level or as coordinated. No climb may occur until crossing the boundary of TC SW (A/B line on RMA diagram).

Chapter 3 Thames Group (EGLC, EGKB, EGMC)

3.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
Thames	TMS	132.700	Thames Director	Thames Director
LC DIR	LCR	128.025	Thames Director	City Director
LC AIR	LCT	118.080	City Tower	City AIR
LC GMC	LCG	121.830	City Ground	City GMC
KB APP	KBA	129.405	Biggin Approach	Biggin Approach
KB AIR	KBT	134.805	Biggin Tower	Biggin AIR
MC DIR	MCR	128.965	Southend Director	Southend Director
MC RAD	MCL	130.780	Southend Radar	Southend Radar
MC AIR	MCT	127.730	Southend Tower	Southend AIR

3.2 Area of Responsibility

TC Thames (i.e., Thames and LC DIR) are responsible for the City CTR/CTA, the Thames RMA and low-level flight within the London CTR. The RMA is depicted below, bounded to the north by a line JACKO-LAM.

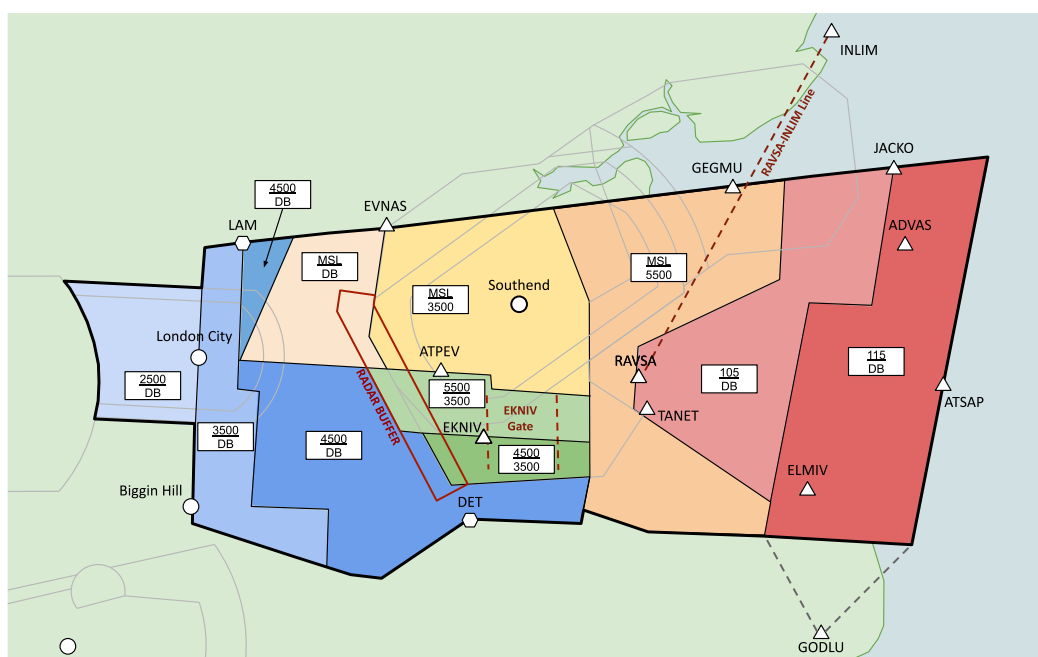
When split from Thames, LC DIR is responsible for:

- Departing traffic from EGLC Runway 27 until transferred to TC.
- Final approach phase of IFR aircraft inside controlled airspace to EGLC and EGKB.
- The EGLC CTR/A and traffic operating low-level within the London CTR (including helicopter routes).
- Top-down for EGLC.

Further details of the LC DIR split are beyond the scope of this document. Coordination regarding external/inbound traffic unknown to Thames/LC DIR should be addressed to Thames (e.g., EGSS departures via DET, other low-level flights) regardless of the runway in use.

3.2.1 Thames RMA

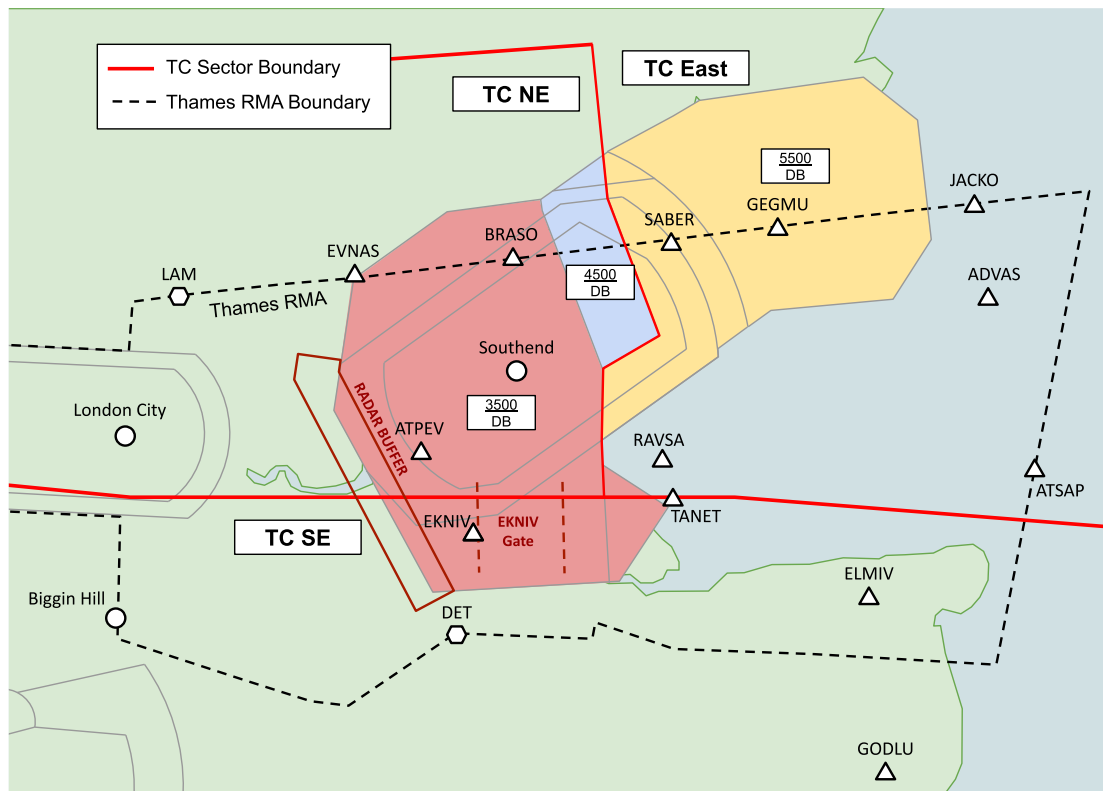
Figure APT-6 – Thames RMA



3.2.2 Southend RMA

Southend Radar is delegated authority for the Southend CTR/CTA in its entirety.

Figure APT-7 – Southend RMA



3.2.3 Minimum Stack Level

Thames operates using the London MSL, common to most London TMA aerodromes. This is based off the Heathrow QNH and a transition altitude of 6000 ft.

1013 hPa is considered high pressure in the London TMA (i.e., MSL is FL70).

3.3 Procedures for Inbound Aircraft

Arrivals to EGLC/EGKB and to EGMC from the south/east arrive via JACKO from TC East and GODLU from TC SE by means of an abbreviated release. On VATSIM, this abbreviated release can be assumed with the transfer of track (electronic abbreviated release). Traffic should be transferred to TC Thames in good time, so TC Thames can issue the appropriate transition.

3.3.1 Level Allocation – EGLC/KB

From	To	Arrival Via	Standing Agreement
TC East	Thames	JACKO	FL90, or next available level (up to and including FL120)
TC SE	Thames	GODLU	FL100, or next available level (up to and including FL120)

3.3.2 Level Allocation – EGMC

All traffic is transferred to TC Thames on silent handover, at least 10 NM in trail.

From	To	Arrival Via	Standing Agreement	Conditions
TC East	Thames	GEGMU (Via JACKO)	↓FL80	
TC SE	Thames	GEGMU (Via OKVAP)	FL80 lvl abeam GODLU, or FL80 lvl 19 NM before ATSAP	Presented underneath any EGLC/EGKB traffic. EGMC arrivals shall be clear of any conflicts with the GODLU hold.
TC NE	MC APC	SPEAR	All individually coordinated to avoid the Thames RMA. Usually descending 4000 ft lvl abeam BRAIN (Notes 1 & 2).	

Note 1: These aircraft are RFD and RFT when within the Southend CTA.

Note 2: This routing does not follow the published SPEAR STAR routes, and therefore aircraft must be issued with a full alternative route and/or positioned on radar headings. Aircraft which follow the published STAR route are to be coordinated as appropriate.

3.3.3 Vectoring/Descent before Release Point

3.3.3.1 EGLC/EGKB Arrivals via JACKO/GODLU

Release Point	Descent Clearance Allowed
JACKO	FL80
GODLU	FL100

Thames may issue vectors and further descent clearance at the points listed in the table below:

Release Point	Released for vectoring	Released for further descent
JACKO (from N/W)	Released for RIGHT turns below FL120, east of the RAVSA – INLIM line.	When inside the Thames RMA.
JACKO (from E)	Released for LEFT turns below FL120.	When inside the Thames RMA.
GODLU	At GODLU, must enter the DB-110 RMA Segment.	When inside the Thames RMA.

3.3.3.2 EGMC Arrivals

Thames may issue vectors and further descent clearance when the aircraft enters the Thames RMA.

Release Point	Descent Clearance Allowed
GEGMU (via LOGAN/JACKO)	FL80
GEGMU (via OKVAP)	FL80

3.4 Procedures for Departing Aircraft

3.4.1 EGLC Departures

From	To	SID	Agreement	Condition
AIR	TC NE	BPK/SAXBI (09)	↑ 3000 ft	Require departure release TC NE.
LC DIR	TC NE	BPK/SAXBI (27)	3000 ft (<i>Note 1</i>)	Require departure release TC NE.
<i>Note 2</i>	TC NE	ODUKU	4000 ft	Requires pre-note TC NE.
<i>Note 2</i>	TC SE	SOQQA	MSL lvi SODVU	Routing via EKNIV or positioned on a heading through the EKNIV Gate .

Note 1: LC DIR will receive this traffic to prevent a level bust into EGLL inbound at 4000 ft. Transfer to TC NE shall only occur once the aircraft is confirmed level at 3000 ft.

Note 2: Departures from Runway 27 are received from LC DIR and from Runway 09 from Thames.

3.4.2 EGKB Departures

Thames shall pre-note TC SE of all EGKB departures. All EGKB departures joining the ATS route network require a release from Thames.

From	To	SDR	Agreement	Condition
Thames	TC SE	All	↑ 4000 ft	Positioned on a radar heading towards DET (<i>See Note</i>)

Note: Thames is responsible for separating EGKB departures from other traffic at DET prior to transfer to TC SE.

3.4.3 EGMC Departures

The following table shows the agreement between the first receiving TC sector and the Thames/MC controllers.

From	To	PDR	Agreement	Condition
Thames	TC NE	EVNAS LAM	↑ 4000 ft	
MC APC	TC East	CLN	↑ 6000 ft	Positioned on a radar heading, or own navigation direct CLN.
Thames	TC SE	DET	↑ 5000 ft	Positioned on a radar heading through the EKNIV Gate .

3.4.3.1 EGMC Departure releases

MC AIR shall request a release from MC APP for all departures.

- For departures via DET, MC AIR shall obtain a release from Thames, who shall notify TC SE of a Southend departure (but does not require a release). MC APP shall position the traffic on a heading towards the EKNIV gate at 3000 ft and hand off to Thames Director.
- For departures via CLN, MC AIR shall obtain a release from TC East. MC APP shall climb these departures within their own airspace and to 6000 ft only clear of TC NE and Thames airspace.
- For departures via EVNAS/LAM, MC AIR shall obtain a release from TC NE. MC APP shall coordinate with Thames as soon as practical. MC APP shall not climb these departures above 3000 ft until agreed by Thames. If agreed by Thames, MC APP shall transfer these aircraft at 4000 ft to TC NE, RFC. Should this not be possible due to other traffic, Thames may elect to work the traffic and will specify whether to transfer to Thames to LC DIR.

Chapter 4 Essex Group (EGSS, EGSC, EGGW)

4.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
N/A	ESS	120.625	Stansted Radar	Stansted/Luton Intermediate
SS INT	SSR	120.625	Stansted Radar	Stansted Intermediate
SS FIN	SSF	136.200	Stansted Director	Stansted Final
SS AIR	SST	123.805	Stansted Tower	Stansted AIR
SS GMC	SSG	121.730	Stansted Ground	Stansted GMC
SS GMP	SSD	121.955	Stansted Delivery	Stansted GMP
GW INT	GWR	129.550	Luton Radar	Luton Intermediate
GW FIN	GWF	128.750	Luton Director	Luton Final
GW AIR	GWT	132.555	Luton Tower	Luton AIR
GW GMC	GWG	121.755	Luton Ground	Luton GMC
GW GMP	GWD	121.885	Luton Delivery	Luton GMP

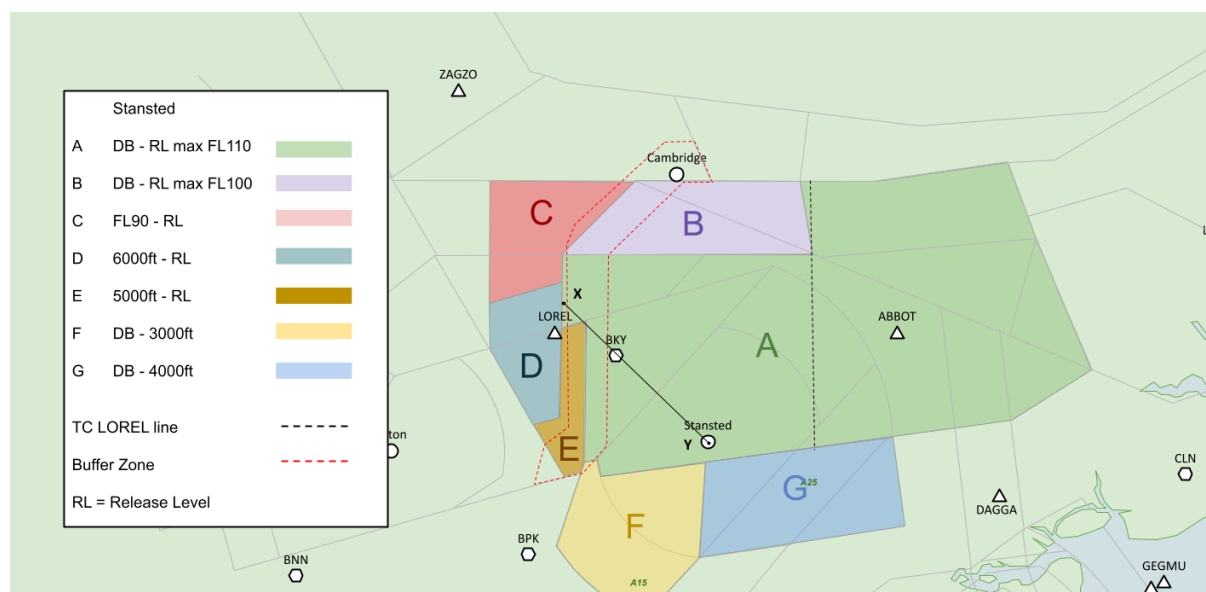
4.2 Area of Responsibility

SS INT and FIN are responsible for the Stansted CTR/CTA and the RMA as delegated by TC. The main vectoring area is bounded to the west by the eastern edge of N601 and to the south by the northern edge of Q295.

Features of the RMA include the “Buffer Zone” and “X-Y Line”, which govern interaction between SS INT and GW INT/SS FIN. These are not relevant to the interaction with LTC.

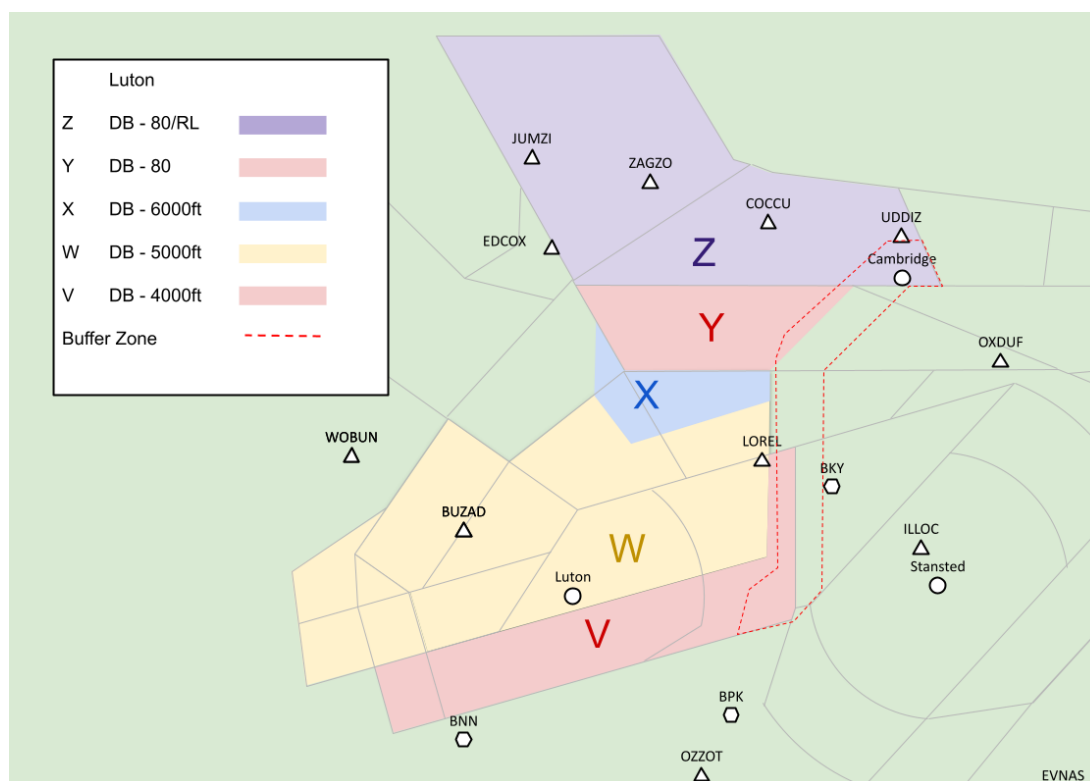
A line depicted within Area A denotes the boundary between TC NE and TC East. Arrivals via LOREL shall not cross this line until MSL or below. Arrivals via ABBOT may only cross this line above MSL if there is higher traffic at LOREL and the ABBOT traffic is descending to MSL or below.

Figure APT-8 – Stansted RMA



GW INT and FIN are responsible for the Luton CTR/CTA and the RMA delegated by TC.

Figure APT-9 – Luton RMA



4.2.1 Minimum Stack Level

Stansted and Luton use the London MSL, common to most London TMA aerodromes. This is based off the Heathrow QNH and a transition altitude of 6000 ft.

1013 hPa is considered high pressure in the London TMA (i.e., MSL is FL70).

4.3 Procedures for Inbound Aircraft

4.3.1 Arrivals via LOREL

The LOREL stack is owned by TC NE and delegated to TC Stansted at MSL, though holding is not permitted below FL90 due to the Luton RMA. Arrivals to LOREL are received from the west via BOMBO and from the southwest via VATON-BPK-BKY at FL90 or the next available level. Where TC NE and NW are split, it may be appropriate for TC NW to coordinate a release level for traffic via BOMBO with TC NE and transfer communication directly to TC Stansted; TC NE remains responsible for the inbound release.

The release point for LOREL arrivals is LOREL. An abbreviated release procedure exists subject to the vectoring and descent restrictions listed below.

4.3.2 Arrivals via ABBOT

The ABBOT stack is owned by TC East. Minimum holding level is MSL or FL80 (due to the base of CAS), whichever is higher.

Arrivals from the east via LAPRA are typically received descending to FL90 or the next available level. Transfer of communication should be as early as possible, and so some aircraft may be transferred cleared to/at FL110 (due to the high base of CAS to the east). Low level or stack swap arrivals to ABBOT (via DET/LOGAN/BPK/BKY) are transferred at the next available holding level.

4.3.3 Arrivals via ZAGZO

The ZAGZO stack is owned by TC NE and delegated to TC Luton at FL80. Arrivals are received from TC NE at FL90 or the next available level. When TC NE and TC NW are split, it may be appropriate for TC NW to coordinate a release level for traffic via EDCOX with TC NE and transfer communication directly to TC Luton; TC NE remains responsible for the inbound release.

4.3.4 Descent before release point

Fix and Release		Condition
ABBOT via CLN/DET	(south/east)	North of northern edge of Q295.
ABBOT via LAPRA	(east)	RFD upon transfer of communication. To FL90.
LOREL via BOMBO	(west)	Further within the RMA if issued a heading and therefore not holding. To FL90.
LOREL via BPK	(south)	Further within the RMA if issued a heading and therefore not holding.
ZAGZO	(all)	Within RMA

4.3.5 Vectoring before release point

Fix and Release		Condition
ABBOT via CLN/DET	(south/east)	North of northern edge of Q295
ABBOT via LAPRA	(east)	North of northern edge of Q295
LOREL via BOMBO	(west)	East of eastern edge of N601 (TC NW/NE Sector boundary)
LOREL via BPK	(south)	North of northern edge of Q295
ZAGZO	(all)	Within RMA

4.4 Procedures for Departing Aircraft (Stansted)

Stansted departures are free flow unless specified otherwise. SIDs and restrictions are tabulated below.

Via	Restrictions	Release	First Sector
CLN		-	TC NE
UTAVA		-	SS FIN (Note 1)
NUGBO		-	SS FIN (Note 1)
BKY	Leaving CAS	-	SS FIN
DET	Night (2300-0600) or via LYD	Pre-note AIR to Thames Release TC NE (Notes 2 & 5)	TC NE (Note 3)
LAM	Heathrow only	TC NE (Note 4)	TC NE (Note 4)

Note 1: AIR shall transfer these departures to SS FIN who shall climb to whichever is higher MSL/FL80 (subject to airspace restrictions – i.e., no higher than 4000 ft in Area F). This traffic shall be transferred to TC NW clean of all inbounds under the control of TC Essex and thus RFC.

Note 2: DET departures are subject to restrictions due to the interaction with Thames traffic, which is not known to TC NE. Thus, TC NE shall not approve DET departures outside of the published hours: traffic should be re-routed via CLN when DET is unavailable.

Note 3: This traffic interacts closely with EGLC outbounds. TC NE must coordinate with Thames either prior to or immediately after releasing the traffic and is not permitted to climb the traffic above 5000 ft, or deviate from the SID, unless this coordination has occurred. Thames shall separate its traffic against the departure and agree the point at which it may be climbed to MSL. If unable to do this safely, Thames may work the traffic and climb it to MSL within its own airspace. TC NE shall

specify whether the traffic is to return to TC NE, be transferred to TC SE or another course of action. TC SE shall not vector the traffic east of track until MSL+1 or higher.

Note 4: When TC NE is offline, release and first sector shall be LL INT N or its top-down.

Note 5: When TC NE is offline, release shall be obtained from Thames or appropriate top-down (TC SE).

4.5 Procedures for Departing Aircraft (Luton)

Via	Restrictions	Release	First Sector
MATCH		TC NE	TC NE
OLNEY (25)		-	TC NW
OLNEY (07)		-	GW INT (Note 1)
DET	EGKK only	TC NE	TC NE
RODNI (25)		-	TC NW
RODNI (07)		-	GW FIN (Note 2)

Note 1: OLNEY departures off 07 are issued an initial altitude of 4000 ft by GMP with their clearance. They are handed to GW INT to deconflict against traffic via the Luton gate. GW INT shall climb to their SID level (6000 ft) and handoff to TC NW clean of traffic released to Luton.

Note 2: GW FIN shall work these departures to ensure separation against arrivals in the Luton RMA. Where traffic is on final approach, Luton shall issue a heading parallel to the extended centreline and transfer to London with the pilot instructed to 'report heading'. Traffic shall be transferred climbing to 5000 ft, which GW FIN may do ahead of the SID restrictions subject to Thames SAXBI/BPK departures.

Luton also has four Standard Departure Routes (referred to in the AIP as Non-Airways Departures) from each runway to leave controlled airspace. These are (25/07 respectively) MIKE/TANGO (SE), NOVEMBER/UNIFORM (SW), PAPA/VICTOR (West) and KILO/SIERRA (NW). This traffic is worked by GW FIN and shall not be used for entering the ATS route network. Except for KILO and ROMEO, these routes remain completely within Luton Class D airspace.

4.6 Intra-TMA Flights

All flights departing SS/GW to another airport within the London TMA not leaving controlled airspace before transfer to TC are subject to release from the receiving sector. The GMP controller should issue a pre-note to the relevant LTC controller when clearance is issued.

Flights from Stansted to Heathrow are to route via LAM. TC NE will coordinate with LL INT North such that these aircraft do not hold.

Flights from Luton to Heathrow shall file BNN and be cleared on November/Uniform with a level coordinated between AIR and TC NW prior to departure. TC NE will coordinate with LL INT North such that these aircraft do not hold.

From	To	Route	Remarks
EGGW	EGKK	DET	
EGSS	EGLC/KB	CLN	
EGGW	EGLC/KB	MATCH	

Chapter 5 Solent (EGHH & EGHI)

5.1 Controller Positions and Coordination Indicator

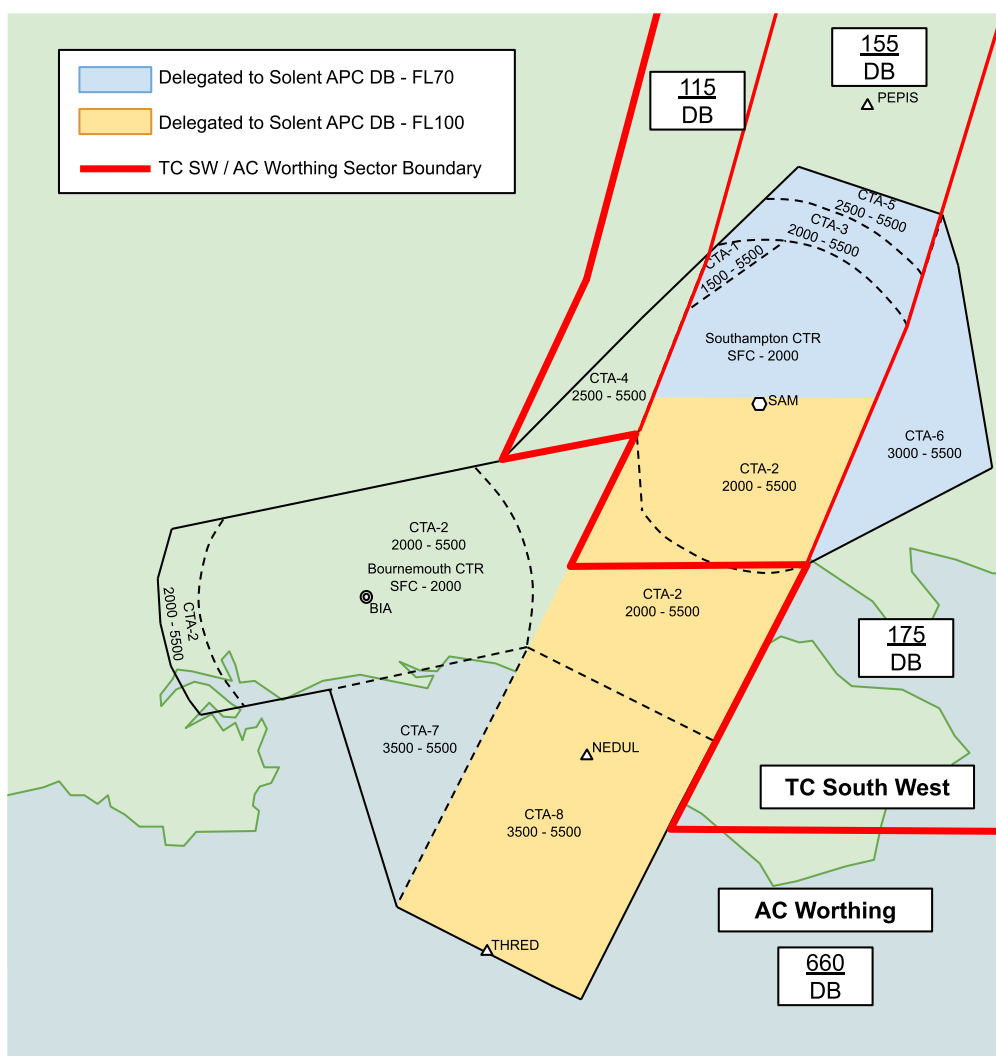
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
SOLENT	SOL	120.230	Solent Radar	Solent Radar
HI INT/RAD	HIR	122.730	Southampton Radar	Southampton Radar
HI AIR	HIT	118.205	Southampton Tower	Southampton AIR
HH INT/RAD	HHR	119.480	Bournemouth Radar	Bournemouth Radar
HH AIR	HHT	125.605	Bournemouth Tower	Bournemouth AIR
HH GMC	HHG	121.705	Bournemouth Ground	Bournemouth GMC

5.2 Area of Responsibility

Solent APC is responsible for the Southampton CTR/CTA and airspace above delegated by TC and AC. The Bournemouth CTR are controlled by Bournemouth Radar, which is in turn covered top-down by Solent.

Top-down coverage for Solent is by AC Worthing.

Figure APT-10 – Solent Airspace



5.2.1 Minimum Stack Level

The Solent aerodromes do not use the London MSL or define an MSL of their own.

5.3 Procedures for Inbound Aircraft

Aircraft inbound to EGHI/HH are transferred to Solent by means of a silent handover at least 10 NM in trail. Solent shall suspend silent handovers if unable to accept further inbounds via that route. Traffic below the agreement level is subject to individual coordination.

All arrivals are transferred own navigation, free from confliction with traffic unknown to Solent.

Via	From	Agreement	Release point
THRED (S)	AC Worthing	FL110 lvl THRED (See Note)	15 NM before THRED
PEPIS (N/NE)	TC SW	↓FL80	FL90
GIVUN (SE)	TC SW	FL90 lvl GIVUN	GIVUN

Note: Solent shall ensure traffic is at or below FL100 by NEDUL.

5.3.1 Vectoring before release point

Via	Vectoring
THRED (S)	After THRED, at FL100 or below.
PEPIS (N/NE)	Passing FL90
GIVUN (SE)	At GIVUN, remaining south of the SAM-GWC track until at/below 5000 ft. Shall not be vectored into AC Worthing airspace.

5.3.2 Descent before release point

All aircraft may be descended by Solent at the release point.

5.3.3 Inbound Holding

Holding Area	Axis	Turn Direction	Time/Distance	Levels	Speed Limit
SAM	029°	Right	1 min	2000 ft - FL100 (Note 1)	210 kts
PEPIS	004°	Left	1 min	FL70 - FL100 (Note 2)	210 kts
RUDMO	276°	Left	1 min	FL80 - FL110 (Note 2)	210 kts
NEDUL	024°	Right	5 NM	4000 ft - FL150 (Note 3)	210 kts to FL140

Note 1: Traffic holding above 6000 ft must be coordinated with TC SW.

Note 2: Traffic holding at PEPIS/RUDMO must be coordinated with TC SW.

Note 3: Traffic above FL100 at NEDUL must be coordinated with AC Worthing.

5.4 Procedures for Departing Aircraft

Standard routings and agreed transfer levels are listed in the table below.

Release shall be requested by Solent APC via the UK Controller Plugin or in the format: “request release (from Bournemouth) (callsign) via (fix)”.

Release shall be passed via voice in an abbreviated format: “(callsign) released”.

Successive departures are to be transferred to TC/AC at least 10 NM in trail, constant or increasing, with a maximum speed of 250 kts IAS.

To	Abbreviated Clearance	Route	Level HI	Level HH	Sector
North	NORRY	NORRY-WCO	↑ FL70	↑ FL100	TC SW
Northwest	PEPIS	RNAV1: PEPIS Y321 NUBRI N14 HEKXA RNAV5: PEPIS Y321 NUBRI DCT KENET	↑ FL70	↑ FL100	TC SW
Northeast	GWC-OCK	GWC-OCK	↑ FL80	↑ FL100	TC SW
East or southeast	GWC	GWC-SFD/BENBO/DRAKE/ BOGNA/OTSID	↑ FL80	↑ FL100	TC SW
South	NEDUL	NEDUL	↑ FL100 on track THRED		AC Worthing
West	-	Outside CAS	-		-

5.4.1 Farnborough Departures

Farnborough departures via HAZEL enter Solent delegated airspace. The procedures for this traffic are documented in [APT 6.4](#).

Chapter 6 Farnborough (EGLF)

6.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
LF APC	LFR	134.355	Farnborough Radar	Farnborough Radar
LF FIN	LFF	130.055	Farnborough Director	Farnborough FIN
LF LARS	LFL	125.250	Farnborough LARS	Farnborough LARS
LF AIR	LFT	122.780	Farnborough Tower	Farnborough AIR
LF GMC	LFG	121.815	Farnborough Ground	Farnborough GMC

Note: The LARS position does not cover the APC position top-down and shall not be opened without LF APC first being online.

6.2 Area of Responsibility

Farnborough APC is responsible for the Farnborough CTR/CTA airspace, as well as additional airspace delegated to it by TC SW dependent on the runway configuration at Heathrow.

Figure APT-11 – Farnborough RMA (Heathrow Westerlies)

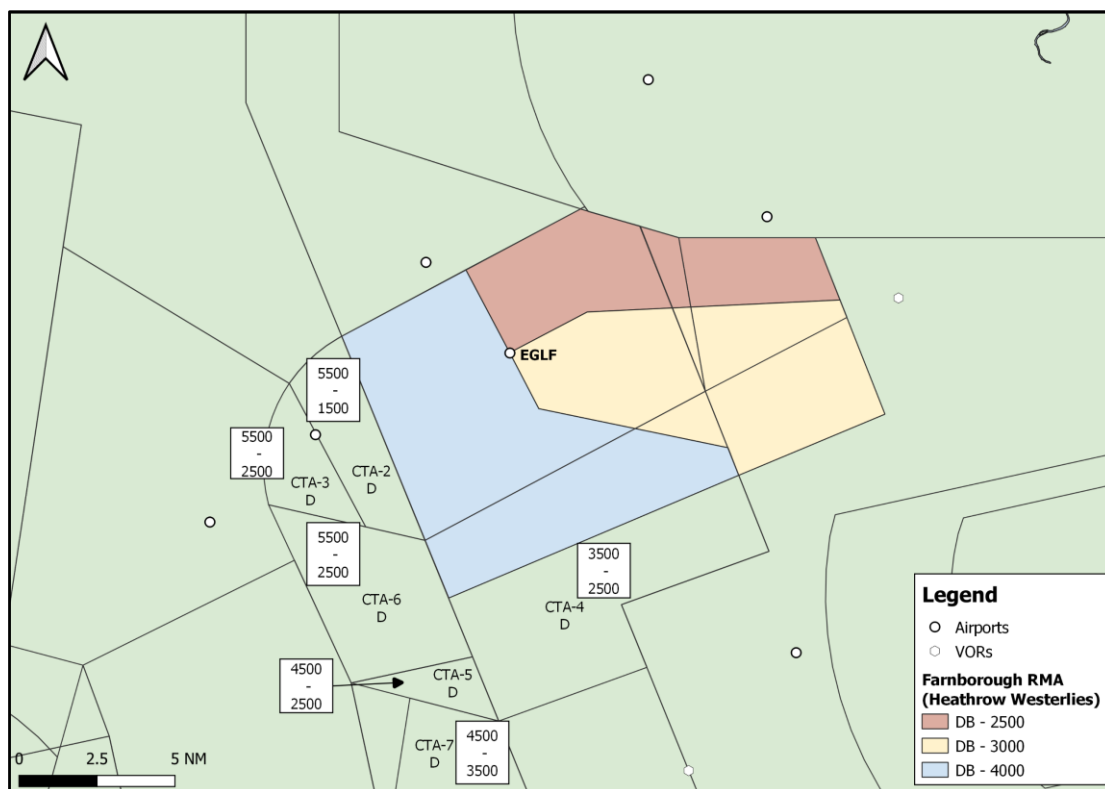
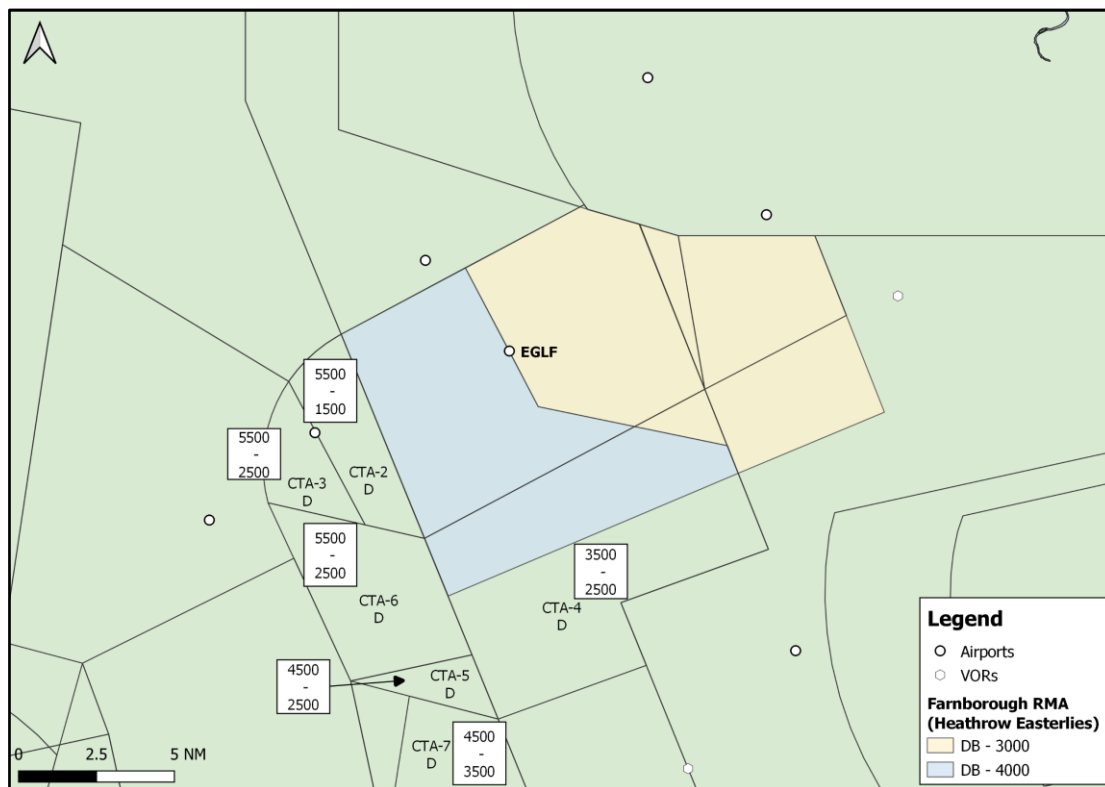


Figure APT-12 - Farnborough RMA (Heathrow Easterlies)



6.2.1 Minimum Stack Level

Farnborough does not define an MSL, however sits under the London TMA and as such reference to MSL would be the London MSL. This is based off the Heathrow QNH and a transition altitude of 6000 ft.

1013 hPa is considered high pressure in the London TMA (i.e., MSL is FL70).

6.3 Procedures for Inbound Aircraft

6.3.1 Inbounds via CPT

The minimum distance between successive inbounds shall be 10 NM unless otherwise coordinated with Farnborough APC.

From	To	Agreement	Condition
TC SW	LF APC	5000 ft lvl (abeam) DIXIB	Transferred either on own navigation DIXIB, or on a radar heading within 3 NM of DIXIB. (Notes 1, 2 & 3)

Note 1: Transfer of communication must be no later than (abeam) DIXIB.

Note 2: Aircraft inbound via CPT are released from TC SW to Farnborough APC when passing FL70.

Note 3: During Heathrow Easterly Operations, TC SW shall ensure such aircraft are positioned no less than 3 NM from the Heathrow RMA. Farnborough APC shall not vector such aircraft so that the separation is reduced less than 3 NM from the Heathrow RMA.

6.3.2 Inbounds via RIMUP/RUDMO

From	To	Agreement	Condition
TC SW	LF APC	4000 ft lvl (abeam) EVATA	Transferred either on own navigation EVATA, or on a radar heading within 3 NM of EVATA. (Notes 1, 2 & 3)

Note 1: Transfer of communication must be no later than (abeam) EVATA.

Note 2: Aircraft inbound via RIMUP/RUDMO are released from TC SW to Farnborough APC when passing altitude 6000 ft (London QNH).

Note 3: During Gatwick Easterly Operations, TC SW shall ensure such aircraft are positioned no less than 3 NM from the Gatwick RMA. Farnborough APC shall not vector such aircraft so that the separation is reduced less than 3 NM from the Gatwick RMA.

6.3.3 Runway 24 Vectoring Procedures

Due to the interaction with the London CTR, traffic vectored for runway 24 may be vectored within 3 NM of the RMA boundary, with Farnborough APC taking responsibility for ensuring separation against Heathrow traffic. All traffic within 3 NM of the boundary and west of the Blackbushe LFA shall be coordinated with the TC SVFR controller in order for both parties to provide traffic information where required. Farnborough is responsible for separation between IFR/IFR and IFR/SVFR flights unless otherwise coordinated.

6.3.4 RNAV5 Arrivals

The RNAV5 STARs should only be flown by aircraft incapable of RNAV1, or when requested by the pilot. TC South West shall vector this traffic towards the RNAV1 handover points and handover per the above silent releases. Coordination is required only if this traffic is required to hold, which will occur at PEPIS. Traffic holding at PEPIS at FL70 is not permitted without coordination with Solent Radar.

6.4 Procedures for Departing Aircraft

Departure Route	SID (06 / 24)	Route
NORRY (north)	HAZEL (2L / 2F)	HAZEL L620 SAM Q41 NORRY SILVA →
KENET (north)	HAZEL (2L / 2F)	HAZEL L620 SAM Q41 PEPIS Y321 NUBRI DCT KENET →
OCK (northeast)	HAZEL (2L / 2F)	HAZEL L620 SAM Q41 PEPIS DCT OCK →
GWC (south)	GWC (2L / 2F)	GWC SFD Y803 DVR (FL165-) → GWC N859 SITET → GWC BOGNA L612 → GWC BOGNA HARDY M605 →
OTSID	GWC (2L / 2F)	GWC OTSID BIG L9 →
SAM	HAZEL (2L / 2F)	HAZEL L620 →

6.4.1 Departure Releases

Via	Restrictions	Departure Release	First Sector
GWC SID	1 per 5 minutes	TC SW	LF APC; then TC SW
HAZEL SID	1 per 5 minutes	TC SW	LF APC; then Solent or TC SW

LF AIR shall obtain a release from LF APC who will obtain onward release from TC South West.

Traffic via HAZEL is flight planned to route HAZEL-SAM, which enters Solent delegated airspace. TC SW may release this traffic without reference to Solent Radar only if intend to climb/route the traffic around Solent airspace. Otherwise, a “Release subject Solent” shall be provided, requiring LF APC to obtain a release from Solent Radar (or its top-down). The release provided changes the Standing Agreement under which the traffic will be transferred to TC SW.

Where Solent has no conflicting traffic, they may elect not to work the departure, which is communicated to LF APC during the request for the release. LF APC will notify TC SW of whether Solent is working the traffic or not, to allow them to plan their workload.

6.4.1.1 Climb Restrictions

Farnborough is permitted to climb departing traffic into the London TMA airspace underneath Gatwick/Heathrow departures to no higher than 5000 ft, provided that the non-Farnborough traffic:

- The aircraft is correctly squawking an assigned code and there is no reason to suspect inaccurate code/callsign conversion (for example if a DUPE indicator is displayed in the track data-block), *and*
- The indicated cleared level in the track data-block of conflicting LTMA traffic indicates a credible level for the traffic to be climbing to, *and*
- The Mode C of all conflicting LTMA traffic indicates 400 ft above (MATS Part 1 occupancy rule) the altitude RAD intends to climb to and the traffic is observed to be continuing their climb.

6.4.1.2 Traffic via BIG

Traffic may request to route east and join controlled airspace at BIG, this should be coordinated with TC South West on an individual basis. If TC South West is unable to issue a joining clearance prior to BIG then the departure should route outside controlled airspace below the LTMA and be coordinated with TC Thames to facilitate a join via the Thames RMA at BIG/DET. Thames will be responsible for onward coordination with TC SE.

6.4.2 Standing Agreements

Route	From	To	Level	Condition
HAZEL Northbound (No Solent release)	LF APC	TC SW	FL70	Own navigation routing direct PEPIS, max 6000 ft until within CTA-8, must not enter Solent airspace or delegated airspace
HAZEL Northbound (Solent release)	LF APC	Solent	↑5000 ft	On a westerly radar heading tracking south of HANKY while remaining 5 NM north of the L620 (HAZEL – SAM) centreline
	Solent	TC SW	FL70	Own navigation or radar heading to PEPIS, must be vectored to pass south of HANKY while remaining 5 NM north of the L620 (HAZEL – SAM) centreline, max 6000 ft until within CTA-8
HAZEL Southbound (No Solent release)	LF APC	Solent	↑5000 ft	
	Solent	TC SW	↑FL100	Max 6000 ft until within CTA-8. Max FL70 until Solent delegated airspace
HAZEL Southbound (Solent release)	LF APC	TC SW	↑5000 ft	RFC within Solent delegated airspace, must remain on SID track until above.
GWC		TC SW	↑5000 ft	

Chapter 7 Birmingham (EGBB)

7.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
BB INT	BBR	123.980	Birmingham Radar	Birmingham Radar
BB FIN	BBF	131.005	Birmingham Director	Birmingham Director
BB AIR	BBT	118.305	Birmingham Tower	Birmingham AIR
BB GMC	BBG	121.805	Birmingham Ground	Birmingham GMC
BB GMP	BBD	121.930	Birmingham Delivery	Birmingham GMP

7.2 Area of Responsibility

Birmingham APC is the delegated controlling authority for the areas shown in the Figure below.

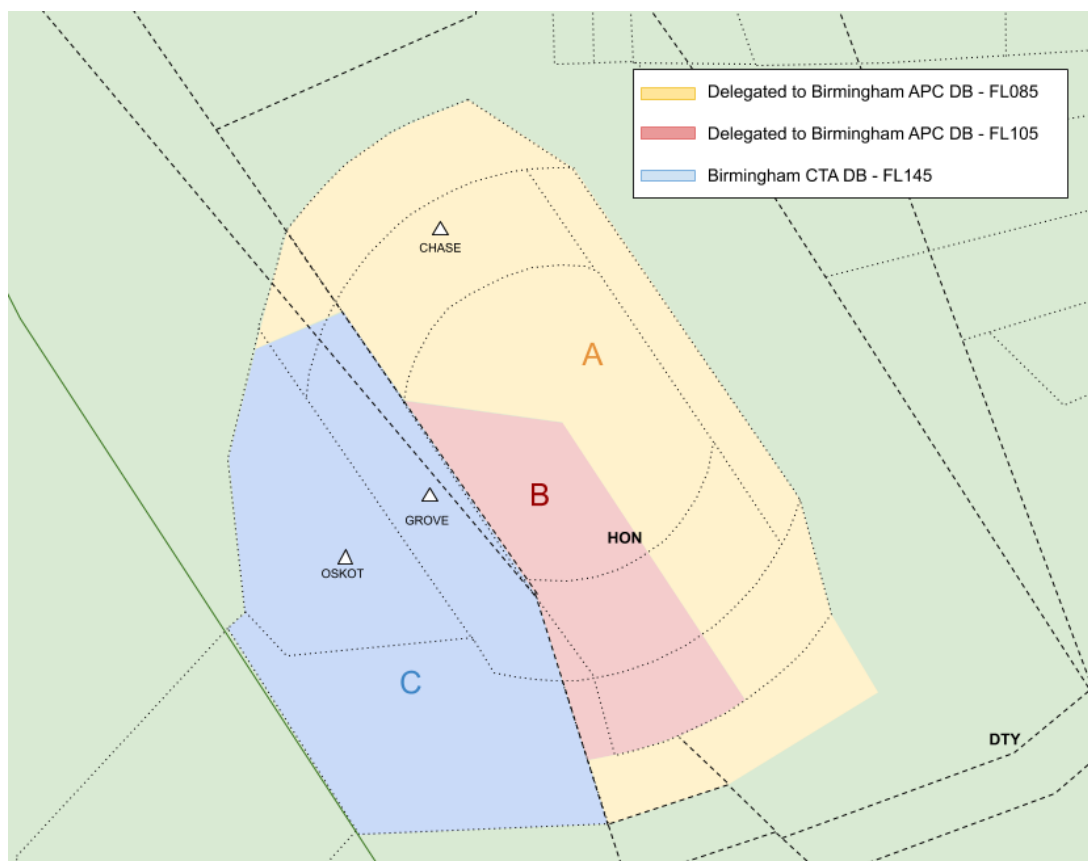
- Area A – DB to FL85
- Area B – DB to FL105
- Area C – DB to FL145

Area C includes the Birmingham CTA 10 (FL65-FL105), Class D Flexible Use Airspace, active in real world (all times in **local**):

- Mon-Thurs 1700-0900
- Fri (or the day before a public holiday) 1700 - Mon (or the day after a public holiday) 0900.

FL105-FL145 is Class C airspace.

Figure APT-13 – Birmingham APC Airspace



7.2.1 Minimum Stack Level

Birmingham MSL is determined from the Birmingham QNH and its transition altitude of 6000 ft.

1013 hPa is considered high pressure in the Midlands Area (Davenport CTA) in order to align with the adjoining London TMA (i.e., MSL is FL70).

7.3 Procedures for Inbound Aircraft

Via	Release Point	Silent Level	Descent before release point
GROVE via BIFIN	GROVE	FL130 lvl BIFIN	MSL subject base of CAS
GROVE via HON	HON	FL90 lvl HON	RFD on transfer of communication
CHASE	Release lvl + 1000 ft	↓FL90	FL90, on transfer of communication

Traffic to GROVE via HON is released to Birmingham by TC Midlands on a **silent handover** procedure at FL90, 10 NM or greater in trail. If 10 NM in trail is not possible then each inbound shall be coordinated. Birmingham shall suspend the silent release procedure if holding at FL90 occurs.

Traffic via BIFIN is handed to Birmingham APC under an **abbreviated release** (verbal or electronic) at FL130 level by BIFIN. Traffic shall be at least 15 NM in trail.

Traffic to CHASE is released on a **silent handover** procedure at FL90. Traffic must be level separated at CHASE and is handed to Birmingham APC when FL90 is clear, or otherwise coordinated.

7.3.1 Runway 33 Inbound Procedures

Inbounds to GROVE via HON

Aircraft inbound to GROVE via HON with Runway 33 in use may be descended below FL90 and vectored without reference to outbounds once crossing the extended centreline. Early descent/vectoring is permitted in situations whereby Birmingham APC ensure separation against their own outbound traffic. Traffic may be vectored up to 30° left of track and descended below FL90 as long as the following conditions are met:

1. Inbound traffic has entered Davenport CTA-9 (North of DTY VOR).
2. 5 NM lateral separation is retained against all Birmingham/Coventry outbounds until they are above FL90.

Inbounds to GROVE via BIFIN

Released for descent on contact, and for turns after BIFIN. BB APC is responsible for providing separation from traffic previously transferred to AC West, if inbound traffic is descended below the agreed level and/or vectored.

Inbounds to CHASE

Aircraft inbound to CHASE with Runway 33 in use are released at 1000 ft above cleared level (i.e., FL100 under the silent release at FL90). Birmingham APC may only turn/descend aircraft below/after the release point **and** when they ensure separation from outbounds, such as:

- When there are no outbounds.
- When outbounds will be retained by Birmingham APC and transferred clean.
- When PC Southeast already has contact with outbounds and has issued climb above FL80.

7.3.2 Runway 15 Inbound Procedures

Inbounds to GROVE via HON

Aircraft inbound to GROVE via HON with Runway 15 in use may be descended below FL90 and vectored without reference to outbounds after HON. Early descent/vectoring is permitted entering the Birmingham delegated airspace if there are no departures.

Inbounds to GROVE via BIFIN

Released for descent on contact, and for turns after BIFIN. BB APC is responsible for providing separation from traffic previously transferred to AC West, if inbound traffic is descended below the agreed level and/or vectored.

Inbounds to CHASE

Aircraft inbound to CHASE with Runway 15 in use are released at 1000 ft above cleared level (i.e., FL100 under the silent release at FL90). Traffic arriving from west of CHASE, may be descended/vectored after/below the release point provided they do not pass east of the extended centreline. For all other arrivals, Birmingham APC may only turn/descend aircraft below/after the release point **and** when they ensure separation from outbounds, such as:

- When there are no outbounds.
- When outbounds will be retained by BB and transferred clean.
- When PC Southeast already has contact with outbounds and has issued climb above FL80.

7.3.3 Holding Procedures

When holding commences at CHASE, Birmingham ATC shall inform PC Southeast and suspend the silent handover at FL90 (“Silent 9”).

Traffic up to and including FL140 in both CHASE and GROVE holds are deemed separated, providing at FL130 and FL140 the traffic is radar monitored. This separation is dependent on the accurate maintenance of the non-standard holding speed (210 kts IAS). The maximum holding level in both holds is FL140.

Should PC Southeast still retain control of traffic in the CHASE hold at FL130 and FL140, it will be their responsibility to radar monitor this traffic against traffic in the GROVE hold at those levels.

***Note:** Due to the relative positions of CHASE and GROVE holds, it is imperative that traffic inbound to CHASE does not route past the holding fix since this would then place this traffic in conflict with the GROVE hold.*

CHASE Hold

CHASE	RNAV Hold, 1-minute legs
Axis	149°
Direction	RIGHT hand
Holding Levels	5000 ft – FL140
Speed	Maximum 210 kts IAS

GROVE Hold

GROVE	RNAV Hold, 1-minute legs
Axis	103°
Direction	RIGHT hand
Holding Levels	FL70 – FL140
Speed	Maximum 210 kts IAS

***Note:** Whenever holding is initiated at GROVE, Birmingham APC will notify TC Midlands and cancel the silent handover.*

7.4 Procedures for Departing Aircraft

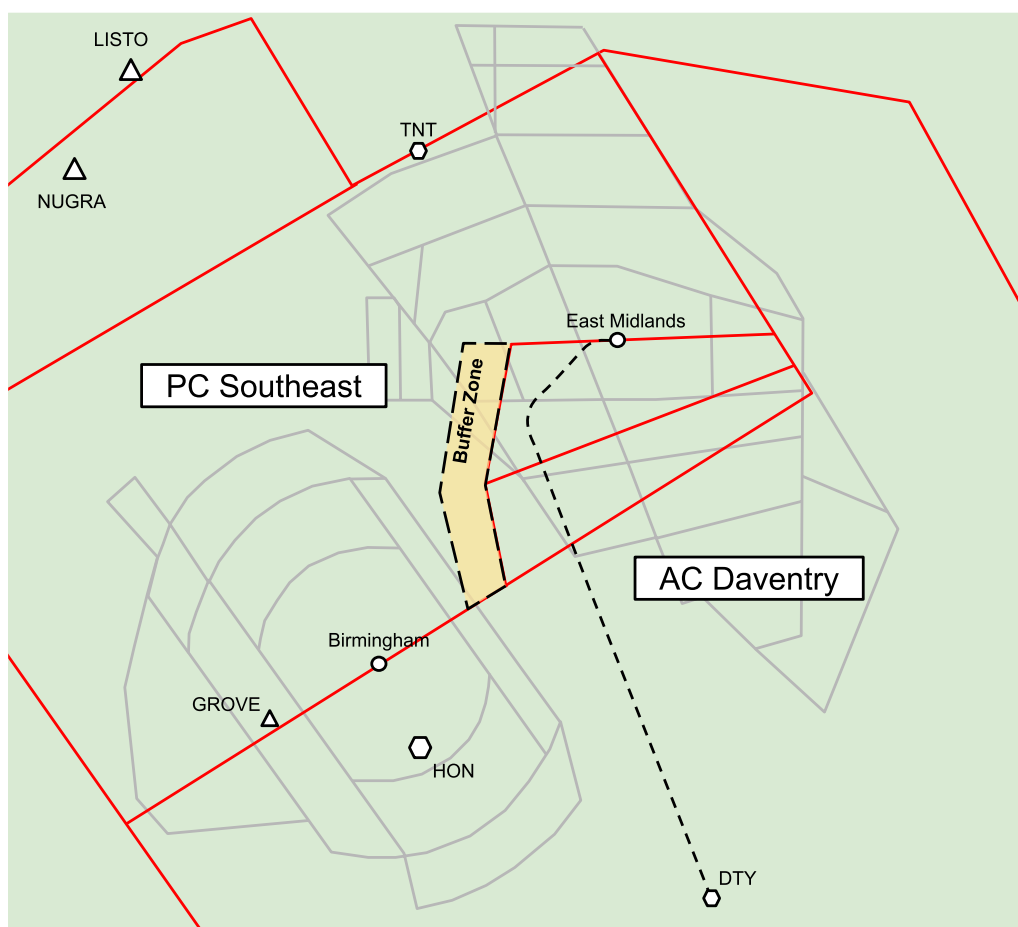
All departures from Birmingham shall be transferred to Birmingham APC who will identify and verify the Mode C readout before transfer to London Control.

7.4.1 Departures to the North

Runway	SID	Standing Agreement	Next Sector
15	LUVUM 1Y	↑FL80	PC Southeast
33	LUVUM 1M		

Birmingham APC will climb all traffic to FL80 subject to departing traffic. When Runway 15 is in use, Birmingham APC shall ensure separation against CHASE inbounds prior to transfer to PC Southeast. Traffic must not be vectored to enter the 3 NM wide Midlands Buffer Zone (see Figure APT-14).

Figure APT-14 – Midlands Buffer Zone



7.4.2 Departures to the West

Runway	Routing	SID	Standing Agreement	Next Sector
15	Via MOSUN	MOSUN 15 procedure	↑FL120	AC West
	Via LUXTO	LUXTO 15 procedure		
33	Via BRUMI	BRUMI 1M		

Note: Birmingham APC must inform AC West (verbally or through the tag) which service the aircraft is on if the airspace is uncontrolled.

In real, this Standing Agreement applies only when the Birmingham CTA and Cotswold CTA Flexible Use Airspace is active (i.e., the aircraft route through controlled airspace). On VATSIM, the agreement will always apply, since even if the airspace is not treated as controlled, the route is still generally available.

Westbound traffic shall be climbed by Birmingham APC to FL120 and handed to AC West released for climb to FL140 and further subject to coordination with TC Midlands. It is Birmingham’s responsibility to retain and separate against traffic inbound via BIFIN. Should this not be possible, coordination shall be effected.

7.4.3 Departures to the South

SIDs to the south vary depending on the runway in use.

Runway	Routing	SID	Standing Agreement	Next Sector
15	Via CPT	CPT 2Y	6000 ft	TC Midlands
	Via COWLY	COWLY 2Y		
	Via DTY	DTY 2Y		
33	Via CPT	ADMEX 1M	6000 ft	TC Midlands
	Via COWLY			
	Via DTY	UNGAP 1M		

Chapter 8 East Midlands (EGNX)

8.1 Controller Positions and Coordination Indicator

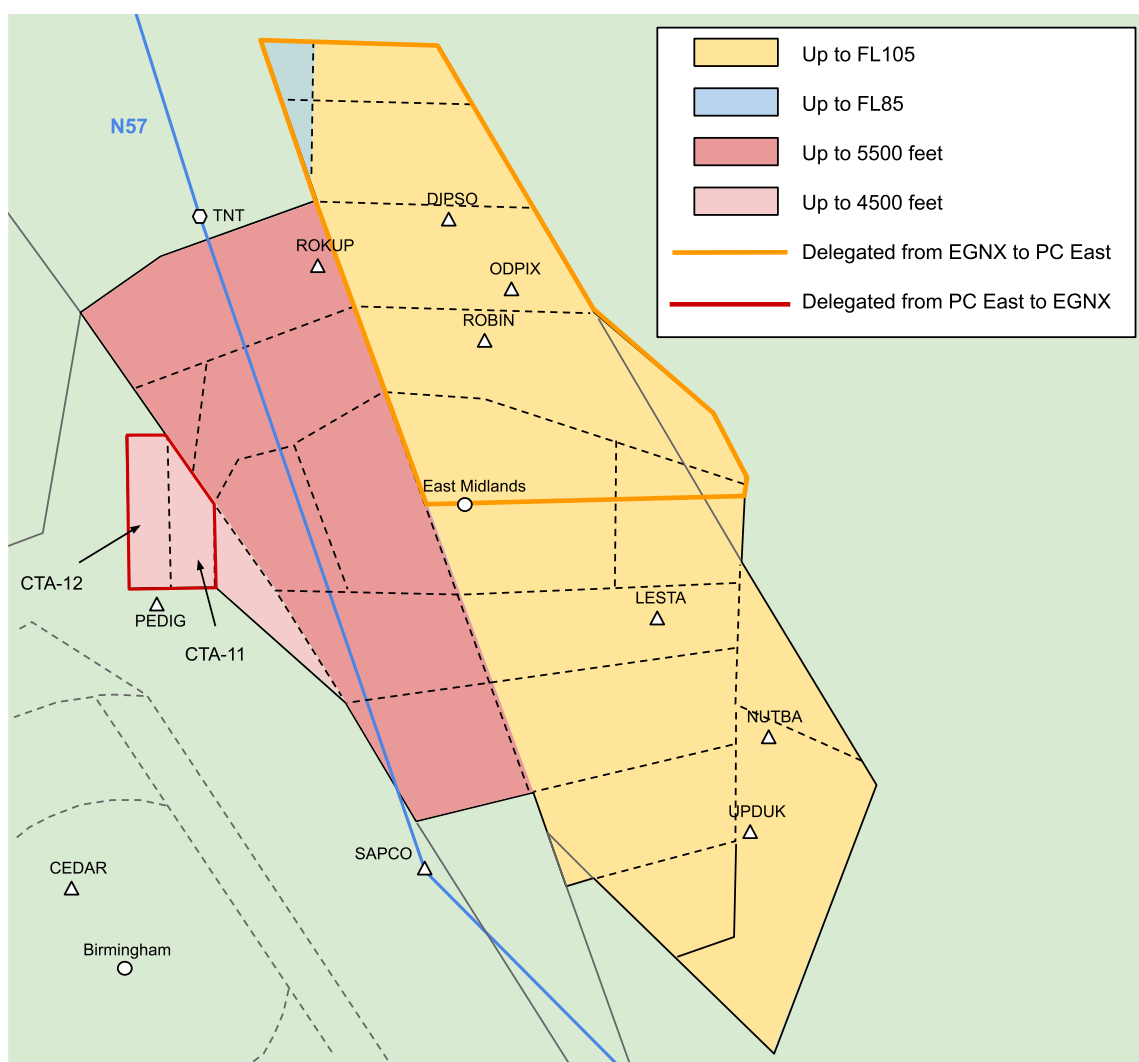
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
NX APC	NXR	126.180	East Midlands Radar	East Midlands Radar
NX RAD	NXF	120.130	East Midlands Radar	East Midlands Radar
NX AIR	NXT	124.005	East Midlands Tower	East Midlands AIR
NX GMC	NXG	121.905	East Midlands Ground	East Midlands GMC

8.2 Area of Responsibility

East Midlands delegate a portion of airspace east of N57 to PC Southeast at FL80 or MSL (whichever is higher). Where traffic wishes to operate VFR in the airspace delegated to PC Southeast, it should be worked by East Midlands, but coordinated with PC Southeast.

PC Southeast delegates an area of Class A airspace to East Midlands above CTA-11 and CTA-12 up to 5000 ft.

Figure APT-15 – East Midlands Airspace



On first contact with TC Midlands, the runway in use shall be provided to all East Midlands arrivals.

8.2.1 Minimum Stack Levels

The MSLs used at PIGOT and ROKUP are as defined in 8.3.5 below.

1013 hPa is considered high pressure in the Midlands Area (Davenport CTA) in order to align with the adjoining London TMA (i.e., MSL is FL70).

8.3 Procedures for Inbound Aircraft

8.3.1 Inbound Releases

Via	Agreement	Speed	Condition
PIGOT	↓FL100	Max 250 kts	Cross VELAG FL130 or below. <i>(Note 1)</i>
ROKUP	↓MSL, minimum FL80	Max 250 kts	<i>(Note 2)</i>

Note 1: Traffic below FL100 must be individually coordinated.

Note 2: PC Southeast shall typically transfer traffic on a radar heading between DIPSO and ROBIN/EMBOR to prevent holding. Else traffic must be handed off in good time to ensure East Midlands has time to issue instructions to prevent holding.

All traffic via PC Southeast and TC Midlands must be 10 NM in trail, constant or increasing, or shall otherwise be coordinated. Traffic is transferred by silent handover. Where holding occurs up to the level of the silent agreement, East Midlands must suspend the agreement and all inbounds are coordinated.

8.3.2 Traffic via PIGOT

Traffic via PIGOT is released for descent to FL80 on contact. Further descent is permitted only within the East Midlands CTA (therefore holding may not occur at PIGOT below FL80).

Traffic is released for RIGHT turn at VELAG but may not pass west of a 360-degree track from VELAG until at or below FL100 (therefore within the EGNX CTA).

When Runway 27 is in use, traffic may not cross the edge of N57 at any time. When Runway 09 is in use, traffic may not cross the edge of N57 until at or below FL70. Such traffic must be descended promptly to re-enter the East Midlands CTA.

8.3.3 Traffic via ROKUP

Traffic via ROKUP is released for descent to MSL and right turns upon transfer of communications. Descent below MSL is permitted east of the eastern edge of N57, and this traffic may not cross the eastern edge heading west until it is below 5500 ft (i.e., must remain within East Midlands' airspace).

Separation against departures is the responsibility of East Midlands APC. PC Southeast shall not climb departures above 6000 ft until clear of traffic released to East Midlands. PC Southeast shall not vector traffic below 5000 ft unless safety critical.

8.3.4 Suspension of Silent Handover Procedures

It is the responsibility of East Midlands APC to suspend silent handover procedures where there is conflicting traffic or insufficient capacity due to inbounds. In this case, inbounds will be individually coordinated.

8.3.5 Holding Procedures

PIGOT Hold

PIGOT	RNAV Hold, 1-minute legs
Axis	185°
Direction	LEFT hand
Holding Levels	MSL (Minimum FL80) – FL120
Speed	Maximum 220 kts IAS

Note 1: MSL at PIGOT is to be determined by the **Birmingham QNH**.

Note 2: The minimum holding level for use at PIGOT is MSL, with an overriding minimum of FL80, due to the base of controlled airspace of CTA-16 (FL75).

ROKUP and PIGOT holds are separated up to and including FL140.

ROKUP Hold

ROKUP	RNAV Hold, 1-minute legs
Axis	292°
Direction	RIGHT hand
Holding Levels	FL80 – FL140
Speed	Maximum 220 kts IAS

Note: MSL at ROKUP is to be determined by the **East Midlands QNH**.

East Midlands APC must notify PC Southeast of the need to hold at ROKUP, after which PC Southeast will clear aircraft to ROKUP and not place them on a radar heading. East Midlands may climb traffic from FL70 to FL80 if holding is to be commenced but should notify PC Southeast.

PC Southeast shall retain control of all traffic in the ROKUP hold at FL130 & FL140. EGNX Approach will control traffic holding FL120 and below.

ROKUP is separated from DAYNE and PIGOT holds up to and including FL140. Note ROKUP is not separated from the Lichfield Radar Corridor (see GEN 8.2.3).

8.4 Procedures for Departing Aircraft

8.4.1 Standard Instrument Departures

When Runway 27 is in use, traffic is directly handed to the receiving PC Southeast/TC Midlands sector unless specified by East Midlands APC.

All departures from Runway 09 require a release from East Midlands APC. East Midlands APC may specify a lower initial altitude than the SID during this release and will normally work all departures. Traffic shall always be transferred to Area sectors on own navigation at SID levels and clear of inbound traffic.

The **POL** SID from Runway 09 (POL 2P) is only available between 0700 and 2200 local each day. At all other times, pilots are to be issued with a Trent (TNT) SID.

East Midlands APC is responsible for monitoring East Midlands departures and providing radar and/or vertical separation between:

- Departures on the same or conflicting routes, when requested by East Midlands ADC.
- Departures from 09 on all SIDs and East Midlands inbound aircraft.
- Departures and inbounds in the EME, EMW, ROKUP or PIGOT holding patterns.
- Departures and any other known inbounds.

8.4.2 Vectoring of Departures

East Midlands APC are permitted to vector departures from Runway 09 when required in order to separate against inbounds, provided the following noise abatement conditions are met:

- Aircraft are not vectored off TNT / POL SIDs until at or above 5000 ft.
- Aircraft are not vectored off DTY SIDs until at or above 6000 ft.

Departures must remain within the lateral constraints of the East Midlands CTR/CTA at all times.

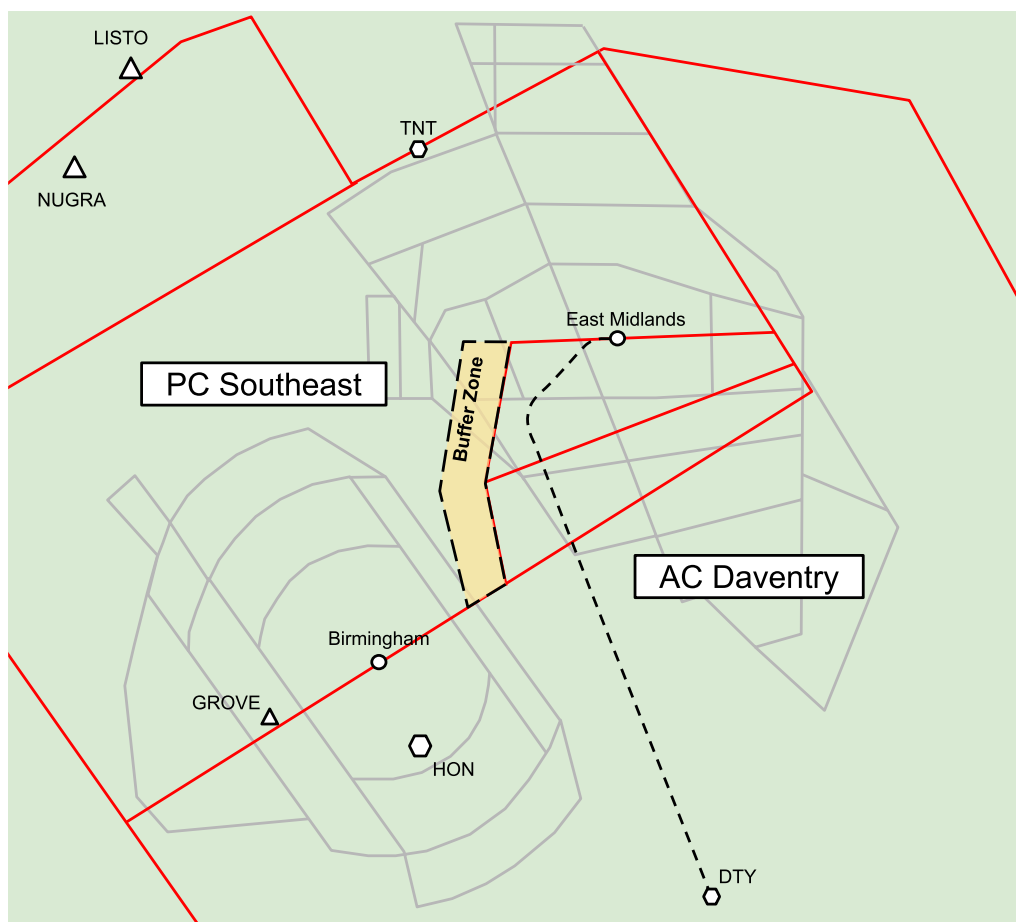
Any aircraft that are vectored off the SID track should have resumed their own navigation before transfer to the next controller unless a heading is coordinated with the next AC / TC departure sector.

All DTY departures must be on their own navigation to the end of the SID by the time they are abeam Birmingham Airport.

TC Midlands will receive DTY departures off Runway 27 directly from AIR.

A Buffer Zone is established (depicted below) for the purpose of ensuring separation between Birmingham and East Midlands departures. As such, TC Midlands must not vector outbounds into the Buffer Zone.

Figure APT-16 – Midlands Buffer Zone



Chapter 9 Manchester (EGCC)

9.1 Controller Positions and Coordination Indicator

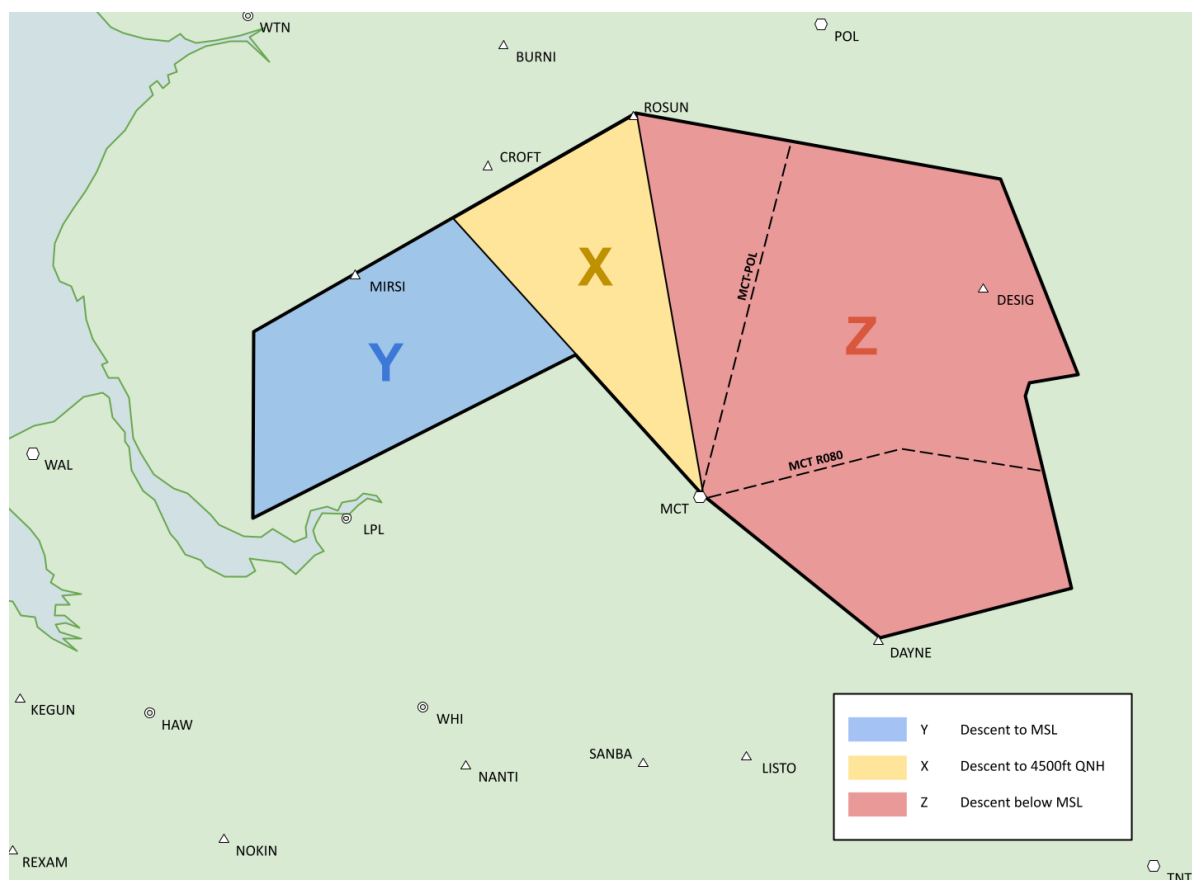
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
CC INT S	CCS	118.580	Manchester Radar	Manchester INT South (Radar South)
CC INT N	CCN	135.005	Manchester Radar	Manchester INT North (Radar North)
CC FIN	CCF	121.355	Manchester Director	Manchester FIN (Director)
CC AIR 1	CCT	118.630	Manchester Tower	Manchester AIR 1
CC AIR 2	CCTS	119.405	Manchester Tower	Manchester AIR 2
CC GMC	CCG	121.855	Manchester Ground	Manchester GMC
CC GMP	CCD	121.705	Manchester Delivery	Manchester GMP

9.2 Area of Responsibility

Manchester APC are responsible for the Manchester CTR/CTA and the airspace delegated within 20 NM. Delegated airspace to the RMA is dependent upon the runway in use.

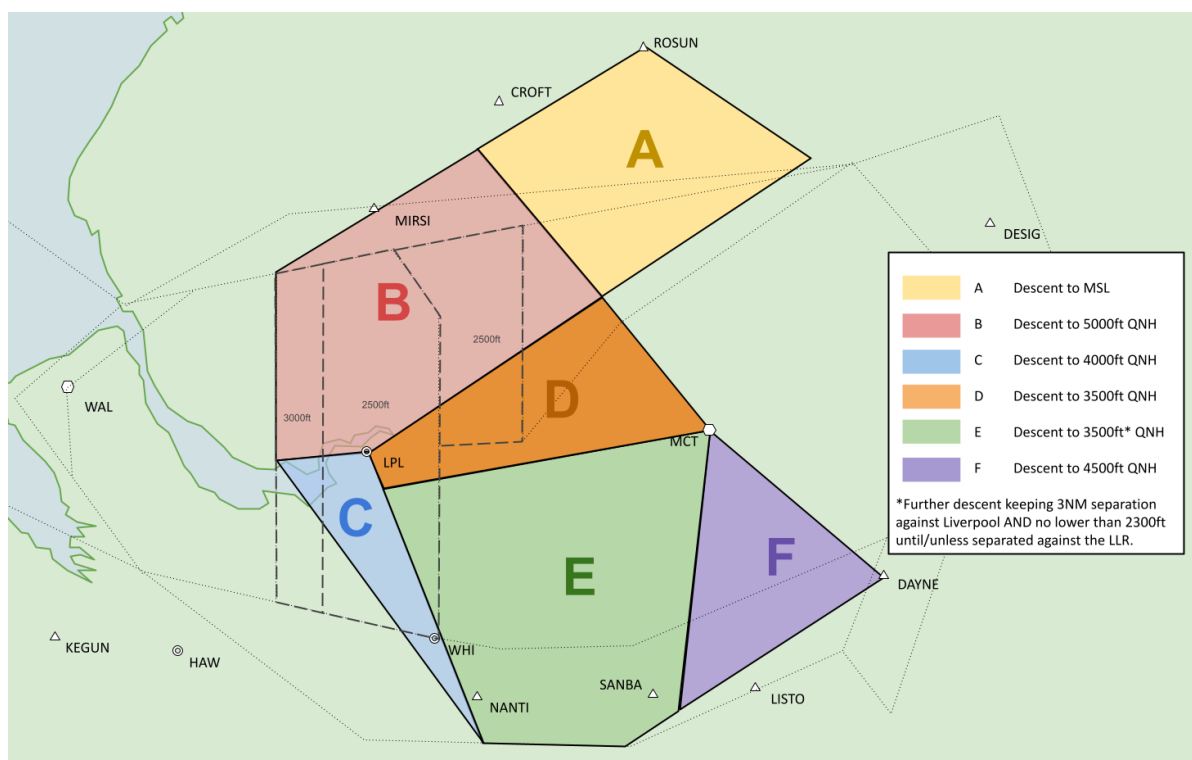
Westerly RMA

Figure APT-17 – Manchester Westerly RMA



Easterly RMA

Figure APT-18 – Manchester Easterly RMA



9.3 Procedures for Inbound Aircraft

9.3.1 Preferred Transfer Conditions

During normal traffic conditions, MPC shall endeavour to transfer traffic to all release points (DAYNE, MIRSI and ROSUN) cleared to FL80. Manchester Approach will descend the aircraft as permitted to enable the next aircraft to be transferred cleared to FL80. Where this is not possible, traffic may still be transferred at other levels according to the abbreviated release procedures.

Hold	From	Preferred Transfer Condition
DAYNE	All	FL80 lvl DAYNE
MIRSI	All	FL80 lvl 5 NM before MIRSI
ROSUN	East via POL	FL80 lvl BURNI
	North	FL80 lvl 5 NM before ROSUN

9.3.2 Abbreviated Releases

The following are the lowest release levels available at each holding pattern. MPC may transfer traffic in level order using an abbreviated release (electronic or verbal).

Via	Runway	Minimum Release Level	Lowest Holding Level	Release Point
DAYNE	All	MSL (Minimum FL70)	MSL (Minimum FL70)	TNT (abeam)
MIRSI	23 L/R	MSL	MSL	MIRSI
	05 L/R	MSL+1 (Minimum FL80)	MSL+1	MIRSI
ROSUN (from North)	23 L/R	MSL+1 (Minimum FL80)	MSL+1	ROSUN
	05 L/R			FL110

Via	Runway	Minimum Release Level	Lowest Holding Level	Release Point
ROSUN via POL	23 L/R	MSL (Minimum FL70)	MSL (Minimum FL70)	ROSUN
	05 L/R			FL110

9.3.3 Vectoring and Descent Restrictions

9.3.3.1 Via DAYNE

Whether transferred by abbreviated release or the preferred transfer conditions, traffic via DAYNE is released for descent to MSL on transfer of communication. Manchester is not permitted to descend below FL70 until aircraft has received an instruction beyond DAYNE, due to the lowest holding level being FL70.

Runway	Conditions
23 L/R	Released for turn at TNT or abeam TNT if transferred on a heading. Turns must ensure the aircraft enters RMA Area Z and shall not route the aircraft west of the TNT-DAYNE-MCT line. Traffic must be at MSL or below before crossing the PC Southeast/Northeast boundary.
05 L/R	Released for left turn after DAYNE.

9.3.3.2 Via MIRSI

Whether transferred by abbreviated release or the preferred transfer conditions, traffic via MIRSI is released for descent to MSL on transfer of communication.

Runway	Conditions
23 L/R	Released for turn at MIRSI. Must remain on or north of the track 090° from MIRSI until east of the MCT-ROSUN line (i.e. the boundary between Areas X and Z). This is to ensure separation against departures climbed by MPC. Traffic must be at FL80 or below by MCT R325° (i.e. the boundary between Areas Y and X).
05 L/R	Released for right turn at MIRSI. Must remain west of the track 175° from MIRSI while in Area B.

9.3.3.3 Via ROSUN

Whether transferred by abbreviated release or the preferred transfer conditions, traffic via ROSUN is released for descent to MSL subject to Leeds Bradford airspace (see *Figure APT-21 – Leeds Airspace*). Manchester may descend traffic to FL80 using the airspace delegated by Leeds to PC Northeast but may not enter airspace under the control of Leeds Approach.

Runway	Conditions
23 L/R	Traffic via POL from the east is released for left turn passing FL110. Otherwise, traffic is released for turn at ROSUN. Traffic leaving ROSUN on a track of 140° or greater must be turned approximately to a 'downwind' before the MIRSI 090° track.
05 L/R	Traffic via POL from the east is released for left turn passing FL110. It must be vectored so that it reaches on or north of the track 215° from ROSUN before leaving Area A. Traffic from the north is released for right turn at ROSUN. It shall be vectored on or north of the track 215° from ROSUN. Traffic may be turned left from the 215° track after passing the eastern edge of the Low Level Route.

9.3.4 Holding Procedures

MIRSI Hold

MIRSI	RNAV Hold, 1-minute legs
Axis	061°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL60) – FL140
Speed	Maximum 230 kts IAS

Note: The MIRSI hold is separated from ROSUN hold up to and including FL140.

DAYNE Hold

DAYNE	RNAV Hold, 1-minute legs
Axis	311°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL70) – FL140
Speed	Maximum 230 kts IAS

Note 1: Traffic holding at DAYNE at FL140 is not separated from traffic holding en-route at TNT VOR at FL140.

Note 2: Aircraft must adhere to the TMA inbound speed restrictions to satisfy holding requirements. Controllers should allow sufficient time for aircraft to reduce from speed restrictions above 250 kts IAS.

Note 3: Manchester shall not descend holding traffic to MSL at DAYNE, unless it is also instructed to leave the hold.

ROSUN Hold

ROSUN	RNAV Hold, 1-minute legs
Axis	172°
Direction	RIGHT hand
Holding Levels	MSL (minimum FL70) – FL140
Speed	Maximum 230 kts IAS

Note 1: ROSUN is separated from MIRSI up to and including FL140.

Note 2: Aircraft entering the ROSUN hold from POL route POL - BURNI - ROSUN. (BURNI is the initial entry fix for aircraft entering the ROSUN hold from the POL direction.)

9.4 Procedures for Departing Aircraft

All departures are free-flow and transferred from AIR to the relevant PC sector.

SID	First Sector	Restrictions
ASMIM	PC West	
DESIG	PC Northeast	
EKLAD	PC West	
KUXUM	PC West	
LISTO	PC Southeast	<u>Westerly operations:</u> Available to non-Jet only, and jet-aircraft under a MTOW 35,000 kg
POL	PC Northeast	
SANBA	PC Southeast	<u>Westerly operations:</u> Jet aircraft only
SONEX	PC Northeast	

9.4.1 EGCC Vectoring of Outbounds Subject Inbounds (‘Turn and Burn’)

The ‘Turn and Burn’ procedures at Manchester allow early climb of departures by vectoring low-level against inbound traffic released to Manchester APC. This is achieved by vectoring inside the SID tracks to lengthen the point of conflict and thus climb departures over inbounds. They are most useful between the following pairings:

- Runway 23L/R: MIRSI/ROSUN inbounds vs. POL/SONEX departures
- Runway 05L/R: ROSUN inbounds vs. ASMIM departures

Before vectoring departing traffic on the SIDs above, the PC controller must consider that:

- Vectoring of departures should not occur until they pass the noise abatement altitude of the relevant NPR profile, as defined in the table below.
- Removing the speed restriction may have the adverse effect of widening the turn radius, so controllers are advised not to do so until the required turn has been observed.
- The effects of wind will need to be considered in selecting a suitable heading that ensures separation from inbound traffic.
- Climb above the SID altitude should be given in the turn to ensure that the departure is able to climb above the inbound traffic.
- Although Manchester APC controllers should be aware of this technique, and as such be vectoring inbounds to allow it to be used safely, the RMAs are ultimately established for the purpose of vectoring inbounds. Thus, when it appears that Manchester APC is operating very close to the southern extremity of their RMA (see APT 9.2), prior coordination must be effected between the PC sector and APC to agree a plan of action for the departing traffic.

Noise Preferential Routes (NPR) apply to all departing jet aircraft. Except when required for safety reasons, deviation from the NPRs is not permitted until aircraft have passed the following altitudes:

SID	Runway	Altitude
EKLAD/KUXEM	23L/R	3000 feet
SONEX/POL	23L/R	4000 feet
LISTO/SANBA	23L/R	5000 feet
ASMIM/DESIG/POL	05L/R	4000 feet
LISTO	05L/R	5000 feet

Chapter 10 Liverpool (EGGP) and Hawarden (EGNR)

10.1 Controller Positions and Coordination Indicator

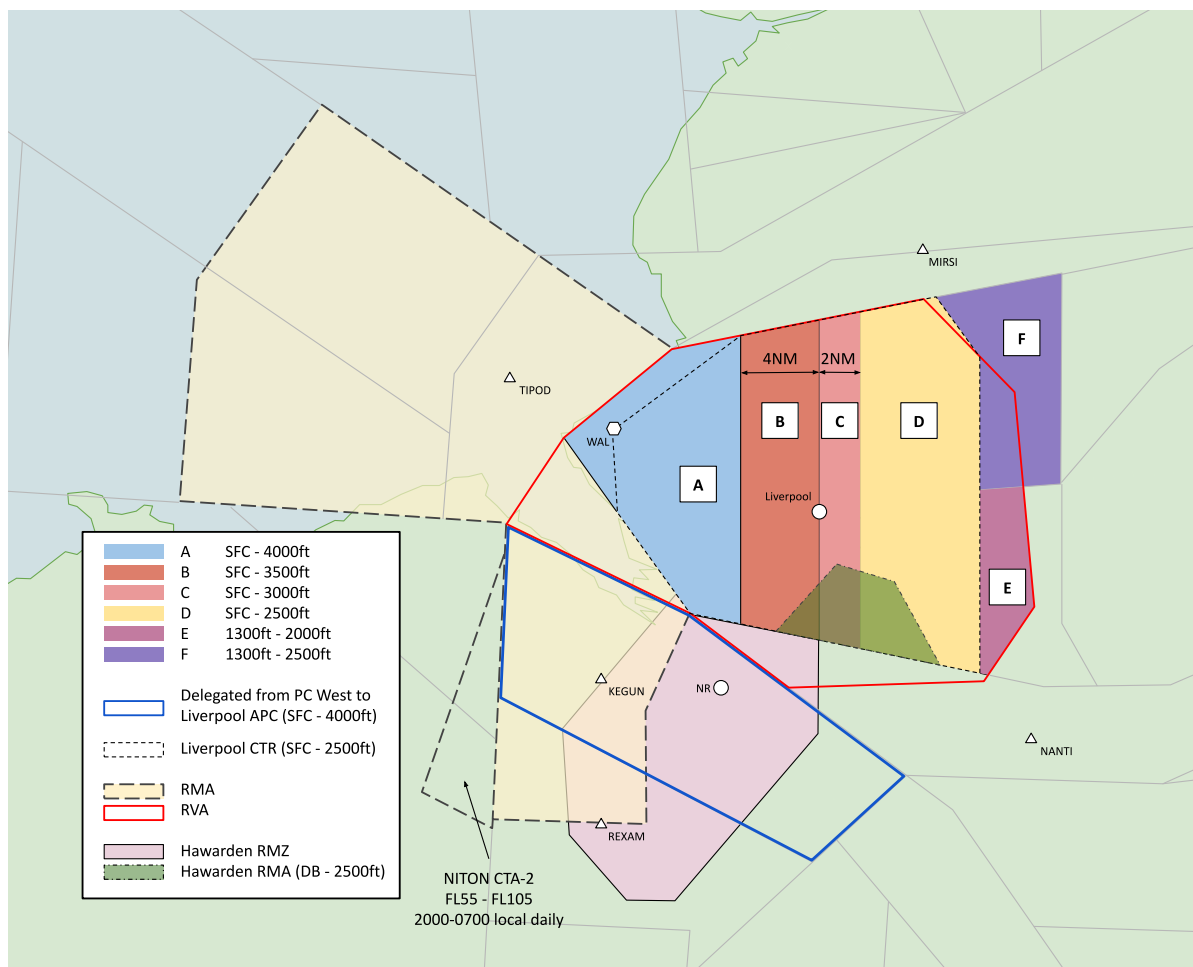
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
GP RAD 1	GPR	119.855	Liverpool Radar	Liverpool RAD 1
GP RAD 2	GPF	118.455	Liverpool Radar	Liverpool RAD 2
GP AIR	GPT	126.355	Liverpool Tower	Liverpool AIR
GP GMC	GPG	121.955	Liverpool Ground	Liverpool GMC
NR RAD	NRR	120.055	Hawarden Radar	Hawarden RAD
NR FIN	NRF	130.015	Hawarden Radar	Hawarden FIN
NR ADC	NRT	124.955	Hawarden Tower	Hawarden ADC

10.2 Area of Responsibility

Liverpool is responsible for the Liverpool CTR/CTA and RMA airspace delegated by PC West. In addition to the standard RMA, the area west of KEGUN is available to Liverpool between 2000-0700 (1900-0600 in winter) daily to facilitate holding at KEGUN.

Note that the term “RMA” for Liverpool does not refer to all delegated airspace, but specifically to the delegated areas containing TIPOD and KEGUN, light yellow in the diagram below.

Figure APT-19 – Liverpool Airspace



10.3 Procedures for Inbound Aircraft

PC West shall transfer EGGP and EGNR inbounds via KEGUN and TIPOD by Silent Handover descending to/at MSL.

Traffic that cannot be transferred at MSL is not subject to the silent release and requires individual coordination. Where a release is provided with the release point specified as “TIPOD” or “KEGUN”, Liverpool will not be permitted to use the less restrictive descent procedures documented later; this is also the release that they must assume if no full release has been coordinated.

Liverpool RAD 1 may request EGNR inbounds be transferred directly to Hawarden RAD. In doing so, it remains Liverpool RAD 1’s responsibility to coordinate any changes to release conditions with Hawarden.

Liverpool RAD 1 is responsible for separating all inbound traffic released to it against Liverpool and Hawarden outbounds.

10.3.1 Release Procedures

10.3.1.1 Liverpool

STAR		Release Conditions
BOFUM 1L PENIL 1L	(West)	Silent release. Released at the RMA boundary.
LAKEY 1L GASKO 1L		Silent release.
POL 1L	(North/east)	- <u>EGCC Westerly Ops</u> : RFT towards the RMA and descent passing the western edge of the Low-Level Route. - <u>EGCC Easterly Ops</u> : Liverpool RMA boundary (Note 1)
LIBSO 1L VEGUS 1L		Silent release.
ELVOS 1L LESTA 1L	(Southeast)	- <u>EGCC Westerly Ops</u> : RFT towards the RMA and descent at NANTI. - <u>EGCC Easterly Ops</u> : RFT towards the RMA and descent 5 NM west of NANTI.
PEPZE 1L	(South)	Silent release. Released at GODPA.

Note 1: The silent release in this situation is incredibly inefficient and, in this scenario, MPC is encouraged to coordinate a full release.

10.3.1.2 Hawarden

Via		Release Conditions
WAL	(West)	As per EGGP traffic.
WAL	(North/east)	Silent release. Released at WAL.
NANTI	(Southeast)	As per EGGP traffic.
GODPA	(South)	As per EGGP traffic.

10.3.2 Liverpool Vectoring Restrictions

10.3.2.1 Liverpool Runway 09

Continuous descent procedures are used and Liverpool is permitted to allow traffic to enter Areas A above 4000 ft for CDA.

10.3.2.2 Liverpool Runway 27 with Manchester Runway 23L/R

Where the release permits it, less restrictive descent requirements are used depending on the circuit direction.

Via	Circuit Direction	Altitude Restrictions
KEGUN/NANTI	Right	4000 ft abeam Liverpool 2500 ft by the western edge of the LLR
	Left	Full descent profile
TIPOD	Right	4000 ft abeam Liverpool 2500 ft by the western edge of the LLR
	Left	3000 ft abeam Liverpool 2000 ft by western edge of the LLR

All traffic on right downwind must be vectored to remain at least 3 NM north of Liverpool.

10.3.2.3 Liverpool Runway 27 with Manchester Runway 05L/R

All traffic must be vectored right hand for Runway 27, with the downwind leg remaining at least 3 NM north of Liverpool following the full descent profile.

Traffic via KEGUN is not permitted within 5 NM of Liverpool until at or below 3000 ft.

10.3.3 Hawarden Vectoring Restrictions

Hawarden traffic is not to be vectored east of a line north-south through Liverpool until at 3500 ft or below.

10.3.4 Holding Procedures

PC West is responsible for both KEGUN and TIPOD holding areas. For aircraft holding at TIPOD and KEGUN, PC West shall retain aircraft at and above FL90. When lower levels become available, they shall descend aircraft to the lowest level and release it to Liverpool APC.

When holding is taking place, PC should not routinely apply speed restrictions above 250 kts IAS below FL100.

TIPOD Hold

TIPOD	RNAV Hold, 1-minute legs
Axis	116°
Direction	RIGHT hand
Holding Levels	MSL (Minimum FL70) – FL100
Speed	Maximum 210 kts IAS

KEGUN Hold

KEGUN	RNAV Hold, 1-minute legs
Axis	003°
Direction	LEFT hand
Holding Levels	MSL (Minimum FL70) – FL100
Speed	Maximum 210 kts IAS

Note 1: PC West and Liverpool APC should note that the KEGUN hold is also used for Hawarden (EGNR) inbounds, which Liverpool APC will control.

Note 2: When holding takes place at KEGUN outside of 2000-0700 local (the hours of NITON CTA-2), Liverpool must radar monitor holding aircraft as a high priority task, else arrange to hold at TIPOD.

HAW Hold

HAW	1-minute legs
Axis	042°
Direction	RIGHT hand
Holding Levels	2500 ft – 5000 ft
Speed	Maximum 210 kts IAS

The HAW hold is not available to Hawarden above 4000 ft without coordination with PC West (and Liverpool RAD 1) as this is not separated against Manchester KUXEM/EKLAD departures. Above 2500 ft in the HAW hold is not separated from REXAM/NANTI departures from Runway 27.

10.4 Procedures for Departing Aircraft

Liverpool AIR shall request release from RAD 1 for all IFR departures. RAD 1 shall specify whether they wish to work the traffic in the release or for it to be transferred directly to PC West.

Hawarden RAD will normally work Hawarden departures, though through coordination Liverpool RAD 1 may choose to work this traffic. Hawarden departures will be transferred to PC West on track to WAL or REXAM within controlled airspace.

10.4.1 NANTI and REXAM Departures when Manchester Runway 05L/R

Whenever Manchester is using Runway 05L/R, the NANTI 2T, NANTI 2V and REXAM 2V SIDs are not available.

Outbound traffic will instead be issued with the following alternative clearance by Liverpool ADC:

SID	Clearance
NANTI 2T	↑3000 ft (Liverpool QNH), heading 180°.
NANTI 2V	↑3000 ft (Liverpool QNH), heading 210°.
REXAM 2V	↑3000 ft (Liverpool QNH), heading 210°.

Liverpool GMC will indicate the alternative clearance has been given by selecting NANTALT or REXAALT in the departure list SID field.

10.4.2 Departure Releases

Liverpool BARTN and POL departures are subject to release from PC West, as this traffic needs to climb through the MIRSI hold protected area to prevent it entering the Manchester RMA.

Hawarden departures enter CAS via REXAM or WAL. Hawarden ADC will pass an expected airborne time to PC West.

Liverpool RAD 1 is responsible for separating all Liverpool and Hawarden departures from each other, as well as against arrivals released by PC West.

Chapter 11 Bristol (EGGD) & Cardiff (EGFF)

11.1 Controller Positions and Coordination Indicator

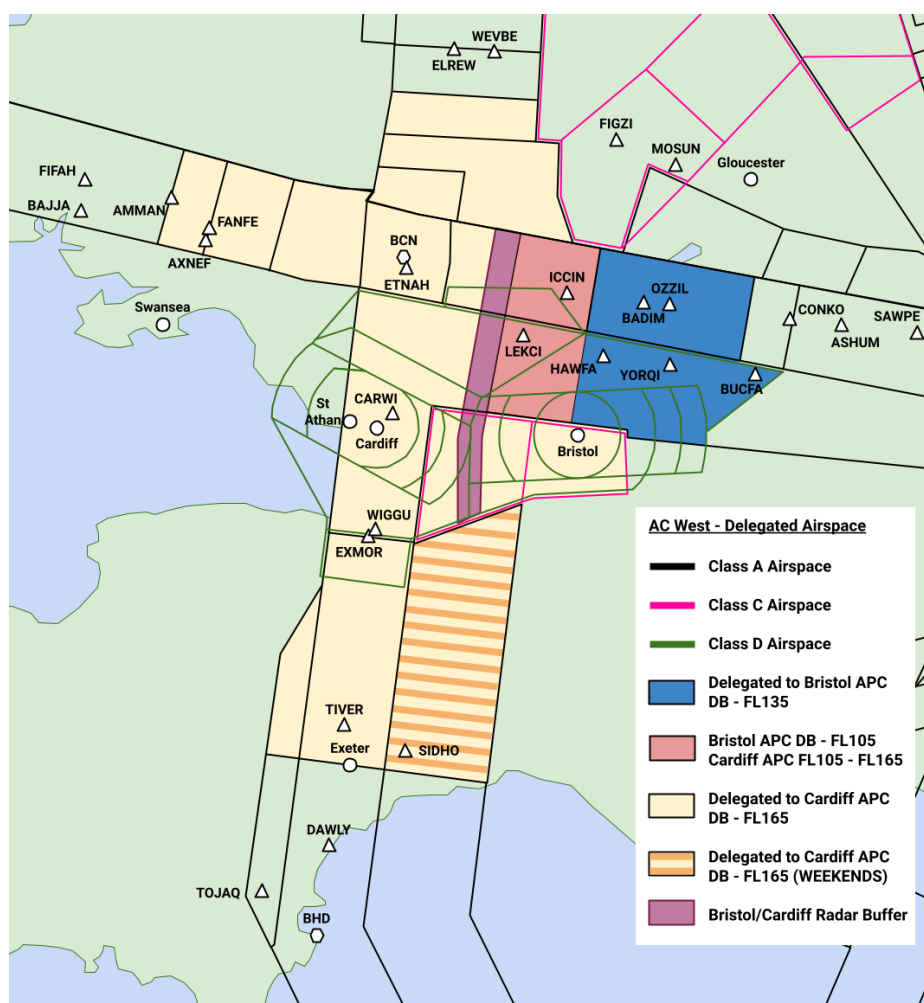
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
GD RAD	GDR	125.650	Bristol Radar	Bristol Radar
GD DIR	GDF	136.080	Bristol Director	Bristol Director
GD AIR	GDT	133.850	Bristol Tower	Bristol AIR
GD GMC	GDG	121.930	Bristol Ground	Bristol GMC
FF RAD	FFR	125.855	Cardiff Radar	Cardiff Radar
FF LARS	FFL	119.155	Cardiff Radar	Cardiff LARS
FF AIR	FFT	133.105	Cardiff Tower	Cardiff AIR

11.2 Area of Responsibility

Cardiff and Bristol Radar are delegated airspace by AC West as depicted below. Cardiff is not responsible for covering Bristol traffic top-down and as such AC West may be responsible for low-level traffic under this delegated area.

VATSIM does not simulate the night-time closure of Cardiff delegated airspace. When Cardiff APC is online, the airspace is delegated, regardless of the time of day.

Figure APT-20 – Airspace Delegated to Cardiff and Bristol ATC



11.3 Procedures for Inbound Aircraft

AC West shall handoff aircraft to Cardiff/Bristol as per the Standing Agreements below. All handovers to Bristol are acceptable on an appropriate radar heading without the need for individual coordination.

STAR	Standing Agreement	Transfer to Sector
BAJJA 1B BAJJA 1C	FL180 lml FANFE	Cardiff APC
DAWLY 1B (Note 3) DAWLY 1C (Note 3)	Individually coordinated	Cardiff APC
FIFAH 1B (Note 1) FIFAH 1C (Note 1)	FL170 lml FIFAH	Cardiff APC
ICTAM 1B ICTAM 1C	↓ FL100 (Note 2) ↓ FL120 (Note 2)	Bristol APC
TOJAC 1B TOJAC 1C	↓ FL170 (Note 4)	Cardiff APC
WEVBE 1B (Note 5) WEVBE 1C (Note 5)	FL160 lml WEVBE	Cardiff APC

Note 1: FIFAH 1B/C is an RNAV5 alternative to BAJJA 1B/C, as navigation performance for RNAV5 traffic would not ensure the aircraft remains within controlled airspace. The fix FIFAH is not on Q63 and as such this STAR should not be issued unless traffic explicitly states they are unable RNAV1.

Note 2: Transferred on a heading to remain north of CONKO and separated from Bristol outbounds. Traffic is released for descent to the base of CAS.

Note 3: DAWLY 1B is mandatory for traffic cruising below FL100. Traffic above FL100 that is RNAV1 capable shall be cleared/re-routed via TOJAQ.

Note 4: Released for descent to FL130, further passing north of EGTE.

Note 5: The ELREW 1B/C STAR is published as an alternative to WEVBE and is only used when gliding activity restricts the use of N862. We do not simulate this on VATSIM and therefore the ELREW 1C shall **not be issued**. Traffic shall be re-routed to WEVBE.

11.3.1 Bristol Inbounds with Cardiff Offline

In the absence of Cardiff, West will allocate levels in accordance with the Standing Agreements below. Traffic from the east is unaffected. All traffic should typically be handed own navigation to BRI, though Bristol will accept on a radar heading without the need for individual coordination.

Inbounds will be handed over clean of traffic unknown to Bristol, RFT and RFD. AC West will not climb Bristol departures that conflict with traffic at release level, however Bristol is responsible for separation once turn/descent is issued.

STAR	Standing Agreement	Transfer to Sector
AMRAL 1B	↓ FL110	Bristol APC
FIFAH 1B	↓ FL110	
DAWLY 1B	↓ FL100	

11.3.2 Bristol & Cardiff Holding Procedures

BRI Hold

RNAV Hold. 1-minute legs.

BRI (Bristol)	512253.19N 0024303.14W
Axis	090°
Direction	LEFT hand
Holding Levels	3000 ft - FL100
Speed	Max 185 kts below FL70 Max 220 kts FL70 and above

CDF Hold

RNAV Hold. 1-minute legs.

BRI (Bristol)	512336.16N 0032016.47W
Axis	297°
Direction	RIGHT hand
Holding Levels	3000 ft - FL100
Speed	Max 200 kts below FL70 Max 220 kts FL70 and above

11.4 Procedures for Departing Aircraft

SID	Condition	Airport	Level	Received From
HAWFA/YORQI	East via L607	EGGD	↑ FL130 (Note 1)	Bristol APC
LEKCI (Runway 12 only)	East via L607	EGFF	↑ FL150 (Note 2)	Bristol APC
BCN (Runway 30 only)	East via L607	EGFF	↑ FL150 (Note 2)	
BCN	West via P4/L9	EGGD/EGFF	↑ FL160	
BCN	North via P69	EGGD/EGFF	↑ FL150	Cardiff APC
EXMOR	South via N92	EGGD/EGFF	↑ FL160 (Note 3)	
EXMOR	South via N42	EGGD/EGFF	↑ FL160 (Note 4)	

Note 1: On L607, or own navigation to BUCFA.

Note 2: On L607 or own navigation to HAWFA.

Note 3: Must reach FL120 10NM north of EGTE.

Note 4: Must reach FL120 by SIDHO. Berry Head CTA 2 and 4 are only available Friday 1600 local to Monday 0745 local.

11.4.1 Departures from Bristol with Cardiff Offline

In the absence of Cardiff, Bristol APC shall identify, validate, and verify all departures and climb according to the agreements below. Departures via HAWFA/YORQI are unchanged. Inbound traffic is known to both stations and as such there is dual responsibility to ensure separation.

AC West will not climb departing traffic until clear of inbounds at release level. If Bristol APC descends inbound traffic below release level, they must ensure separation against departures transferred to AC West.

SID	Condition	Level
BCN	West via P4/L9	↑ FL90
BCN	North via P69	↑ FL90
EXMOR	South via N92/N40	↑ FL90

Chapter 12 Leeds Bradford (EGNM)

12.1 Controller Positions and Coordination Indicator

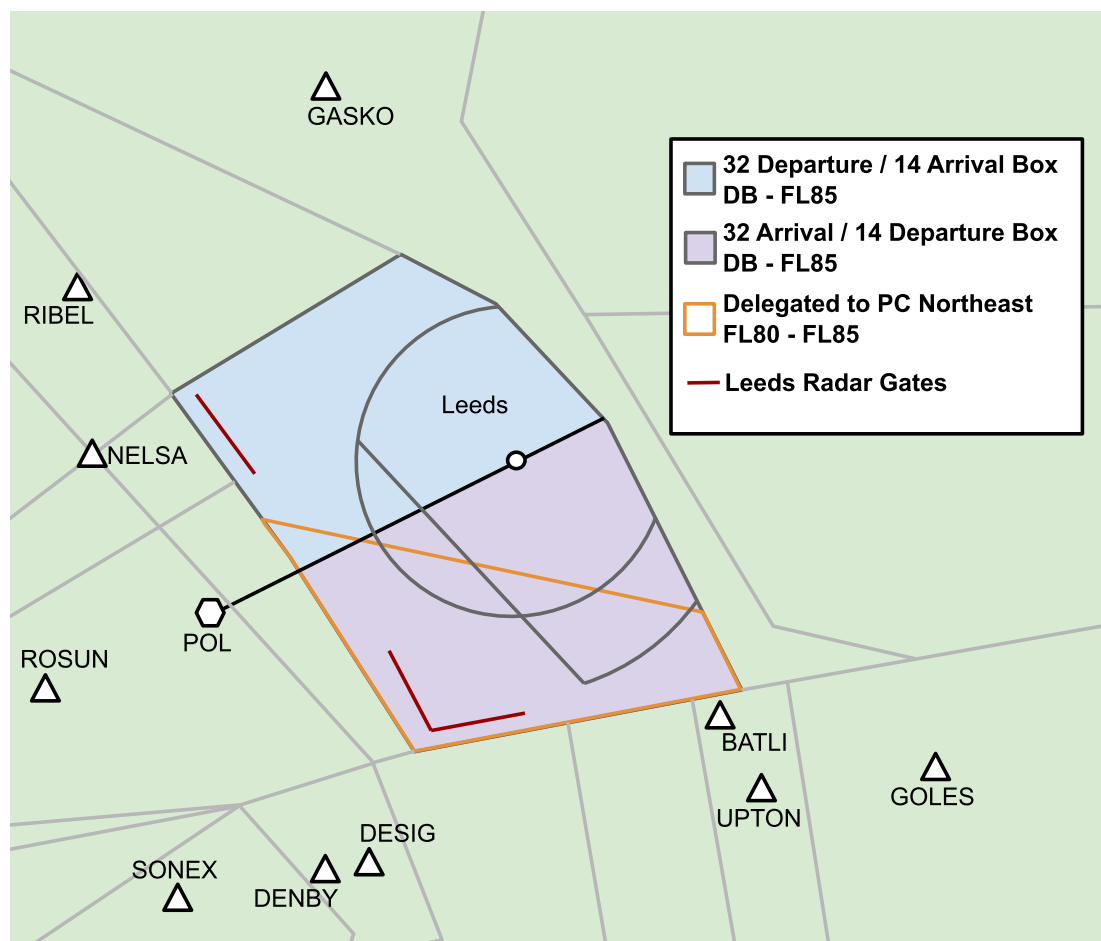
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
NM RAD	NMR	134.580	Leeds Radar	Leeds Radar
NM DIR	NMF	125.380	Leeds Director	Leeds Director
NM AIR	NMT	120.305	Leeds Tower	Leeds AIR
NM DEL	NMD	121.805	Leeds Delivery	Leeds GMP

12.2 Area of Responsibility

Leeds APC is responsible for the Leeds CTR/CTA (Class D) up to FL85. Leeds delegates a portion of its CTR/A corresponding to the airspace below Y70 to PC Northeast for use at FL80.

Leeds separates its airspace into a departure and arrival box depending on the runway in use, separated on the diagram below by a black line and may be displayed on the controller display as the **POL – LBA Line**.

Figure APT-21 – Leeds Airspace



12.3 Procedures for Inbound Aircraft

There are no STARs to Leeds Bradford, traffic typically files DCT LBA at the end of their route from GASKO, POL, DENBY or BATLI. Traffic is transferred by PC Northeast on own navigation to LBA by silent handover, clear of conflict at least 10NM in trail when on similar routes. Traffic on different routes must be level separated until traffic ahead is issued descent by Leeds.

PC Northeast may vector traffic via one of the arrival gates, ideally an arrival gate routing into the arrival box. Where traffic is transferred to be missing the delegated airspace, Leeds shall not allow traffic to enter without coordination with PC Northeast.

Via	Agreement	Release for Turn	Released for Descent
POL	FL80	FL70 or CTA boundary	Upon transfer of communications (Note 1)
DENBY	FL80	Southern edge of L975 (runway 32). CTA boundary (runway 14)	Upon transfer of communications (Note 1)
GASKO	FL80	CTA boundary (Note 2)	Upon transfer of communications (Note 1 & 2)
BATLI	FL90	5 NM before GOLES (Note 3)	Upon transfer of communications (Note 1)

Note 1: Inbound traffic transiting the departure box once transferred to Leeds is released for descent to FL80 only. Further descent is permitted within the departure box if Leeds ensures separation against airborne departures already transferred to PC and further departures are worked by Leeds. .

Note 2: Typically, Leeds can offer a deconfliction service to inbound traffic via GASKO, PC Northeast will release traffic at GASKO descending to FL130. Leeds must descend this traffic out of controlled airspace as soon as possible and shall remain clear until cleared into the Leeds CTA. Alternately PC Northeast will transfer this traffic within controlled airspace tracking to LBA.

Note 3: Traffic released on own navigation must not be turned west of it's track until LBA. When runway 14 is in use, it must not be turned left after LBA to a track of less than 270 degrees.

PC Northeast will not climb departing traffic via POL/NELSA until clear of inbounds via POL/GIBSO/DENBY at FL80. PC Northeast will not climb departing traffic via DOPEK/LAMIX until clear of inbounds via BATLI at FL90. If Leeds choses to descend this traffic, it assumes responsibility for separation.

12.4 Procedures for Departing Aircraft

All SIDs climb to FL70 and are free flow with PC Northeast. Leeds APC will specify to ADC in the release whether it wishes to work the departing traffic, otherwise it will be transferred directly to PC Northeast.

SIDs via	Agreement	Release	Next Sector
DOPEK	FL70	APC	PC Northeast
LAMIX	FL70	APC	PC Northeast
NELSA	FL70	APC	PC Northeast
POL	FL70	APC	PC Northeast

Leeds APC will separate traffic via LAMIX/DOPEK against inbounds from the west (DENBY, POL) and is recommended to work these departures where there is conflicting inbound traffic. PC Northeast will not climb or turn this traffic until clear of inbounds released to Leeds via BATLI.

PC Northeast will not climb traffic via POL/NELSA against inbounds from the west (DENBY/POL/GIBSO) until clear of conflict. If Leeds elects to descend the inbound traffic it is assuming responsibility for separation.

Chapter 13 Newquay (EGHQ)

13.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
HQ RAD 1	HQR	133.405	Newquay Radar	Newquay Radar 1
HQ RAD 2	HQL	127.930	Newquay Radar	Newquay Radar 2
HQ AIR	HQT	134.380	Newquay Tower	Newquay AIR
HQ GMC	HQG	121.955	Newquay Ground	Newquay GMC

Newquay Radar 2 is only permitted to be opened when Radar 1 is online. Its purpose is to provide LARS and SRAs only and does not interact with AC. All coordination to Newquay from AC shall be via Radar 1.

Top-down for Newquay is by AC West.

13.2 Area of Responsibility

Newquay provides a LARS service within 60 NM of the aerodrome up to FL95. In accordance with the MARS services under AC West, Newquay will provide a MARS service to its own inbound and outbound aircraft up to FL195 but may not be transferred traffic above this level.

13.3 Procedures for Inbound Aircraft

Direction	Fix	Via	Sector
North	ADHAV	N24	AC West
Northeast	EXMOR	N92	AC West
East	DAWLY	L620	AC West
Southeast	BHD	N864	AC West
West	LND	-	AC West

Traffic inbound to EGHQ via the ATS route network typically leaves at the points above and then routes direct NQY. AC West shall notify Newquay APC of the inbound aircraft's route, squawk code, currently cleared level and type of service. Newquay will respond with an acceptance level, typically FL100.

Transfer to Newquay is at the discretion of AC West but is encouraged to be early once below FL195 and within 60 NM. Should transfer occur within controlled airspace, traffic is released for further descent, but turn only below the acceptance level.

13.4 Procedures for Departing Aircraft

Direction	Fix	Route	Restrictions
North	NICXI	M17 (Q63)	LANPI Q63 only to Dublin group
Northeast	EPACE	P16	RNAV1
Northeast	EXMOR	DCT CARWI N864	RNAV5
East	DAWLY	L620, N17	-
Southeast	ABBEW	N90 SKESO	-
West/South	LND	-	-

Newquay shall by default offer a MARS service to departing traffic joining the ATS route network system and relay a joining clearance. Response to a joining request shall include a track, level, new squawk, and contact frequency. If no new squawk is issued, Newquay will generate one. In either case, Newquay will observe code change before transfer of communications. Traffic shall be transferred below FL195 and before entering controlled airspace. The service type shall either be coordinated or included in the electronic tag on handover.

Chapter 14 Oxford (EGTK)

14.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
TK RAD	TKR	125.090	Oxford Radar	Oxford Radar
TK FIN	TKF	119.980	Oxford Director	Oxford Final
TK AIR	TKT	133.430	Oxford Tower	Oxford AIR
TK GND	TKG	121.955	Oxford Ground	Oxford Ground

Top-down for Oxford is provided by TC Midlands.

Brize Norton is a military aerodrome with Class D airspace to the south-west of Oxford. Top-down at Brize Norton is provided by Swanwick Military (West).

The Transition Altitude at Oxford is 6000 ft, whereas the Transition Altitude for Brize Norton is 3000 ft.

14.2 Area of Responsibility

Oxford is located outside of controlled airspace but has a 2 NM ATZ from the surface to 2000 ft above aerodrome level. The Brize Norton CTR (surface to 3500 ft) is in the immediate vicinity to the south-east and a small portion of the south-eastern Oxford ATZ lies within the Brize Norton CTR and is delegated to Brize Norton APC. Oxford APC is not delegated any controlled airspace and requires positive clearance from either Brize Norton APC or Area Control prior to allowing traffic under its control to enter controlled airspace.

The Oxford AIAA (Area of Intense Aerial Activity) is notified airspace highlighting the high volume of both civilian and military traffic operating in the vicinity of Oxford and pilots transiting the AIAA are encouraged to contact either Oxford APC or Brize Norton LARS to obtain a UK Flight Information Service (FIS).

LARS in the area surrounding Oxford is typically provided by Brize Norton (EGVN). Pilots maintaining a listening watch on Brize frequencies typically squawk 3727.

14.3 Procedures for Inbound Aircraft

Inbound aircraft from the ATS route network will be notified to TK RAD by the relevant sector. RAD will pass an acceptance level, which London will clear the aircraft to. Oxford will receive traffic outside or leaving controlled airspace and vector or otherwise sequence for approach. If Brize Norton is online and Oxford (plus its top down) are not, inbound traffic shall be offered to Brize who may elect to work the traffic or request London sends it to Unicom.

Direction	Fix	Route	Sector
North (<i>Note 1</i>)	BUGUP	HON / PEPUL – BUGUP – OX	TC Midlands
East / South	CPT / KENET	CPT / KENET – BUGUP – OX	TC SW (<i>Note 2</i>)
West	CONKO	CONKO – OX	AC West

Note 1: A small number of UK SRD routes from the north terminate at DTY. Traffic routing via DTY will be coordinated direct OX or on a radar heading.

Note 2: The standard routing for traffic arriving from the southeast is via KENET, with TC SW coordinating with TK RAD to avoid leaving controlled airspace in the LTMA. However, when traffic conditions permit, TC may coordinate a more direct routing with TK RAD.

Approaches to Runway 01 require coordination with Brize Norton APC. The traffic must be coordinated through the CTR and released before being cleared for the approach. TK RAD will retain inbound traffic while it transits the Brize Norton CTR.

14.4 Procedures for Departing Aircraft

VFR departures from Oxford squawk 4520.

Single turbo prop aircraft and larger departing off Runway 19 require a release from Brize Norton due to the likelihood of entering Brize CTR after departure.

TK RAD will prenote the relevant sector and obtain a release (where required) prior to departure.

To	Fix	Route	Next Sector	Release
North/East	SAPCO	IXURA – DTY – SAPCO	TC Midlands	No
East	DTY	IXURA – DTY	TC Midlands	No
South (RFL < FL195)	KENET	BUGUP – KENET	TC South West	Yes
South (RFL > FL195)	CPT	IXURA – NANUM – BUGUP – EVSEM – CPT	TC Midlands	No
West (RFL < FL105)	BADIM	BADIM	Bristol APC	No
West (RFL > FL105)	CONKO	CONKO	AC West	No
London TMA	SILVA	SILVA	TC North West	Yes
EGLL / EGWU	WCO	WCO	TC North West	Yes

Traffic routing **via CPT** must be routed initially towards IXURA – even when departing Runway 19 – as this traffic joins controlled airspace on track IXURA with TC Midlands, climbed to remain clear of TC airspace. When joining clearance is requested, TC Midlands may offer a more direct routing depending on traffic/sector configuration.

Traffic routing **via WCO** shall typically be given joining clearance with the release request.

TK RAD shall only transfer traffic to Area Control once joining clearance has been obtained, else the aircraft must be instructed to remain outside of controlled airspace and to contact the relevant controller.

15.2.1 Minimum Stack Levels

Northolt does not define an MSL, however sits under the London TMA and as such reference to MSL would be the London MSL. This is based off the Heathrow QNH and a transition altitude of 6000 ft.

SID departures from Northolt are all provided with the London QNH, whereas inbound arrivals are provided with the Northolt QNH. Corrective action does not need to be taken when the London and Northolt QNHs differ, and traffic is separated vertically.

15.3 Procedures for Inbound Aircraft

Inbound traffic is transferred by London Terminal Control to the relevant Heathrow INT controller at the same agreements as Heathrow traffic, though can be coordinated lower. Heathrow will pass the inbound details to Northolt Approach with a stack time and squawk. The Heathrow RMA rules apply to Northolt traffic under the control of LL INT N/S.

Heathrow will individually release traffic to WU APC, typically at 3000 ft on easterly operations and 4000 ft on westerly operations, with the assumption that Northolt will descend to 3000 ft as soon as practical.

In the absence of Northolt coverage, Heathrow may vector traffic towards the relevant approach and retain on frequency until successfully landed. Coordination is required with TC SVFR for all Northolt inbound arrivals in the absence of Northolt APC.

15.4 Procedures for Departing Aircraft

All departing traffic requires a release from WU APC and the receiving TC North sector. WU APC shall work the traffic to identify, validate and verify the Mode C and ensure it complies with the climb profile, including the requirement to be level 3000 ft at the London CTR boundary.

In the event a TC sector is offline, release shall be obtained from LL INT North.

Where Northolt traffic is departing in the same runway configuration as Heathrow traffic, WU APC may transfer traffic to the relevant TC controller climbing according to the published SID, unless otherwise specified in the release.

For traffic via BPK, transfer of communications must take place by 6 DME before BPK.

SID (RNAV)	RWY	Step Climb to	Release	First Sector
BUZAD 3X (4X)	07	6000 ft	TC NW (Note 2, 3)	TC NW
BUZAD 1Y (2Y)	25	5000 ft	TC NW (Note 1)	TC NW
MATCH 1X (2X)	07	5000 ft	TC NE	TC NE
MATCH 1Y (2Y)	25	5000 ft	TC NE	TC NE
CPT 5X (6X)	07	5000 ft	TC NW (Note 2)	TC NW
CPT 4Y (5Y)	25	5000 ft	TC NW (Note 1)	TC NW
DET 4X	07	5000 ft	TC NE	TC NE
DET 4Y	25	5000 ft	TC NE	TC NE

Note 1: If Luton is operating from Runway 25, TC NW must coordinate with TC NW before issuing a release (as TC NE releases conflicting Luton DET and MATCH departures). If Luton is operating on Runway 07, TC NW should inform TC NE after issuing a release.

Note 2: TC NW should inform TC NE after issuing a release.

Note 3: TC NW will typically issue a 3000 ft level restriction prior to release in order to separate against westbound Luton traffic.

In the absence of Northolt APC (or Swanwick Military), departures should contact Heathrow INT North before entering the runway, who will obtain the relevant releases and coordinate with TC SVFR.

15.4.1 Opposite Direction Departures

Should Northolt wish to approve an opposite-direction departure it must first obtain approval from the receiving TC sector. This may be requested at the release; however, Northolt should expect a delay if not notified in advance. Before releasing the traffic, Northolt APC shall notify LL INT North of the departing aircraft, squawk, and route.

WU APC will handle opposite direction departures and separate from Heathrow arrivals and departures. Traffic departing 07 while Heathrow are landing westerlies must be vectored by WU APC to join the relevant Runway 25 SID. Traffic should not be transferred to TC North on a heading, without coordination. Transfer shall be initiated to LTC as soon as practical, climbing to SID levels and clean from Heathrow traffic.

15.4.1.1 Separation against Luton Departures

Northolt departures conflict extensively with Luton traffic. The following table lists restrictions needing to be placed on SIDs that are not separated, conflicts that are already subject to release, and separated SIDs.

Northolt	Luton – Not Separated	Luton – Not Separated, but on Release	Luton – Separated
BUZAD 3X/4X	OLNEY / RODNI	(RWY 25) MATCH / DET	(RWY 07) MATCH / DET
BUZAD 1Y/2Y	OLNEY / RODNI		MATCH / DET
MATCH 1X/2X		MATCH / DET	OLNEY / RODNI
MATCH 1Y/2Y		MATCH / DET	OLNEY / RODNI
CPT 5X/6X	RODNI		OLNEY / MATCH / DET
CPT 4Y/5Y	(RWY 25) OLNEY	(RWY 25) MATCH / DET	OLNEY / MATCH / DET (RWY 07)
DET 4X		MATCH / DET	OLNEY / RODNI
DET 4Y		MATCH / DET	OLNEY / RODNI

Chapter 16 Isle of Man (EGNS)

16.1 Controller Positions and Coordination Indicator

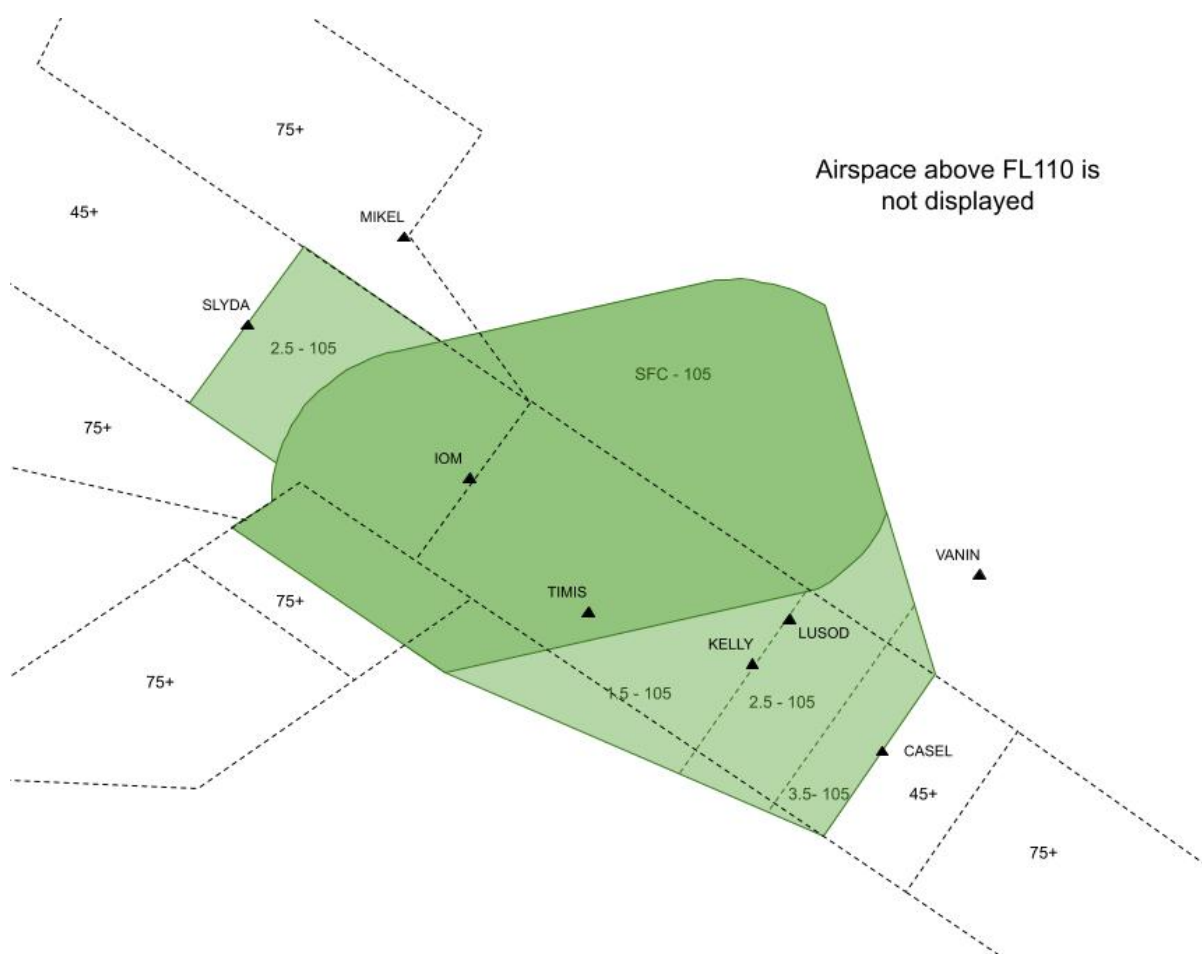
Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
NS RAD 1	NSR	135.905	Ronaldsway Radar	Ronaldsway Radar 1
NS RAD 2	NSF	120.855	Ronaldsway Radar	Ronaldsway Radar 2
NS APC	NSA	135.905	Ronaldsway Approach	Ronaldsway Approach
NS ADC	NST	119.005	Ronaldsway Tower	Ronaldsway Tower

The preferred position is Ronaldsway Radar (EGNS_APP), however, controllers may simulate non-radar procedural approach at Ronaldsway by logging on with the EGNS_A_APP callsign. When operating non-radar, neither RAD 1 nor RAD 2 can be opened.

16.2 Area of Responsibility

Ronaldsway APC is responsible for the airspace of the Isle of Man CTR/CTA, which is considered active at any time of day when controlled. The airspace is Class D and extends to FL105. Overflights at FL110 and below will be coordinated with Ronaldsway APC and control transferred as required.

Figure APT-23 – Isle of Man Airspace



16.2.1 Minimum Stack Levels

There is no MSL in use at Ronaldsway. Transition altitude is 3000 ft.

16.3 Procedures for Inbound Aircraft

The following standard arrival routes exist for Ronaldsway traffic. For routes inside controlled airspace, silent handover agreements exist between Area Control and Ronaldsway:

From	Route	Agreed Level	From	Transfer of Control
North	MIKEL		OCAS	-
North East	DCS DCT IOM		OCAS	-
NW	L10 SLYDA	FL70	Antrim	SLYDA
South East	L10 KELLY	FL100 (Note 1)	PC West (IoM)	10 NM before CASEL
	M146 LUSOD	FL100 (Note 1)	PC West (IoM)	10 NM before ERDUV
South West	Y911 IOM	FL90	Antrim	CTR boundary
East	DCT VANIN		OCAS	-

Note 1: Traffic may be positioned on own navigation or on a radar heading to position north of L10.

Traffic shall be transferred in accordance with the following conditions:

- Area Control shall achieve a minimum radar spacing of 5 NM, constant or increasing, between successive inbound on the same route grouping.
- Transfer of communication shall be no later than 25 DME IOM, clean of traffic not known to Ronaldsway APC.
- Inbound aircraft are released subject to any outbound traffic and APC is responsible for separation against outbound traffic if the inbound aircraft is descended below the agreed level.
- If Area Control has applied speed control APC shall not remove this until traffic is either descended below the agreed level or existing separation can be maintained.

APC can suspend the silent handover agreement at any time, at which point arrivals must be individually coordinated. Additionally, any aircraft which will not meet the conditions of the silent handover agreement must be coordinated.

16.4 Procedures for Departing Aircraft

ADC will prenote (via text coordination) the receiving Area Control sector with the callsign, estimated airborne time (+/- 3 minutes) and initial ATS route at the time of start-up. All departures via the ATS route network are subject to release by Ronaldsway Radar 1. All departures are transferred to Ronaldsway Radar 1 (or its top-down order) who will identify, verify, and validate the radar return.

All departures are subject to silent handover to STC/PC, transferred clean of conflict from traffic under the control of Ronaldsway.

Direction	Route	ATS Route	Agreement	To
Southeast	KELLY	L10	↑FL90 (Note 1)	PC West (IoM)
	TIMIS / INKOB	Q39	↑FL90 (Note 2)	PC West (IoM)
Southwest	IOM	Y911	↑FL80	Antrim
North	MIKEL / SLYDA	None	-	OCAS
Northeast	DCS	Various	-	OCAS
Northwest	IOM	L10	↑FL60	Antrim
East	VANIN	None	-	OCAS

Note 1: *On a radar heading to position south of L10.*

Note 2: *On a radar heading to position south of L10 or own navigation on Q39.*

Traffic shall be transferred in accordance with the following conditions:

- APC shall achieve a minimum radar spacing of 5 NM, constant or increasing, between successive outbounds on the same route grouping.
- Transfer of communication shall be no later than the CTR/CTA boundary clear of traffic not known to Area Control, transfer of control is coincident with transfer of communication.
- Outbound aircraft are released subject to any inbound traffic and Area Control is responsible for separation against inbound traffic if the outbound aircraft is climbed above the agreed level.
- Any aircraft which will not meet the conditions of the silent handover agreement must be coordinated.

Chapter 17 Newcastle (EGNT)

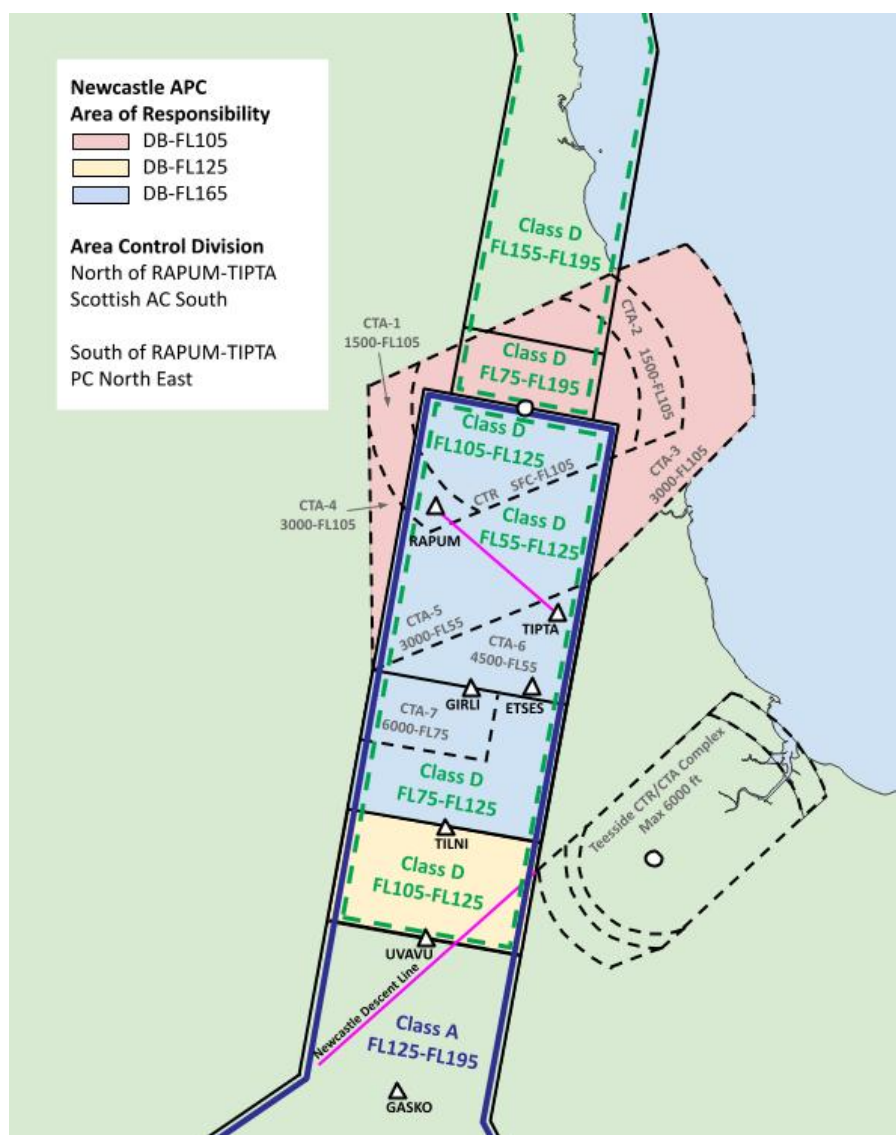
17.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
NT RAD	NTR	124.380	Newcastle Radar	Radar
NT FIN	NTF	125.830	Newcastle Director	FIN
NT AIR	NTT	119.705	Newcastle Tower	AIR
NT GMC	NTG	121.730	Newcastle Ground	GMC

17.2 Area of Responsibility

Newcastle RAD is responsible for the CTR/CTA and delegated portion of the Yorkshire CTA as depicted below. The FIN position can be opened in periods of high workload and acts as a Final Director.

Figure APT-24 – Newcastle Airspace



17.2.1 Minimum Stack Level

Transition altitude is 6000 ft. The Minimum Flight Level in use is based on the EGNT QNH. 1013 hPa is considered low pressure (i.e., MSL is FL80).

17.3 Procedures for Inbound Aircraft

From	Route	Agreed Level	RFD	Release Point
PC NE	STAR via ETSES	↓ FL160	FL140	5 NM north of Teesside RWY 23 extended centreline (Notes 1 & 2)
	P18 NATEB (RNAV5)	↓ FL160	FL140	
ScAC South / ScTMA Talla	All	Coordinated & reduced radar handover, ideally transferred inside controlled airspace (Note 3)		
London Mil	Via ERKIT/OTBED	Accepting level provided by NT RAD and radar handover OCAS approx. 40 NM from EGNT		

Note 1: Positioned to the east of the P18 centreline, either on own navigation via RNAV STAR or on a heading to remain 5NM east of TILNI. All traffic transferred at least 10 NM in trail, constant or increasing.

Note 2: Descent is permitted below FL140 prior to release point if Newcastle coordinates the traffic and descent with Teesside.

Note 3: Traffic via DCS transferred within controlled airspace is released for descent and turn on transfer of communication, unless coordinated otherwise.

RNP transitions exist from ETSES for use with the RNP approach only. Other traffic should be vectored.

17.4 Procedures for Departing Aircraft

Departing aircraft southbound may be cleared on the GIRLI SID. All other aircraft are issued a standard ‘omni-directional departure’ clearance and pre-noted to NT RAD at start-up and subject to a release by NT RAD. The Currock Hill gliding site lies to the southwest of Newcastle airport and amended clearances and SIDs are issued when it is active, shown below in brackets.

All departures climb initially to FL80.

Direction	Runway	Route
SW	25	GIRLI 3X (1Y)
	07	GIRLI 1T
South/SE (incl. via ERKIT)	25	Straight ahead to 1.5 DME NEW then left heading 210° (180°)
	07	Straight ahead to 3.5 DME NEW then right heading 190°
251° to 070°	25	Straight ahead to FL80
	07	Straight ahead to FL80

17.4.1 Coordination of Departures to Area Control

Route	Agreement / Procedure	To
South via GIRLI/P18	↑ FL150 (Notes 1 & 2)	PC Northeast
South via ERKIT/OTBED	Radar handover for MARS (Notes 3 & 4)	Swanwick Mil (North)
North via P18 (RFL >155)	Coordinate join instruction	ScAC South
North (RFL <155)	Radar handover for OCAS	Swanwick Mil (North)
Y96 (via HAVEN)	Coordinate join instruction	ScAC South
DCS	Coordinate join instruction	Talla

Note 1: Released for climb when south of RAPUM-TIPTA track. Transfer to be initiated within 20 NM from NATEB and before FL130, 10 NM constant or increasing.

Note 2: Newcastle APC are responsible for coordination with Teesside if not able to make FL140 by 5 NM before TILNI.

Note 3: Newcastle to pre-note callsign, airborne estimate and allocated SSR code and Swanwick Mil will provide an acceptance level. Silent handover once outside of Newcastle airspace to Swanwick Mil.

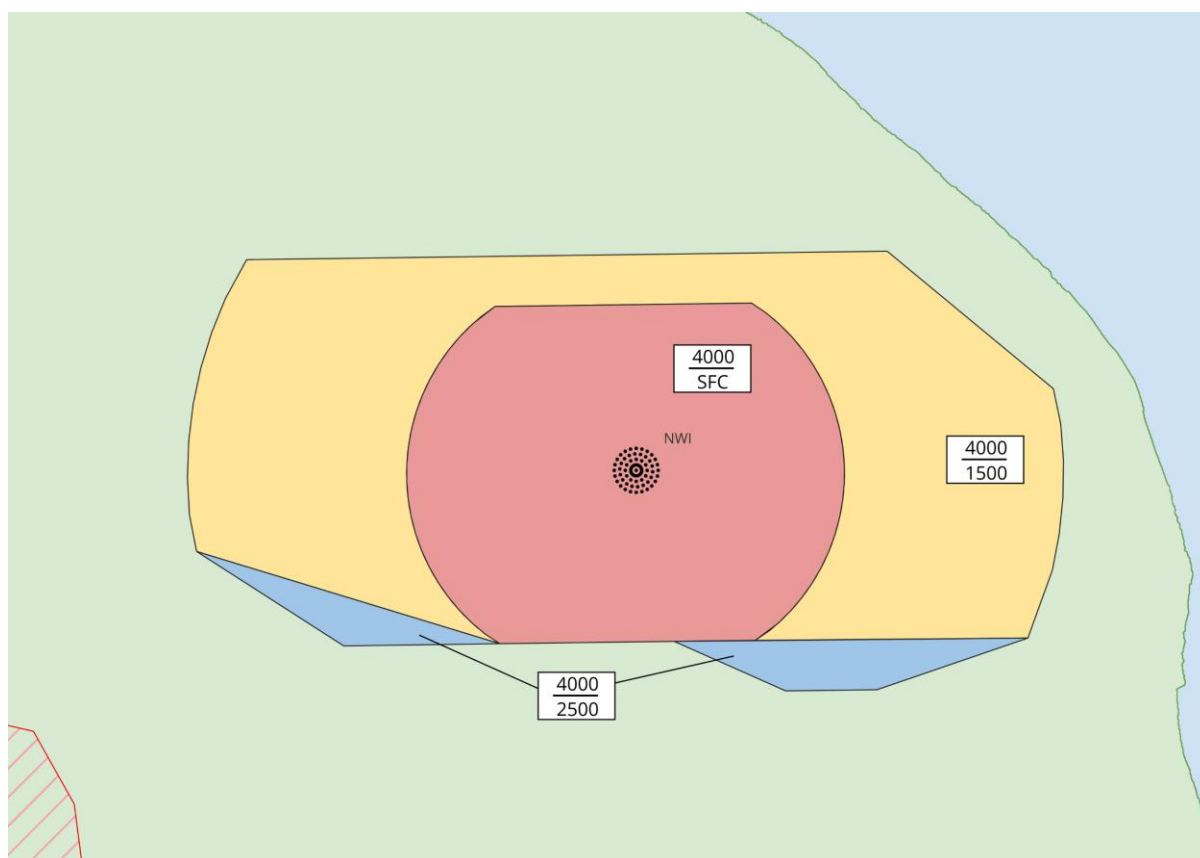
Chapter 18 Norwich (EGSH)

18.1 Controller Positions and Coordination Indicator

Position Identifier	EuroScope Identifier	Frequency	RTF Callsign	Coordination Name
SH RAD	SHR	119.355	Norwich Radar	Norwich Radar
SH DIR	SHF	128.330	Norwich Director	Norwich Director
SH ADC	SHT	124.255	Norwich Tower	Norwich Tower

18.2 Area of Responsibility

Figure APT-25 – Norwich Airspace



18.2.1 Minimum Stack Level

Transition altitude is 5000 ft. The Minimum Flight Level in use is based on the EGSH QNH. 1013 hPa is considered low pressure (i.e., Minimum Flight Level is FL80).

18.3 Procedures for Inbound Aircraft

The transferring area sector will pre-note Norwich Approach with the callsign, SSR, and ETA. In the absence of London Military, AC North Sea will offer a deconfliction service prior to hand over to Norwich Radar.

Direction	Sector	Level
North	AC North Sea	FL180
South East	TC East	FL100
South West	TC East	FL160
East (Y70, BODSO)	AC North	FL180

East (MOLIX)

London Military

FL100

Inbounds via the L602 (southbound) and L603 (eastbound) will be handled by PC Northeast in accordance with the procedures set out in [MPC 4.4.7](#).

18.4 Procedures for Departing Aircraft

SH ADC will clear all flights with a UKCP-generated SSR and SH RAD will obtain a joining clearance before departure, stating callsign, departure, destination, point of entry into CAS and level. TC/AC will issue slot restrictions if required.

Currently established departure routes are below. In the absence of London Military then AC North Sea will offer a deconfliction service to departing aircraft prior to entering controlled airspace, except traffic via BANEM which shall receive service from SH RAD.

Direction	Sector	Level	Waypoint
North (EGPX FIR)	London Military	FL170	NALAX
North MAN TMA	London Military	FL150	OTBED (Note 1)
South East	TC East	FL110	BANEM
South West	TC East	FL180	BKY (Note 2)
East	AC North Sea	FL180	BODSO
East	London Information	FL170	MOLIX (Note 3)

Note 1: Outbounds via L602 will be coordinated between Norwich APC/London Military/PC Northeast, in accordance with the procedures set out in MPC 4.3.4.2.

Note 2: Departures via BKY should be cleared to join CAS 16 NM north-east of BKY to prevent incursion into TC East airspace.

Note 3: Departures will request joining clearance from London Information and join CAS at the Amsterdam FIR boundary. London Information will contact Amsterdam Radar and obtain the clearance to join controlled airspace before relaying this to the aircraft. The aircraft will report to Norwich APC once the clearance has been received. In the absence of London Information, Norwich APC will obtain clearance from Amsterdam.

ANX

**SECTION 6
ANNEXES**

ANX | ANNEXES

Annex A | Standard Terminal Arrival Routes (STARs)

A.1 Birmingham (EGBB)

Designator	Arrival Via	Route
AMPIT 1B	L15	AMPIT – NOKIN – CREWE – CHASE
BEGAM 1B	UP16	BEGAM – MCT – VEGAR – ELEZE – CHASE
CROFT 1B	(U)L612	CROFT – MCT – VEGAR – ELEZE – CHASE
DOLOP 1B	(U)Y124	DOLOP – AMPIT – NOKIN – CREWE – CHASE
HEMEL 1B	L610, T420, Q3, M184	HEMEL – BUZAD – WELIN – PUFAX – HON – OSKOT – GROVE
FIGZI 1B	L180, N91	FIGZI – BIFIN – GROVE
LIBSO 1B	UL975	LIBSO – FIZED – GOLES – DESIG – MCT – VEGAR – ELEZE – CHASE
MAKUX 2B	FRA	MAKUX – SOSIM – GIGTO – MALUD – AMPIT – NOKIN – CREWE – CHASE
MALUD 1B	(U)L975, Q37	MALUD – AMPIT – NOKIN – CREWE – CHASE
POL 1B	N57, P18	POL – MCT – VEGAR – ELEZE – CHASE
SILVA 1B	Q41, M183, M605	SILVA – YOHA – HON – OSKOT – GROVE
VEGUS 1B	Y70	VEGUS – GOLES – DESIG – MCT – VEGAR – ELEZE – CHASE
WAL 1B	L10, L975	WAL – CREWE – CHASE

Note: These routes also apply to aircraft inbound to Coventry (EGBE).

A.2 Bristol (EGGD)

Designator	Arrival Via	Route	Remarks
ADVED 1A (09)	N864	EXMOR – ADVED	Issued by Cardiff APC when online
BAXUN 1A (27)	N864	EXMOR – ROTLU – BAXUN	
BAJJA 1B	Q63	BAJJA – FANFE – BCN – PEGZA – BRI	
DAWLY 1B	N864	DAWLY – EXMOR – BRI	RNAV5
ELREW 1B	-	ELREW – DIZIM – BCN – PEGZA – BRI	Not for use on VATSIM
FIFAH 1B	Q63	FIFAH – AMMAN – BCN – PEGZA – BRI	
ICTAM 1B	L179, L722, Q63, T421	ICTAM – SAWPE – ASHUM – POMAX – BRI	
TOJAQ 1B	P16, FRA	TOJAQ – COXPE – IZLAW – EXMOR – BRI	
WEVBE 1B	N862	WEVBE – UBCAM – INGUR – BRI	

A.3 Cardiff (EGFF)

Designator	Arrival Via	Route	Remarks
BAJJA 1C	Q63	BAJJA – FANFE – BCN – CDF	
DAWLY 1C	N864	DAWLY – IZLAW – EXMOR – CDF	
ELREW 1C	-	ELREW – DIZIM – BCN – CDF	Not for use on VATSIM
FIFAH 1C	Q63	FIFAH – AMMAN – BCN – CDF	
ICTAM 1C	L179, L722, Q63, T421	ICTAM – SAWPE – CONKO – OCTIZ – BRI – CDF	
TOJAQ 1C	P16, FRA	TOJAQ – COXPE – IZLAW – EXMOR – CDF	
WEVBE 1B	N862	WEVBE – UBCAM – ACBAZ – KUKIS – CDF	

A.4 East Midlands (EGNX)

Designator	Arrival Via	Route
AMPIT 2E	L15	AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
BEGAM 1E	UP16	BEGAM – MCT – VEGAR – TNT – DIPSO – ROKUP
CROFT 1E	(U)L612	CROFT – MCT – VEGAR – TNT – DIPSO – ROKUP
DOLOP 1E	(U)Y124	DOLOP – AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
DTY 1E	M605	DTY – VELAG – UPDUK – PIGOT (See Note)
HEMEL 1E	L610, M184, T420	HEMEL – WELIN – VELAG – UPDUK – PIGOT (See Note)
LIBSO 1E	UL975	LIBSO – FIZED – GOLES – DESIG – MCT – VEGAR – TNT – DIPSO – ROKUP
MAKUX 1E	L15, Q38	MAKUX – SOSIM – GIGTO – MALUD – AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
MALUD 1E	(U)L975, Q37	MALUD – AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
POL 1E	P18, N57	POL – MCT – VEGAR – TNT – DIPSO – ROKUP
VEGUS 1E	Y70	VEGUS – GOLES – DESIG – MCT – VEGAR – TNT – DIPSO – ROKUP
WAL 2E	L975, L10, Q39	WAL – NUGRA – VEGAR – TNT – DIPSO – ROKUP

Note: These routes also apply to aircraft inbound to Retford/Gamston (EGNE).

A.5 Farnborough (EGLF)

Designator	Arrival Via	Route
ABSAV 1P	L980	ABSAV – RUDMO – PEPIS
CPT 1P	Q63, N859, L179	CPT – HANKY – PEPIS
CPT 1V	Q63, N859, L179	CPT – GOBNU – INDOX – DIXIB – LFS02 – VEXUB
ELDAX 1V	N20, M8	ELDAX – NOTGI – EVEXU – RIMUP – NIDGO – IBGON* – LUXIV – EVATA – LFS03 – VEXUB
KATHY 1V	L980, P83	KATHY – ABSAV – RUDMO – RIMUP – NIDGO – IBGON* – LUXIV – EVATA – LFS03 – VEXUB
NOTGI 1P	N20	NOTGI – EVEXU – RUDMO – PEPIS
SOKDU 1V	N17	SOKDU – ABSAV – RUDMO – RIMUP – NIDGO – IBGON* – LUXIV – EVATA – LFS03 – VEXUB

* Compulsory reporting point at IBGON.

Note: These routes also apply to aircraft inbound to Blackbushe (EGLK), Dunsfold, Fair Oaks (EGTF), Lasham (EGHL) and Odiham (EGVO).

A.6 Guernsey (EGJB)

Designator	Arrival Via	Route
ALD 1G	-	ALD – GUR
BEVAV 1G	G273, G274, T496	BEVAV – OYSTA – GUR
BIGNO 1G	L149	BIGNO – GUR
DIN 1G	A25	DIN – GUR
SKERY 1G	N862	SKERY – GUR
Runway 27		
LELNA 1B	(U)N621 (FL200+), Z171, N63	LELNA – BRILL – GUR
ORTAC 1B	Q41	ORTAC – BRILL – GUR
Runway 09		
LELNA 1V	(U)N621 (FL200+), Z171, N63	LELNA – EVKEX – GUR
ORTAC 1V	Q41	ORTAC – EVKEX – GUR

A.7 Jersey (EGJJ)

Designator	Arrival Via	Route
Runway 26		
BEVAV 1J	G273, G274, T496	BEVAV – JSY
BIGNO 1L	L149	BIGNO – CHUBB – OYSTA – PERCH – JSY
BIGNO 1J	L149	BIGNO – JSY
LERAK 1J	G27	LERAK – JSY
LELNA 1J	(U)N621 (FL200+), Z171, N63	LELNA – ANGLA – JSY
MINQI 1J	R14	MINQI – JSY
ORTAC 1J	Q41	ORTAC – ANGLA – JSY
SKERY 1L	N862	SKERY – CHUBB – OYSTA – PERCH – JSY
SKERY 1J	N862	SKERY – JSY
TUNIT 1J	N160	TUNIT – OYSTA – PERCH – JSY
Runway 08		
BEVAV 1K	T496	BEVAV – OYSTA – SHARK – JW
BIGNO 1K	L149	BIGNO – GUR – SHARK – JW
LERAK 1K	T498, G27	LERAK – OYSTA – SHARK – JW
LELNA 1K	(U)N621 (FL200+), Z171, N63	LELNA – ALD – SHARK – JW
ORTAC 1K	Q41	ORTAC – ALD – SHARK – JW
SKERY 1K	N862	SKERY – GUR – SHARK – JW
TUNIT 1K	N160	TUNIT – SHARK – JW

A.8 Liverpool (EGGP)

Designator	Arrival Via	Route
BOFUM 1L	Q37	BOFUM – BAKOX – BAVUD – DONAX – MALUD – TIPOD
ELVOS 1L	T420	ELVOS – TNT – NANTI – KEGUN
GASKO 1L	P18	GASKO – RIBEL – CROFT – WAL – BAROS – TIPOD
LAKEY 1L	L612	LAKEY – VAMEB – OBUNI – CALDA – CROFT – WAL – BAROS – TIPOD
LESTA 1L	N601, UP6	LESTA – TNT – NANTI – KEGUN
LIBSO 1L	UL975	LIBSO – FIZED – GOLES – UPTON – UNIGO – DESIG – WAL – BAROS – TIPOD
PENIL 1L	L10, L28, Q38	PENIL – RUGER – TIPOD
PEPZE 1L	P16	PEPZE – MONTY – GODPA – KEGUN
POL 1L	N57, P18	POL – WAL – BAROS – TIPOD
VEGUS 1L	Y70	VEGUS – SIVBU – GIPLO – GOLES – UPTON – UNIGO – DESIG – WAL – BAROS – TIPOD

Note: These routes also apply to aircraft inbound to Hawarden (EGNR).

A.9 London Gatwick (EGKK)

Designator	Arrival Via	Route	Remarks
ABSAV 1G	L980	ABSAV – AVANT – GWC – HOLLY – WILLO	
AMDUT 1G	AMDUT	AMDUT – SFD – WILLO	‘Stack swap’
ARNUN 1G	ARNUN	ARNUN – HASTY – SFD – WILLO	‘Stack swap’
BARMI 1G	P7	BARMI – SONOG – ODROB – TEBRA – ABTUM – ARNUN – LARCK – TIMBA	
DISIT 1G	L151 (FL195+)	DISIT – KIDLI – MID – TUFOZ – HOLLY – WILLO	
GWC 1G	Y8	GWC – HOLLY – WILLO	
KIDLI 1G	N859 (FL195-)	KIDLI – MID – TUFOZ – HOLLY – WILLO	
KONAN 1G	L607	KONAN – ARNUN – LARCK – TIMBA	
KUNAV 1G	(U)T421	KUNAV – AMDUT – KKE64 – TIMBA	
MID 1X	MID	MID – ZOPHI – MAY – LARCK – TIMBA	‘Stack swap’
NEVIL 1G	M189, G27, Z273	NEVIL – OSPOL – NETVU – ELDAX – AMDUT – TIMBA	
OTMET 1G	N17	OTMET – SOKDU – NEDUL – ELDER – TELTU – HOLLY – WILLO	
SIRIC 1G	P2	SIRIC – NIGIT – MID – TUFOZ – HOLLY – WILLO	
TEBRA 2G	Y4, Q63, L610	TEBRA – ABTUM – ARNUN – LARCK – TIMBA	
TELTU 1G	TELTU	TELTU – SFD – TIMBA	‘Stack swap’
VASUX 1G	(U)P88, L982	VASUX – DISVO – TELTU – HOLLY – WILLO	

A.10 London Heathrow (EGLL)

Designator	Arrival Via	Route	Remarks
ALESO 1H	T420	ALESO – ROTNO – ETVAX – TIGER – BIG	
BARMI 1H	P7	BARMI – SONOG – LOGAN – SABER – BRASO – WESUL – LAM	
BIG 1Z	BIG	BIG – DORKI – OCK	‘Stack swap’
FITBO 1H	Y125	FITBO – SOPIT – WCO – BNN	Not for flight planning
HAZEL 1H	L620	HAZEL – LLS01 – OCK	
HON 1H	L15, L10, L612	LAM – DORKI – OCK HON – TOBID – SOPIT – WCO – BNN	
LAM 1X	LAM	LAM – HILLY – BIG	‘Stack swap’
LAM 1Y	LAM	LAM – DORKI – OCK	‘Stack swap’
LAM 1Z	LAM	LAM – DONNA – BNN	‘Stack swap’
LOGAN 2H	L608, L980	LOGAN – TRIPO – SABER – BRASO – WESUL – LAM	
NUGRA 1H	(U)Y53, Q36, Q38	NUGRA – TOBID – SOPIT – WCO – BNN	
OCK 1Z	OCK	OCK – DORKI – HILLY – BIG	‘Stack swap’
OTMET 1H	N17	OTMET – SOKDU – NEDUL – BIGTO – HAZEL – OCK	
ROXOG 1H	(U)P87, L962	ROXOG – AMTOD – BEGTO – HAZEL – OCK	
SIRIC 1H	P2	SIRIC – NIGIT – LLW03 – OCK	
SIRIC 1Z	SIRIC	SIRIC – CPT – BNN	‘Stack swap’
TANET 1Z	TANET	TANET – DET – BIG	‘Stack swap’
TOBID 1X	TOBID	TOBID – WOD – OCK	‘Stack swap’

A.11 London City (EGLC), Biggin Hill (EGKB)

Designator	Arrival Via	Route	Remarks
KATHY 1C	L980	KATHY – BIDVA – EVEXU – SOXUX – OKVAP – GODLU	
KONAN 1C	L9	KONAN – GODLU	
SOVAT 1C	L613	SOVAT – ERKEX – OKVAP – GODLU	
NEVIL 1C	M189	NEVIL – OSPOL – NETVU – SOXUX – OKVAP – GODLU	
AVANT 1C	L620	GIBSO – BEGTO – AVANT – BIG – UMTUM – GODLU	
HON 1C	UL612, L10	HON – ROGBI – TIXEX – ODVOD – ROPMU – NUDNA – INLIM – JACKO	
LISTO 1C	(U)Q4, Z197	LISTO – PEDIG – ROGBI – TIXEX – ODVOD – ROPMU – NUDNA – INLIM – JACKO	
SAM 1C	L620	SAM – BIDVA – EVEXU – SOXUX – OKVAP – GODLU	
SILVA 1C	SILVA	SILVA – BOMBO – BKY – BRAIN – CLN – JACKO	
SIRIC 1C	P2	SIRIC – BIG – UMTUM – GODLU	
SUMUM 1C	L608, Q63	SUMUM – LOGAN – JACKO	
SUMUM 1X	L608, Q63	SUMUM – TEVMO – GODLU	‘Stack swap’
XAMAN 1C	L980	XAMAN – LOGAN – JACKO	
XAMAN 1X	L980	XAMAN – TEVMO – GODLU	‘Stack swap’

A.12 London Luton (EGGW)

Designator	Arrival Via	Route	Remarks
BARMI 1N	P7	BARMI – MEGEL – DITOB – WIQID – MUCTE – OFJES – UDDIZ – COCCU – JUMZI – ZAGZO	
DET 2A	N57 (FL170-)	DET – LOFFO – ABBOT	Low level / RNAV5
FINMA 1N	L15, M605	FINMA – WOBUN – EDCOX – JUMZI – ZAGZO	
LOGAN 2A	L608, L980 (FL100-)	LOGAN – CLN – ABBOT	Low level / RNAV5
LISTO 1N	L612, P18, (U)Y124, Z197, Q4	LISTO – PEDIG – ROGBI – FINMA – WOBUN – EDCOX – JUMZI – ZAGZO	
RINIS 1N	M40	RINIS – IDESI – WIQID – MUCTE – OFJES – UDDIZ – COCCU – JUMZI – ZAGZO	
SILVA 1N	M183, Q41, M605	SILVA – WOBUN – EDCOX – JUMZI – ZAGZO	
SIRIC 1N	P2	SIRIC – NIGIT – VATON – OZZOT – BPK – ILLOC – OXDUF – JUMZI – ZAGZO	
TELTU 1N	(U)M185, N17, L982, (U)N6	TELTU – MOREZ – VATON – OZZOT – BPK – ILLOC – OXDUF – JUMZI – ZAGZO	
TOSVA 1N	Y6	TOSVA – IDESI – WIQID – MUCTE – OFJES – UDDIZ – COCCU – JUMZI – ZAGZO	
UNDUG 1N	(U)M733	UNDUG – MAY – VATON – OZZOT – BPK – ILLOC – OXDUF – JUMZI – ZAGZO	
XAMAN 1N	L980	XAMAN – IDESI – WIQID – MUCTE – OFJES – UDDIZ – COCCU – JUMZI – ZAGZO	

A.13 London Stansted (EGSS), Cambridge (EGSC)

Designator	Arrival Via	Route	Remarks
ABBOT 1Z	ABBOT	ABBOT – TABIS – BUSTA – LOREL	‘Stack swap’
AVANT 1L	L89, L980	AVANT – OCK – VATON – BPK – BKY – BUSTA – LOREL	
BANVA 1L	M733, Y8	BANVA – UNDUG – MAY – VATON – BPK – BKY – BUSTA – LOREL	
BARMI 2A	P7	BARMI – MEGEL – DITOB – LAPRA – ABBOT	
BKY 1X	BKY	BKY – ADNAM – ABBOT	‘Stack swap’
BPK 1X	BPK	BPK – ADNAM – ABBOT	‘Stack swap’
DET 2A	N57 (FL170-)	DET – LOFFO – ABBOT	Low level / RNAV5
FINMA 1L	M605	FINMA – BOMBO – BKY – BUSTA – LOREL	
LOGAN 2A	L608, L980 (FL100-)	LOGAN – CLN – ABBOT	Low level / RNAV5
LISTO 1L	L612, P18, Q4, (U)Y124, Z197	LISTO – PEDIG – ROGBI – FINMA – BOMBO – BKY – BUSTA – LOREL	
RINIS 1A	M40	RINIS – IDESI – LAPRA – ABBOT	
SILVA 1L	M605	SILVA – BOMBO – BKY – BUSTA – LOREL	
SIRIC 1L	P2 (FL180+)	SIRIC – NIGIT – VATON – BPK – BKY – BUSTA – LOREL	
TELTU 1L	(U)M185, N17, L982, (U)N6	TELTU – VATON – BPK – BKY – BUSTA – LOREL	
TOSVA 1A	Y6	TOSVA – IDESI – LAPRA – ABBOT	
XAMAN 1A	L980	XAMAN – IDESI – LAPRA – ABBOT	

A.14 Manchester (EGCC)

Designator	Arrival Via	Route
AXCIS 1M	P16	AXCIS – MONTY – REXAM – WAL – MIRSI
ELVOS 1M	T420	ELVOS – TNT – QUSHI – DAYNE
LAKEY 1M	L612	LAKEY – DIZZE – ROSUN
LESTA 1M	N601, UP6	LESTA – TNT – QUSHI – DAYNE
LIBSO 1M	UL975	LIBSO – FIZED – GOLES – POL – BURNI – ROSUN
MAKUX 1M	L15, Q38	MAKUX – SOSIM – GIGTO – IBRAR – WAL – MIRSI
MALUD 1M	L975, Q37	MALUD – WAL – MIRSI
OTBED 1M	Y70, L60	OTBED – GOLES – POL – BURNI – ROSUN
PENIL 1M	L10, L28	PENIL – WAL – MIRSI
SETEL 1M	N57	SETEL – ROSUN
TILNI 1M	(U)P18	TILNI – GASKO – BEGAM – SETEL – ROSUN

A.15 Newcastle (EGNT)

Designator	Arrival Via	Route
POL 1N	(U)N601, (U)P17, (U)N57	POL – GOKOV – IRKOR – XODRU – ETSSE
RIMTO 1N	L46, L613, Y70(E), Y250	RIMTO – GOKOV – IRKOR – XODRU – ETSSE

A.16 Southampton (EGHI) and Bournemouth (EGHH)

Designator	Arrival Via	Route
BUGUP 1S	L8, Y322	BUGUP – RISIN – NUBRI – SAM
COWLY 1S	Q41	COWLY – PEPIS – SAM
CPT 1S	Q63	CPT – PEPIS – SAM
ELDAX 1S	N20, M8	ELDAX – NOTGI – EVEXU – GIVUN – RUDMO – MILVA – SAM
THRED 1S	Q41, Y110	THRED – NEDUL
UMBUR 2S	M40	UMBUR – OCK – PEPIS – SAM

A.17 Southend (EGMC)

Designator	Arrival Via	Route
KATHY 1S	L980	BIDVA – EVEXU – SOXUX – OKVAP – ATSAP – ADVAS – GEGMU
NEVIL 1S	M189	NEVIL – OSPOL – NETVU – SOXUX – OKVAP – ATSAP – ADVAS – GEGMU
SAM 1S	L620	SAM – BIDVA – EVEXU – SOXUX – OKVAP – ATSAP – ADVAS – GEGMU
SILVA 1S	SILVA	SILVA – BOMBO – BKY – BRAIN
SOVAT 1S	L613	SOVAT – ERKEX – OKVAP – ATSAP – ADVAS – GEGMU
LISTO 1S	(U)Q4, Z197	LISTO – PEDIG – FINMA – CLIPY – BOMBO – BKY – BRAIN – MAYLA – SPEAR
FINMA 1S	L15 (FL150-FL190)	FINMA – BOMBO – BKY – BRAIN – MAYLA – SPEAR
SUMUM 1S	L608, Q63	SUMUM – LOGAN – JACKO – GEGMU
XAMAN 1S	L980	XAMAN – LOGAN – JACKO – GEGMU

Annex B | Separation from Terminal Holds**ABBOT Holding Area**

Hold	Level	Remark
BKY	FL140-	Separated
BNN	FL150-	Separated
BOMBO	FL140-	Separated
BRASO	FL150-	Separated
JACKO	FL140-	Separated
LAM	FL150-	Separated
LOREL	FL150-	Separated
SABER	FL150-	Separated
WCO	FL140-	Separated
ZAGZO	All	Separated

AMDUT Holding Area

Hold	Level	Remark
MID	FL190-	Separated
PEPIS	FL190-	Separated
ROPMU	FL190-	Separated
SABER	FL170-	Separated
TIGER	FL190-	Separated
VATON	FL190-	Separated

BIG Holding Area

Hold	Level	Remark
BKY	FL350-	Separated
BNN	FL290-	Separated
BRASO	FL220-	Separated
GODLU	FL120-	Separated
LAM	FL150-	Separated
MID	FL350-	Separated
OCK	FL150-	Separated
OKVAP	FL150-	Separated
SABER	FL350-	Separated
RUDMO	FL110-	Separated
TIGER	FL140-	Separated
TIMBA	FL160-	Separated
VATON	FL200-	Separated
WCO	FL140-	Separated
WILLO	FL190-	Separated

BKY Holding Area

Hold	Level	Remark
ABBOT	FL140-	Separated
BNN	FL200-	Separated
BOMBO	FL140-	Separated
BRASO	FL350-	Separated

Hold	Level	Remark
LAM	FL350-	Separated
LAPRA	FL210-	Separated
LOREL	All	Not separated
OKVAP	FL150-	Separated
RUDMO	FL110-	Separated
SABER	FL350-	Separated
VATON	FL200-	Separated
WCO	FL140-	Separated
WOBUN	All	Separated

BNN Holding Area

Hold	Level	Remark
ABBOT	FL150-	Separated
BIG	FL290-	Separated
BKY	FL200-	Separated
BOMBO	FL140-	Separated
DELBO	All	Not separated
LAM	FL280-	Separated
LAPRA	FL210-	Separated
LOREL	FL150-	Separated
OCK	FL200-	Separated
VATON	All	Not separated
WCO	FL90-	Separated
WCO	FL100+	Not separated
WOBUN	All	Separated

BOMBO Holding Area

Hold	Level	Remark
ABBOT	FL140-	Separated
BKY	FL140-	Separated
BNN	FL140-	Separated
BRASO	FL140-	Separated
DELBO	FL140-	Separated
LAM	FL140-	Separated
LAPRA	FL210-	Separated
LOREL	FL140-	Separated
VATON	FL140-	Separated
VATON	FL150+	Not separated
WCO	FL140-	Separated
WOBUN	All	Not separated
ZAGZO	FL140-	Separated

BRASO Holding Area

Hold	Level	Remark
ABBOT	FL150-	Separated
BIG	FL220-	Separated
BKY	FL350-	Separated

Hold	Level	Remark
BOMBO	FL140-	Separated
JACKO	All	Not separated
LAM	FL140-	Separated
LOREL	FL150-	Separated
SABER	All	Not separated
TIGER	FL220-	Separated
VATON	FL200-	Separated
WCO	FL140-	Separated

CHASE Holding Area

Hold	Level	Remark
EMW	FL120 and below	Separated
GROVE	FL130+	Not separated
HON	All	Not separated

DAYNE Holding Area

Hold	Level	Remark
ROSUN	All	Separated
MIRSI	All	Separated
ROKUP	All	Separated

DELBO Holding Area

Hold	Level	Remark
BNN	All	Not separated
BOMBO	FL140-	Separated
LOREL	FL150-	Separated
VATON	FL200-	Separated

GODLU Holding Area

Hold	Level	Remark
ABBOT	FL120-	Separated
ATPEV	6000-	Separated
JACKO	FL120-	Separated
LAM	FL120-	Separated
SABER	FL120-	Separated
TIGER	FL120-	Separated
TIMBA	FL120-	Separated

GROVE Holding Area

Hold	Level	Remark
CHASE	FL130+	Not separated
HON	All	Not separated

GWC Holding Area

Hold	Level	Remark
ARNUN	FL140-	Separated
OCK	FL140-	Separated
TIMBA	FL140-	Separated
WILLO	FL140-	Separated

HON Holding Area

Hold	Level	Remark
CHASE	All	Not separated
DTY	FL150+	Not separated
GROVE	All	Not separated

JACKO Holding Area

Hold	Level	Remark
ABBOT	FL120-	Separated
GODLU	FL120-	Separated
LAM	FL120-	Separated
LAPRA	FL140-	Separated
OKVAP	FL140-	Separated
SABER	All	Not separated

KEGUN Holding Area

Hold	Level	Remark
LPL	All	Separated
TIPOD	All	Separated

LAM Holding Area

Hold	Level	Remark
ABBOT	FL150-	Separated
BIG	FL150-	Separated
BKY	FL350-	Separated
BNN	FL280-	Separated
BOMBO	FL140-	Separated
BRASO	FL140-	Separated
GODLU	FL120-	Separated
JACKO	FL140-	Separated
LOREL	FL150-	Separated
OCK	FL210-	Separated
SABER	FL200-	Separated
VATON	FL200-	Separated

LOREL Holding Area

Hold	Level	Remark
ABBOT	FL150-	Separated
BKY	All	Not separated

BNN	FL150-	Separated
BOMBO	FL140-	Separated
BRASO	FL150-	Separated
DELBO	FL150-	Separated
LAM	FL150-	Separated
LAPRA	FL210-	Separated
VATON	FL150-	Separated
WCO	FL140-	Separated
ZAGZO	FL140-	Separated

LPL Holding Area

Hold	Level	Remark
KEGUN	All	Separated
MIRSI	All	Not separated
TIPOD	All	Separated
WAL	All	Not separated

MIRSI Holding Area

Hold	Level	Remark
DAYNE	All	Separated
LPL	All	Not separated
ROSUN	FL140-	Separated
TIPOD	All	Separated

OCK Holding Area

Hold	Level	Remark
ARNUN	FL140-	Separated
BIG	FL150-	Separated
BNN	FL200-	Separated
LAM	FL210-	Separated
TIGER	FL200-	Separated
TIMBA	FL200-	Separated
VATON	All	Not separated

POL Holding Area

Hold	Level	Remark
DAYNE	All	Not separated
ROSUN	All	Not separated

ROKUP Holding Area

Hold	Level	Remark
PIGOT	All	Separated
DAYNE	All	Separated
EME and EMW	All	Not separated

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ROSUN Holding Area

Hold	Level	Remark
DAYNE	All	Separated
MIRSI	FL140-	Separated

SABER Holding Area

Hold	Level	Remark
ABBOT	FL150-	Separated
BIG	FL350-	Separated
BKY	FL350-	Separated
BRASO	All	Not separated
JACKO	All	Not separated
LAM	FL200-	Separated

TIGER Holding Area

Hold	Level	Remark
BIG	FL140-	Separated
BRASO	FL220-	Separated
DET	FL150-	Separated
GODLU	FL140-	Separated
MAY	All	Not separated
OCK	FL200-	Separated

TIMBA Holding Area

Hold	Level	Remark
BIG	FL160-	Separated
GODLU	FL140-	Separated
GWC	FL140-	Separated
OCK	FL200-	Separated
VATON	FL200-	Separated
WILLO	FL150-	Separated

TIPOD Holding Area

Hold	Level	Remark
KEGUN	All	Separated
LPL	All	Separated
MIRSI	All	Separated

VATON Holding Area

Hold	Level	Remark
AMDUT	FL190-	Separated
BIG	FL200-	Separated
BKY	FL200-	Separated
BNN	All	Not separated
BOMBO	FL140-	Separated
BRASO	FL200-	Separated

DELBO	FL200-	Separated
GWC	FL140-	Separated
LAM	FL200-	Separated
LOREL	FL150-	Separated
MID	FL200-	Separated
OCK	All	Not separated
TIMBA	FL200-	Separated
WILLO	FL200-	Separated
WOBUN	All	Separated

WCO Holding Area

Hold	Level	Remark
BNN	FL100+	Not separated
BNN	FL90-	Separated
BOMBO	FL140-	Separated
DELBO	All	Not separated
LAM	FL140-	Separated
LOREL	FL140-	Separated
WOBUN	All	Not separated

WILLO Holding Area

Hold	Level	Remark
ARNUN	FL140-	Separated
BIG	FL190-	Separated
GODLU	FL120-	Separated
GWC	FL140-	Separated
MID	FL170-	Separated
OCK	FL140-	Separated
RUDMO	FL110-	Separated
TIGER	FL140-	Separated
TIMBA	FL150-	Separated
VATON	FL200-	Separated

ZAGZO Holding Area

Hold	Level	Remark
ABBOT	FL140-	Separated
BOMBO	FL140-	Separated
BKY	FL140-	Separated
BOMBO	FL140-	Separated
WOBUN	FL140-	Separated

GLOSSARY

Abbreviation	Meaning
AC	Area Control (Sector)
ACC	Area Control Centre
ADC	Aerodrome Control
AIP	Aeronautical Information Publication
AIR	AIR Controller (i.e., Tower Controller)
AoR	Area of Responsibility
APC	Approach Control
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATD	Actual Time of Departure
ATIS	Automatic Terminal Information Service
ATS	Air Traffic Service
BS	Basic Service
CAS	Controlled Airspace
CDR	Conditional Route – a route which is permanently plannable during the times published in ENR 3 and may be used tactically at the discretion of ATC
COP	Coordination Point
COPN	Coordination Entry Point
COPX	Coordination Exit Point
CTA	Control Area
CTR	Control Zone
DB	Designated Base
DME	Distance Measuring Equipment
DS	Deconfliction Service
EAT	Estimated Approach Time
FIN	Final Director
FIR	Flight Information Region
FIS	Flight Information Service
FISO	Flight Information Service Officer
FL	Flight Level
FRA	Free Route Airspace
ft	Feet (Dimensional Unit)
GMC	Ground Movement Control
GMP	Ground Movement Planner
hPa	Hectopascal
IFR	Instrument Flight Rules
INT	Intermediate Director
IVV	Identification, Verification, Validation
LAG	Local Area Group
LoA	Letter of Agreement
LTC	London Terminal Control
LTMA	London TMA
lvl	Level (by)
MATS	Manual of Air Traffic Services
MDI	Minimum Departure Interval
MHz	Megahertz
MPC	Manchester Prestwick Control
MSL	Minimum Stack Level

Abbreviation	Meaning
MSL	Minimum Stack Level
MTMA	Manchester TMA
MUAC	Maastricht Upper Area Control
MVA	Main Vectoring Area
NM	Nautical Mile
NPR	Noise Preferential Route
OCAS	Outside of Controlled Airspace
PC	Prestwick (MTMA) Centre ('MAN' Callsigns on VATSIM)
PS	Procedural Services
RFC	Released for Climb
RFD	Released for Descent
RFL	Requested Flight Level
RFT	Released for Turn
RMA	Radar Manoeuvring Area
RNAV	Area navigation
RNP	Required navigation performance
ScAC	Scottish Area Control
ScTMA	Scottish TMA
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information AIM 7-1-6 - information concerning en-route weather phenomena which may affect safety of aircraft operation
SPT	Support
SSR	Secondary Surveillance Radar
STAR	Standard Terminal Arrival Route
TC	Terminal Control
TI	Traffic Information
TL	Transition Level
TMA	Terminal Manoeuvring Area
TS	Traffic Service
UIR	Upper Information Region
UK FIS	UK Flight Information Service
vACC	virtual Area Control Centre
VFR	Visual Flight Rules
vMATS	virtual Manual of Air Traffic Services
VOR	VHF omnidirectional range
vRAF	virtual Royal Air Force
XFL	Exit Flight Level

