

# **LONDON FIR (EGTT) VMATS PART 2**

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

**REVISION 2026/04 - EFFECTIVE 29 APRIL 2026**

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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 1<sup>1</sup> (CAP 493) and guidance on standard UK Radiotelephony phraseology, detailed in CAP 413<sup>2</sup>.

### 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.

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### 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.

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

<sup>2</sup> 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 1.1, 6.1           | North           | Revised AC Lakes area of responsibility to reflect reallocation of airspace to new Scottish Borders sector                              |
| LAC 6.3, 6.4, 7.3, 7.4 | North           | Updated AC Lakes and North Sea standing agreements and coordination with adjacent Scottish sectors to reflect FRA D3 & re-sectorisation |
| MPC 1.2, 3.1, 4.1      | North           | Revised PC West and PC North East areas of responsibility to reflect reallocation of airspace to new Scottish Borders sector            |
| MPC 3.2, 3.3, 4.2, 4.3 | North           | Updated PC standing agreements and coordination with adjacent Scottish sectors to reflect FRA D3 & re-sectorisation                     |
| APT 2.1                | South           | Added new Gatwick (EGKK) GMC split controller identifiers   |
| APT 5.1                | South           | Updated Solent Radar controller identifier  |
| ANX A.1, A.4, A.14     | North           | Revised EGBB, EGNX and EGCC STARs commencing in Scottish/North airspace due to FRA implementation                                       |
| ANX A.15               | All             | Newcastle (EGNT) STAR now RIMTO 2N due to FRA implementation  |

## 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                           |
|---------------------|-----------------------------------|
| <a href="#">PRE</a> | Preface                           |
| <a href="#">GEN</a> | Unit General Operating Procedures |
| <a href="#">LAC</a> | London Area Control               |
| <a href="#">LTC</a> | London Terminal Control           |
| <a href="#">MPC</a> | Manchester Prestwick Control      |
| <a href="#">APT</a> | Airports                          |
| <a href="#">ANX</a> | 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.

## List of Figures

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## Validity of Procedures

Controllers must ensure they are using the most recent version of documentation when controlling and mentoring.

Variations to the procedures and information published in the vMATS and Agreed Levels Diagrams are handled as described below.

### Permanent Instructions (PIs)

Amendments to existing procedures and the introduction of new procedures will be notified through a **Permanent Instruction** in the [Briefing Area \(PIs\)](#). These shall have precedence over procedures published in this document.

Significant changes will also be highlighted to controllers via a UK Controller Plugin notification, but controllers are expected to check the forum and Discord for relevant changes.

### AIP-Published Data

Some information included in this vMATS is aeronautical data 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.

### Temporary Instructions (TIs)

A **Temporary Instruction** is used to notify 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 TIs in the [Briefing Area \(TIs\)](#) 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   |
|---|---|
| <b>Aircraft from unstaffed airspace</b>   | Observation of successful code-callsign conversion following the allocation of a discrete Mode A code, unless already discrete          |
| <b>Departures handled ‘top-down’</b>  | May be identified via the Departure Method and Mode A validated through observation of the expected code-callsign conversion            |
| <b>Departures from airfields within CAS</b>                                     | Observation of the expected code-callsign conversion with no DUPE error shown, else squawk IDENT in accordance with the procedure above |
| <b>Departures from airfields outside of CAS transferred by an adjacent unit</b> | 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:

|                                      |  |
|--------------------------------------|--|
| <b>FRA Horizontal Entry Point I</b>  | A published Significant Point on the horizontal boundary of FRA from which DCT operations are allowed.   |
| <b>FRA Horizontal Exit Point (X)</b> | A published Significant Point on the horizontal boundary of FRA to which DCT FRA operations are allowed.   |
| <b>FRA Departure Point (D)</b>       | A published Significant Point from which aircraft transition from the lower route network from a specific airfield to DCT FRA operations.  |
| <b>FRA Arrival Point (A)</b>         | A published Significant Point where aircraft transition from DCT FRA operations to the lower route network to a specific airfield.   |
| <b>FRA Intermediate Point (I)</b>    | A published Significant point via which DCT FRA operations are allowed.<br><br>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 B6<sup>3</sup>).
- 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.

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<sup>3</sup> 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.<br>VFR flights shall be given traffic information and, if requested or deemed appropriate, traffic avoidance advice shall be suggested. |
| Class E<br><br>( <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.<br>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 774<sup>4</sup>.

### 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.

<sup>4</sup> 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  |
|----------------------------|--|
| <b>Type</b>                | Non-surveillance-based service.  |
| <b>Provision</b>           | Controllers and FISOs may provide a Basic Service.   |
| <b>Flight Rules</b>        | IFR and VFR.   |
| <b>Identification</b>      | The controller may identify an aircraft.   |
| <b>Traffic Information</b> | Generic traffic information.   |
| <b>Deconfliction</b>       | Deconfliction is not provided under a Basic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested.             |
| <b>Terrain</b>             | Basic Service is available at all levels, and the pilots remain responsible for terrain clearance at all times.  |
| <b>Headings</b>            | 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. |
| <b>Levels</b>              | 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   |
|-----------------------|---|
| <b>Type</b>           | Surveillance-Based service.   |
| <b>Provision</b>      | Only provided by a controller with access to an ATS surveillance system.                                      |
| <b>Flight Rules</b>   | IFR and VFR.  |
| <b>Identification</b> | The controller shall identify the aircraft, inform the pilot that they are identified, and maintain identity. |

|                            |  |
|----------------------------|--|
| <b>Traffic Information</b> | 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> ). |
| <b>Deconfliction</b>       | Deconfliction is not provided under a Traffic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested.   |
| <b>Terrain</b>             | Traffic Service may be provided below MSA; however, pilots remain responsible for terrain clearance.   |
| <b>Headings</b>            | A pilot may operate under their own navigation, or a controller may provide headings for the purpose of positioning, sequencing, or as navigational assistance.  |
| <b>Levels</b>              | 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.

| <b>Deconfliction Service</b> | <b>Remarks</b>   |
|------------------------------|--|
| <b>Type</b>                  | Surveillance-Based service.  |
| <b>Provision</b>             | Only provided by a controller with access to an ATS surveillance system.   |
| <b>Flight Rules</b>          | IFR <b>only</b> .  |
| <b>Identification</b>        | The controller shall identify the aircraft, inform the pilot that they are identified, and maintain identity.  |
| <b>Traffic Information</b>   | The controller may, subject to workload, pass traffic information on deconflicted traffic in order to improve the pilot’s situational awareness  |
| <b>Deconfliction</b>         | <p><u>The deconfliction minima against un-coordinated or unknown traffic are:</u></p> <ul style="list-style-type: none"> <li>- 5 NM laterally; or</li> <li>- 3000 ft vertically unless Mode-C has been verified.</li> </ul> <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"> <li>- 3 NM laterally; or</li> <li>- 1000 ft vertically</li> </ul> |
| <b>Terrain</b>               | 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.  |
| <b>Headings</b>              | A pilot may operate under their own navigation, or a controller may provide headings for the purpose of positioning, sequencing, or as navigational assistance.  |
| <b>Levels</b>                | 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:<br>- Basic Service;<br>- Traffic Service;<br>- Deconfliction Service;<br>- 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 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, 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.

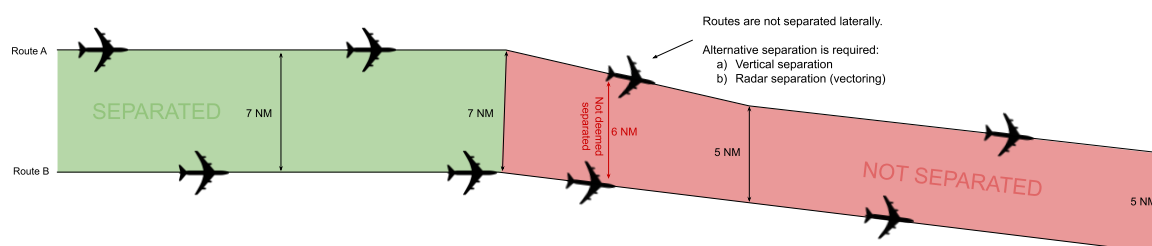
The use of adequate speed control may be used in place of headings for aircraft flying in trail.

#### 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:

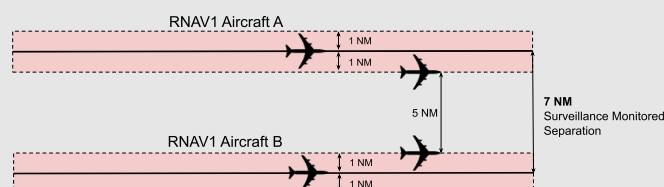
- Traffic must be established on the route centreline, or following radar vectoring / within FRA, more than **7 NM** (or 5 NM where 3 NM radar separation is approved) from the adjacent route and cleared to a navigational fix.
- Aircraft must be radar vectored if any significant route deviations are observed 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) SIDs/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/C/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    |                     |
| 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 normally effective at the receiving controller's AoR boundary. Unless otherwise stated, 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 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 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 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 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                |                             |
|-----------------------------|---------------------------|-----------------------------|
| <b>Belfast Group</b>        | Belfast/Aldergrove (EGAA) | Newtownards (EGAD)          |
|                             | Belfast/City (EGAC)       | Londonderry/Eglinton (EGAE) |
| <b>Brize Group</b>          | Brize Norton (EGVN)       | Gloucester (EGBJ)           |
|                             | Fairford (EGVA)           | Kemble (EGBP)               |
| <b>Essex Group</b>          | London Stansted (EGSS)    | Cambridge (EGSC)            |
|                             | London Luton (EGGW)       |                             |
| <b>Heathrow Group</b>       | London Heathrow (EGLL)    | Northolt (EGWU)             |
| <b>Jersey Group</b>         | Alderney (EGJA)           | Jersey (EGJJ)               |
|                             | Guernsey (EGJB)           |                             |
| <b>London TMA Group</b>     | <u>Essex Group</u>        | Denham (EGLD)               |
|                             | <u>Heathrow Group</u>     | Gatwick (EGKK)              |
|                             | <u>Thames Group</u>       |                             |
| <b>Manchester TMA Group</b> | Manchester (EGCC)         | Barton (EGCB)               |
|                             | Liverpool (EGGP)          | Hawarden (EGNR)             |
| <b>Midlands Group</b>       | Birmingham (EGBB)         | East Midlands (EGNX)        |
|                             | Coventry (EGBE)           |                             |
| <b>Scottish TMA Group</b>   | Edinburgh (EGPH)          | Dundee (EGPN)               |
|                             | Glasgow (EGPF)            | Cumbernauld (EGPG)          |
|                             | Prestwick (EGPK)          |                             |
| <b>Severn Group</b>         | Cardiff (EGFF)            | Swansea (EGFH)              |
|                             | Bristol (EGGD)            | St Athan (EGSY)             |
| <b>Solent Group</b>         | Southampton (EGHI)        | Bournemouth (EGHH)          |
| <b>Thames Group</b>         | London/City (EGLC)        | Southend (EGMC)             |
|                             | Biggin Hill (EGKB)        | Rochester (EGTO)            |
| <b>Wessex Group</b>         | Blackbushe (EGLK)         | Lasham (EGHL)               |
|                             | Fairoaks (EGTF)           | Dunsfold (EGTD)             |
|                             | Odiham (EGVO)             |                             |

#### 5.11.2 Non-UK

| Group                  | Aerodromes                |                       |
|------------------------|---------------------------|-----------------------|
| <b>Brussels Group</b>  | Brussels (EBBR)           | Antwerp (EBAW)        |
|                        | Brussels Melsbroek (EBMB) | Chievres (EBCV)       |
|                        | Charleroi (EBCI)          |                       |
| <b>Dublin Group</b>    | Dublin (EIDW)             | Weston (EIWT)         |
|                        | Casement (EIME)           |                       |
| <b>Haamstede Group</b> | 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

|                            |           |   |
|----------------------------|-----------|---|
| <b>W<br/>E<br/>S<br/>T</b> | Weather   | Turbulence<br>CB Activity<br>SIGMETs<br>Winds<br>Pressure Settings (High/Low) and Minimum Stack Level<br>Runway(s) in Use |
|                            | Equipment | RT/Intercom systems<br>ATIS   |
|                            | Situation | Military Activity<br>Holding<br>Flow restrictions (e.g. MDIs, level caps, departure checks)<br>Staffing/Adjacent ATC      |
|                            | Traffic   | Traffic on frequency<br>Pending Traffic<br>Potential Traffic Conflicts  |

#### 5.12.2 PRAWNS

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

## Chapter 6 Top-Down Coverage

In the absence of the local ATC, the responsibility for top-down control (see 2.5) is determined as follows:

| ID  | Sector/Position | ID    | Sector/Position  | ID    | Sector/Position |
|-----|-----------------|-------|------------------|-------|-----------------|
| LS  | AC South        | LSC   | AC South-Central | TC NW | TC North West   |
| LH  | AC Worthing     | L     | AC Bandbox       | TC NE | TC North East   |
| LD  | AC Dover        |       |                  | TC N  | TC North        |
| LC  | AC Central      | PC    | PC Bandbox       | TC SW | TC South West   |
| LM  | AC Daventry     | PC W  | PC West          | TC SE | TC South East   |
| LE  | AC Clacton      | PC E  | PC East          | TC S  | TC South        |
| LW  | AC West         | PC NE | PC Northeast     | TC    | TC Bandbox      |
| LN  | AC North        | PC SE | PC Southeast     |       |                 |
| LNE | AC North Sea    |       |                  | TC E  | TC East         |
| LNW | AC Lakes        |       |                  | 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 – LH – LS – LSC – L        |
| London Gatwick (EGKK)  | Shoreham (EGKA) ★               |  |
| Southampton (EGHI)     |                                 | LH – 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 – LNW – LN – L             |
| Norwich (EGSH)         |                                 | LNE – LN – 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.

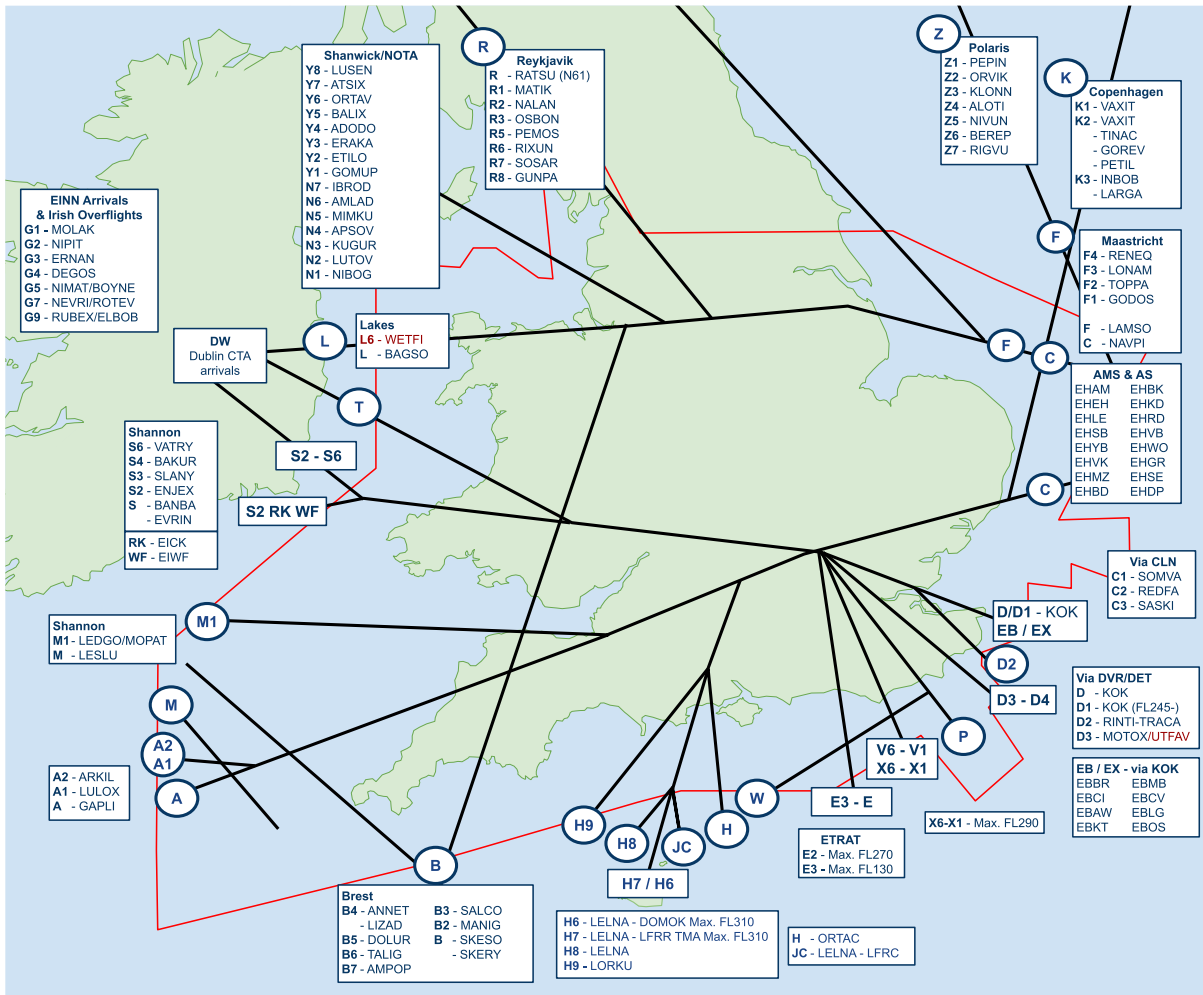
## Chapter 7 UK Intention Codes

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   |
| EX      | - | EBOS & EBKT    |
| DW      | - | Dublin CTA     |

Figure GEN-2 – UK Intention Codes



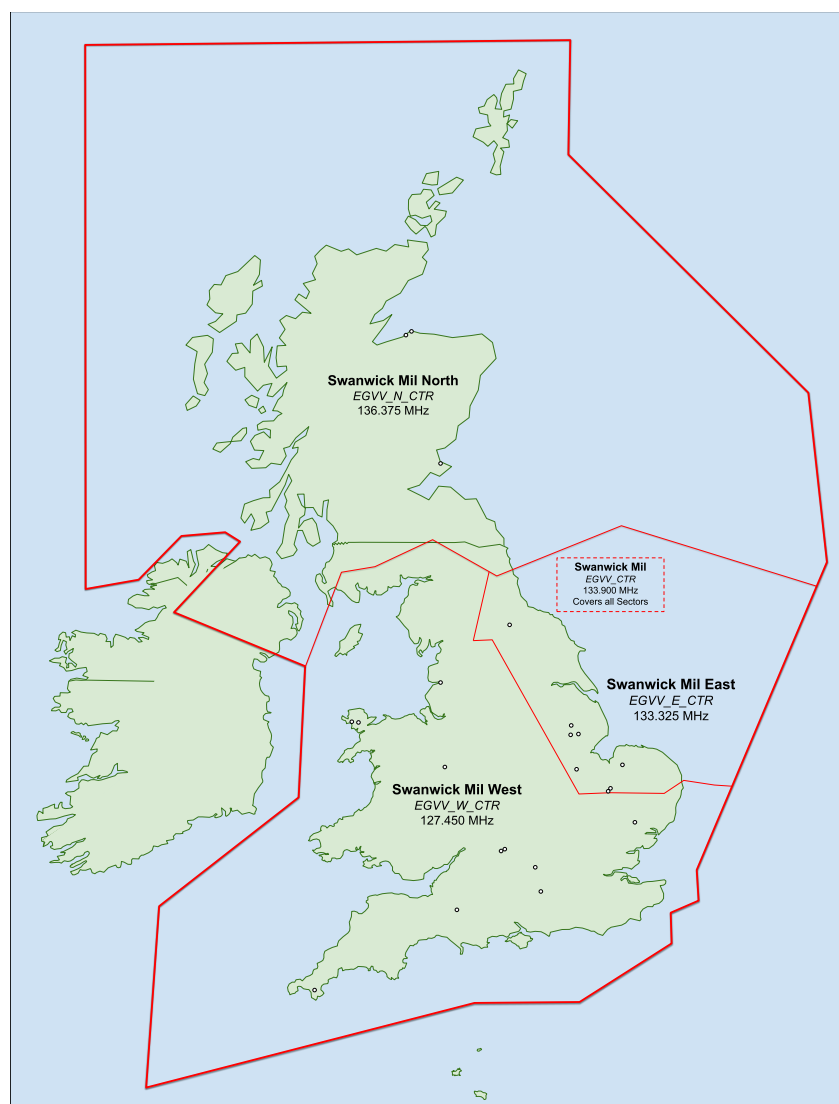
## Chapter 8 Civil/Military Procedures

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

|  |  |
|--|--|
| <b>EGVV_CTR</b><br>"Swanwick Mil"<br>133.900 MHz | <b>EGVV_E_CTR</b><br>"Swanwick Mil East"<br>133.325 MHz  |
|  | <b>EGVV_W_CTR</b><br>"Swanwick Mil West"<br>127.450 MHz  |
|  | <b>EGVV_N_CTR</b><br>"Swanwick Mil North"<br>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*.

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

### 8.2.3 Lichfield Radar Corridor

See *Figure GEN-4*.

|                            |  |
|----------------------------|--|
| <b>Swanwick Mil Sector</b> | West   |
| <b>Civil Sector</b>        | PC Southeast                                 |
| <b>Transit Area</b>        | Daventry CTA in the vicinity of PEDIG        |
| <b>Centreline</b>          | Coningsby (CGY) TACAN radial 252°            |
| <b>Width</b>               | 12 NM  |
| <b>Level(s)</b>            | 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*.

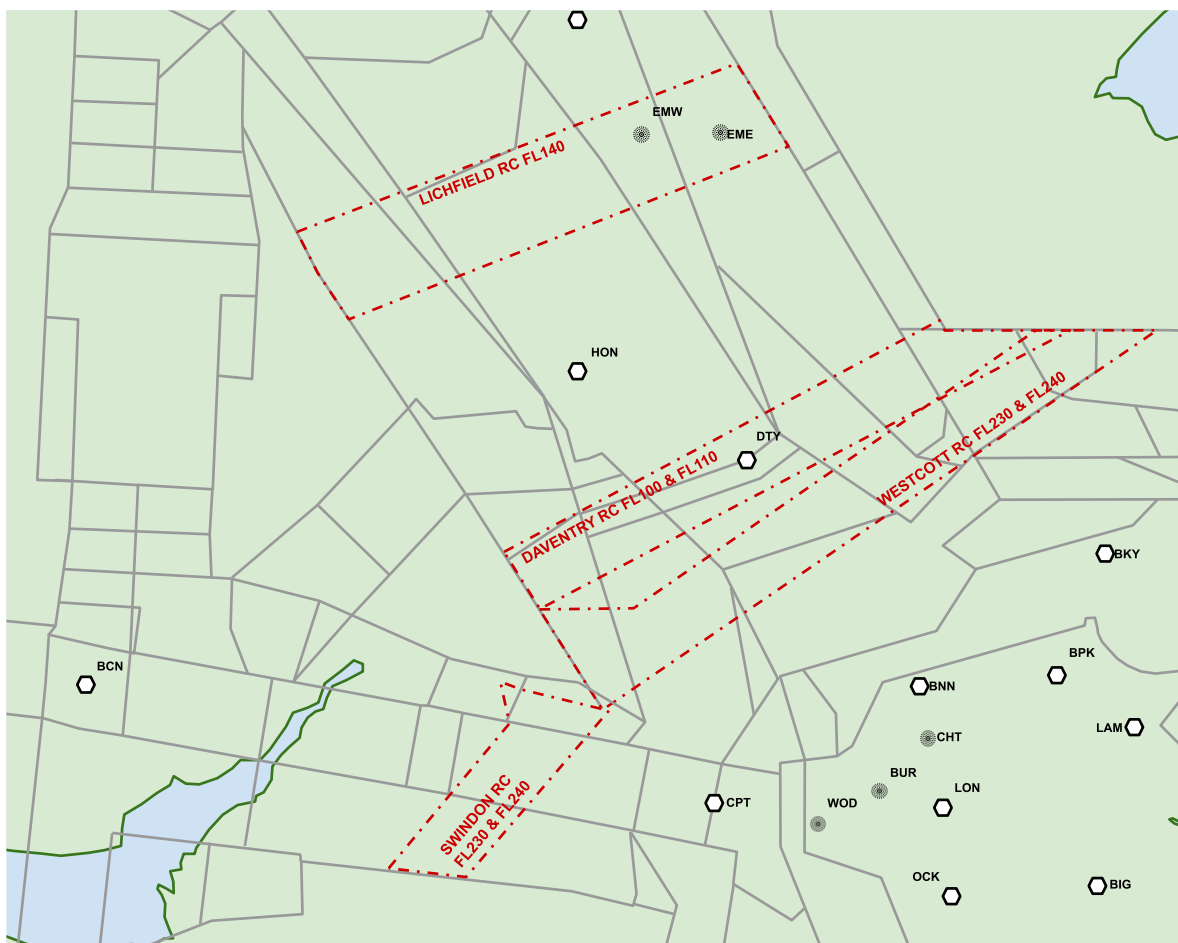
|                            |   |
|----------------------------|---|
| <b>Swanwick Mil Sector</b> | West  |
| <b>Civil Sector</b>        | AC West   |
| <b>Transit Area</b>        | Cotswold CTA  |
| <b>Centreline</b>          | Between the BZN (Brize Norton) and VLN (Yeovilton) TACANs |
| <b>Width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

### 8.2.5 Westcott Radar Corridor

See *Figure GEN-4*.

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

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



### 8.2.6 LYNAS Radar Corridor

See *Figure GEN-5*.

|                            |                                       |
|----------------------------|---------------------------------------|
| <b>Swanwick Mil Sector</b> | West                                  |
| <b>Civil Sector</b>        | PC West                               |
| <b>Transit Area</b>        | Holyhead CTA in the vicinity of PEDIG |
| <b>Width</b>               | 12 NM                                 |
| <b>Level(s)</b>            | 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*.

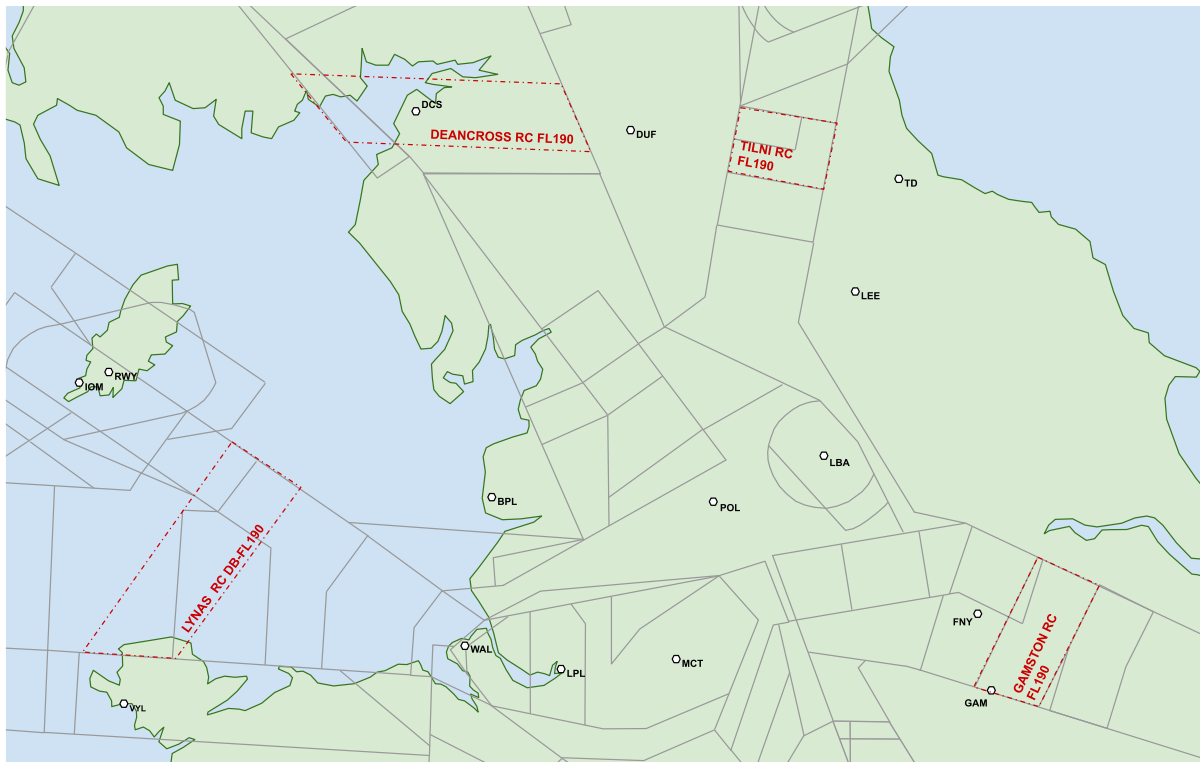
|                            |   |
|----------------------------|---|
| <b>Swanwick Mil Sector</b> | East  |
| <b>Civil Sector</b>        | PC Northeast                                |
| <b>Transit Area</b>        | Lincolnshire CTA in the vicinity of GAM VOR |
| <b>Width</b>               | 10 NM 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

### 8.2.8 TILNI Radar Corridor

See *Figure GEN-5*.

|                            |                                       |
|----------------------------|---------------------------------------|
| <b>Swanwick Mil Sector</b> | East                                  |
| <b>Civil Sector</b>        | PC Northeast                          |
| <b>Transit Area</b>        | Yorkshire CTA between TILNI and GIRLI |
| <b>Width</b>               | 10 NM                                 |
| <b>Level(s)</b>            | 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”.

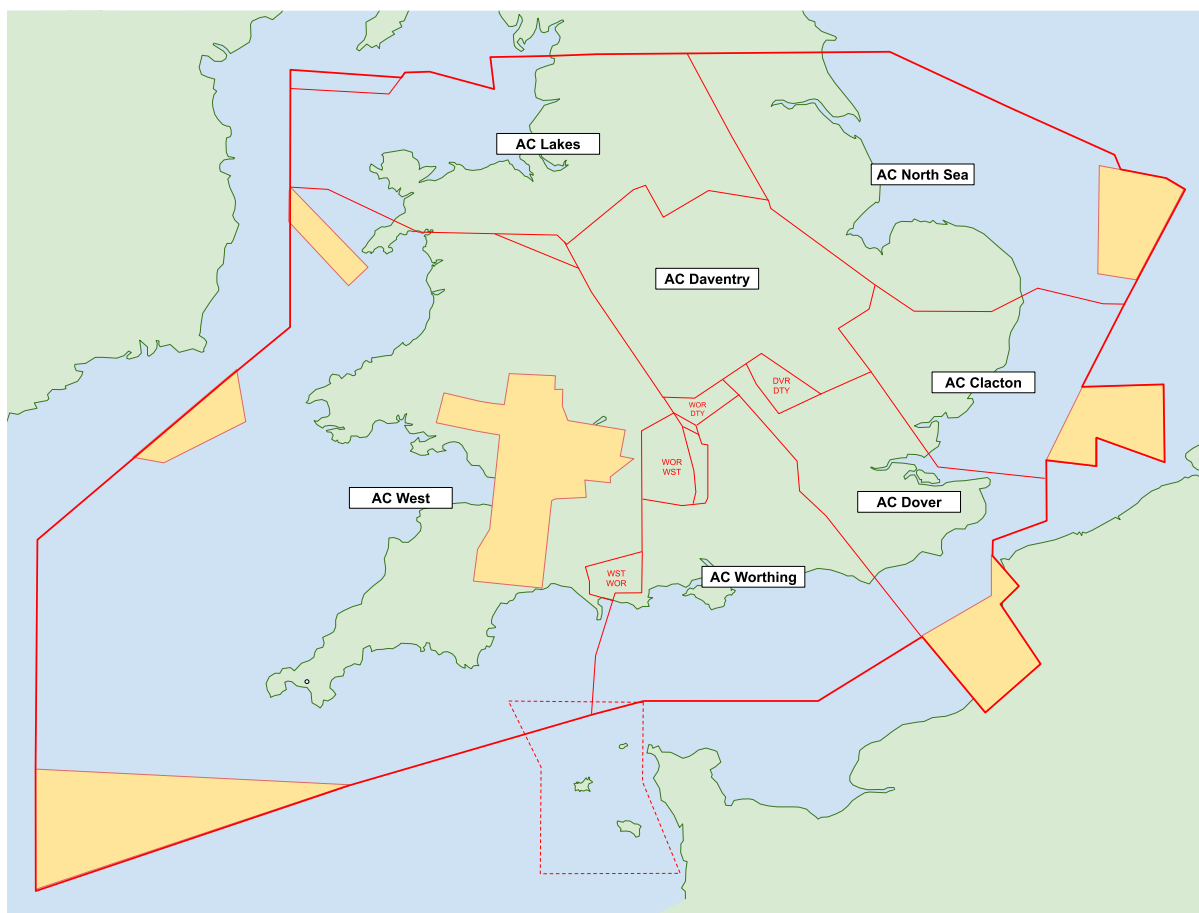
| VATSIM Callsign | LAG         | Coordination Name |            | Frequency |
|-----------------|-------------|-------------------|------------|-----------|
| LON_CTR         | -           | AC Bandbox        | <i>BBX</i> | 127.430   |
| LON_SC_CTR      | -           | AC South Central  | <i>LSC</i> | 132.605   |
| LON_S_CTR       | South LAG   | South             | <i>STH</i> | 129.430   |
| LON_H_CTR       | South LAG   | Worthing          | <i>WOR</i> | 134.440   |
| LON_D_CTR       | South LAG   | Dover             | <i>DVR</i> | 134.905   |
| LON_C_CTR       | Central LAG | AC Central        | <i>CEN</i> | 127.105   |
| LON_M_CTR       | Central LAG | Daventry          | <i>DTY</i> | 120.025   |
| LON_E_CTR       | Central LAG | Clacton           | <i>CLN</i> | 118.480   |
| LON_N_CTR       | North LAG   | AC North          | <i>NTH</i> | 133.705   |
| LON_NW_CTR      | North LAG   | Lakes             | <i>LKS</i> | 135.580   |
| LON_NE_CTR      | North LAG   | North Sea         | <i>NOR</i> | 128.130   |
| LON_W_CTR       | West LAG    | AC West           | <i>WST</i> | 126.080   |

**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<br><b>AC Bandbox</b><br>127.430 | LON_SC_CTR<br><b>AC South Central</b><br>132.605 | LON_S_CTR<br><b>AC South</b><br>129.430   |
|   |  | LON_C_CTR<br><b>AC Central</b><br>127.105 |
|   | LON_N_CTR<br><b>AC North</b><br>133.705          |   |
|   | LON_W_CTR<br><b>AC West</b><br>126.080           |   |

**AC South LAG Bandboxing/Splitting Procedures**

|   |   |   |   |
|---|---|---|---|
| LON_S_CTR<br><b>AC South</b><br>129.430 | LON_H_CTR<br><b>Worthing</b><br>134.440 | LON_H_CTR                               |   |
|   | LON_D_CTR<br><b>Dover</b><br>134.905    | LTC_S_CTR<br><b>TC South</b><br>134.125 | LTC_SW_CTR<br><b>TC South West</b><br>133.180 |
|   |   |   | LTC_SE_CTR<br><b>TC South East</b><br>120.530 |
|   | 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<br><b>AC Central</b><br>127.105 | LON_M_CTR<br><b>Daventry</b><br>120.025 | LON_M_CTR                                  |   |   |
|   | LON_E_CTR<br><b>Clacton</b><br>118.480  | LTC_M_CTR<br><b>TC Midlands</b><br>121.030 | LTC_N_CTR<br><b>TC North</b><br>119.780 | LTC_NW_CTR<br><b>TC North West</b><br>121.280 |
|   |   | LTC_E_CTR<br><b>TC East</b><br>121.230     |   | LTC_NE_CTR<br><b>TC North East</b><br>118.825 |
|   |   | 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<br><b>AC North</b><br>133.705   | LON_NW_CTR<br><b>Lakes</b><br>135.580  | LON_NW_CTR                              |  |  |
|   |  | MAN_CTR<br><b>PC Bandbox</b><br>133.200 | MAN_W_CTR<br><b>PC West</b><br>128.055       |  |
|   | MAN_E_CTR<br><b>PC East</b><br>133.800 |   | MAN_SE_CTR<br><b>PC Southeast</b><br>134.430 |  |
|   |  |   | MAN_NE_CTR<br><b>PC Northeast</b><br>135.715 |  |
| LON_NE_CTR<br><b>North Sea</b><br>128.130 |  |   |  |  |

**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 is covered top-down by Lakes (LON\_NW\_CTR) whereas PC Northeast is covered top-down by North Sea (LON\_NE\_CTR).

**AC West LAG**

|  |
|--|
| LON_W_CTR<br><b>AC West</b><br>126.080 |
|--|

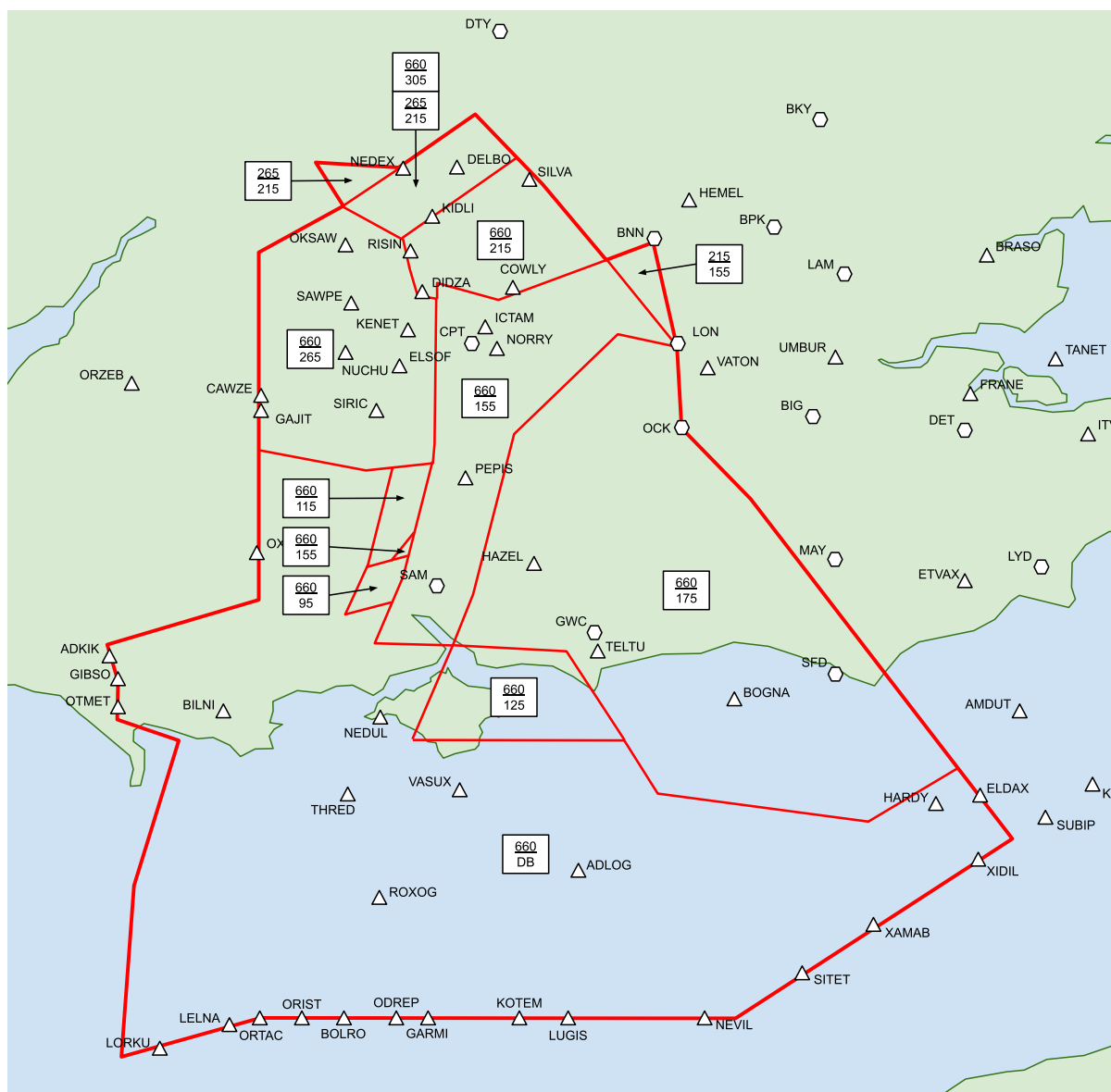
## Chapter 2 South LAG | AC Worthing

### 2.1 Area of Responsibility

AC Worthing (LON\_H\_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 designated 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 South position (LON\_S\_CTR) 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.

## 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   |
|---------------------------------------|--|---|---|---|---|
| <b>Inbounds to:</b><br>- Solent Group | <b>Inbounds to:</b><br>- Heathrow Group<br>- EGKK (RNAV5)<br>- EGLF<br>- Wessex Group<br>- Brize Group | <b>Inbounds to:</b><br>- EGKK only<br>(RNAV1) | <b>Inbounds to:</b><br>- Thames Group<br>- EGMD<br>- MTMA Group<br>- Scottish TMA<br>Group<br>- London FIR<br>Overflights | <b>Inbounds to:</b><br>- Essex Group<br>(RNAV5)<br>- Midlands Group<br>- EGTC | <b>Inbounds to:</b><br>- Essex Group<br>(RNAV1)<br>- 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.<br>(Notes 1, 2, 3 & 4) |
| EGLF, Wessex Group                 | FL270 lvl 10 NM before GIBSO /<br>FL270 lvl 10 NM before OTMET |   |
| Heathrow Group, EGKK, Thames Group | FL270 lvl GIBSO / OTMET  |   |
| Essex Group                        | FL300 lvl GIBSO / OTMET  |   |

| From              | Agreement       | Conditions   |
|-------------------|-----------------|--|
| EGGD, Brize Group | FL180 lvl ELSOF | Not RFT until passing ELSOF. Then released for right turns only.<br>(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/SC),<br>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.

Effective 29 April 2026

### 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 lvi AVANT/TELTU | <b>Not</b> 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 heading, it is released for right turns only within AC Worthing's airspace.

### 2.3.2 LTC Standing Agreements

#### 2.3.2.1 TC NW

##### From TC NW to AC Worthing

| From       | Agreement                  | Conditions       |
|------------|----------------------------|------------------|
| EGSS, EGSC | FL160 lvi 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 lvl HAZEL                      | 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. Not RFC with AC Dover.

#### 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 |

### 2.3.2.4 TC Midlands

#### From TC Midlands to AC Worthing

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

## 2.3.3 External Standing Agreements

### 2.3.3.1 Jersey Control

#### From Jersey Control to AC Worthing

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

#### From AC Worthing to Jersey Control

| From         | To           | Agreement       | Conditions        |
|--------------|--------------|-----------------|-------------------|
| -            | Jersey Group | FL200 lvl LELNA |                   |
| Solent Group | Jersey Group | FL140 lvl ORTAC |                   |
| -            | LFRC         | FL120 lvl LELNA | Intention code JC |

### 2.3.3.2 Brest East Low (FL295-FL345)

#### From AC Worthing to Brest East Low

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

**Note 1:** When Paris TP (PAR) 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.

### 2.3.3.3 Brest J (FL195+)

#### From Brest J 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                   |                     |
| Thames Group, EGMD                              | Maximum FL220 lvl NEVIL                   |                     |
| EGKA  | Maximum FL210 lvl NEVIL                   | RFD to FL200        |
| Solent Group                                    | Maximum FL220 lvl REVTU                   | Via ORIST. (Note 1) |

**Note 1:** This traffic is RFD to FL130 with Brest and Rennes APP after passing REVTU. AC Worthing must coordinate with Jersey ORTAC sector for any descent below FL200 on the flight plan route via REVTU-ORIST-VEXEN. A direct route from REVTU to THRED avoids the requirement for coordination.

### 2.3.3.4 Brest V (FL195+)

#### From AC Worthing to Brest V

| From  | To                    | Agreement     | Conditions   |
|---|-----------------------|---------------|--|
| London TMA (excl. EGSS, EGSC, EGGW, EGLC, EGMC) | -                     | Maximum FL350 | Via LELNA/LORKU. (Notes 1 & 2)                     |
| -   | All                   | Maximum FL310 | Via LELNA-UPALO. Intention code <b>H6</b> (Note 2) |
| -   | LFRR FIR (excl. LFRC) | Maximum FL310 | Intention code <b>H7</b> (Note 2)                  |
| -   | LFRD                  | Maximum FL250 | Via LELNA.   |

**Note 1:** Coordination is not required for LTMA departures via LELNA/LORKU that are climbing up to a maximum level of FL350. Traffic below its RFL is RFC, subject to known traffic. All other departures or traffic cleared to higher levels must be level by LELNA.

**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.

**2.3.3.5 Paris TP (FL115-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,<br>LFLA, LFLX, LFPO, LFPV, LFPN,<br>LFPM, LFJR, LFRM, LFO* (except<br>OE, OH, OP) | Maximum FL270 lvl SITET | Intention code <b>E2</b>  |

**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.

**2.3.3.6 Rennes APP (SITET FL115-; NEVIL FL195-)**

From AC Worthing to Rennes APP

| To                                    | Agreement               | Conditions  |
|---------------------------------------|-------------------------|---|
| LFRG, LFRK, LFOH, LFOE                | Maximum FL110 lvl SITET | Intention Code <b>E3</b> .<br>Streamed 15 NM in trail |
| EGJJ, EGJA, EGJB, LFRK, LFRD,<br>LFRK | Maximum FL180 lvl NEVIL | Streamed 15 NM in trail                               |

**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 transferred from AC Worthing to AC 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, subject to known traffic.

**2.4.2 Paris, Brest and Rennes ACCs**

The French ACCs Paris, Brest and Rennes border London AC Worthing. Between SITET and XAMAB, Rennes extends up to FL115, Paris from FL115 to FL265, and Brest FL295 and above. West of and including NEVIL, the division between Brest and Rennes is at FL195.

**2.4.2.1 Sectorisation**

**2.4.2.1.1 Paris ACC**

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

**Paris TP (FL115-FL295) Sector**

|                              |                                |                                |                                |                               |                           |
|------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------|
| <b>PAR_TP_CTR</b><br>128.875 | <b>PAR_HPKZ_CTR</b><br>129.005 | <b>PAR_OPKZ_CTR</b><br>127.305 | <b>PAR_RPAW_CTR</b><br>133.925 | <b>PAR_LOW_CTR</b><br>135.410 | <b>PAR_CTR</b><br>128.275 |
|------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------|

**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-FL345)**

|                              |                            |                           |
|------------------------------|----------------------------|---------------------------|
| <b>LFRR_E_CTR</b><br>136.000 | <b>LFRR_CTR</b><br>125.500 | <b>PAR_CTR</b><br>128.275 |
|------------------------------|----------------------------|---------------------------|

**Brest East High (FL345+)**

|                               |                       |
|-------------------------------|-----------------------|
| <b>LFRR_UE_CTR</b><br>130.235 | <b>Brest East Low</b> |
|-------------------------------|-----------------------|

**Brest V (FL195+)**

|                              |                               |                              |                            |
|------------------------------|-------------------------------|------------------------------|----------------------------|
| <b>LFRR_V_CTR</b><br>118.865 | <b>LFRR_VK_CTR</b><br>124.775 | <b>LFRR_W_CTR</b><br>129.505 | <b>LFRR_CTR</b><br>125.500 |
|------------------------------|-------------------------------|------------------------------|----------------------------|

**Brest J (FL195+)**

|                              |                              |                            |
|------------------------------|------------------------------|----------------------------|
| <b>LFRR_J_CTR</b><br>127.385 | <b>LFRR_W_CTR</b><br>129.505 | <b>LFRR_CTR</b><br>125.500 |
|------------------------------|------------------------------|----------------------------|

**2.4.2.1.3 Rennes APP**

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

**Rennes APP Cotentin (SFC-FL195)**

|                              |                     |
|------------------------------|---------------------|
| <b>LFRN_C_APP</b><br>134.200 | <b>Rennes North</b> |
|------------------------------|---------------------|

**Rennes North [SITET only] (SFC-FL115)**

|                              |                            |                              |                            |
|------------------------------|----------------------------|------------------------------|----------------------------|
| <b>LFRN_N_APP</b><br>126.950 | <b>LFRN_APP</b><br>134.000 | <b>LFRR_W_CTR</b><br>129.505 | <b>LFRR_CTR</b><br>125.500 |
|------------------------------|----------------------------|------------------------------|----------------------------|

**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 transfer of traffic on headings requires coordination prior to transfer of communication.

**2.4.2.3.1 From Brest ACC to London ACC**

| Coordination Point | Transfer of Control | Transfer of Communications |
|--------------------|---------------------|----------------------------|
| <b>NEVIL</b>       | NEVIL               | At or before ANGLO         |
| <b>DIKRO</b>       | KOTEM               | At or before DIKRO         |
| <b>AKIKI</b>       | GARMI               | At or before AKIKI         |
| <b>REVTU</b>       | 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 non-LTMA departures with RFL310+ are 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, known as the DIKRO Box. Within the DIKRO Box, traffic transferred from Brest Sectors to London AC Worthing cleared to FL240 or above is RFC to any level or RFD to FL250. All northbound traffic is released for turn (up to 45°), remaining within the confines of the DIKRO Box.

*(Figures on next page)*



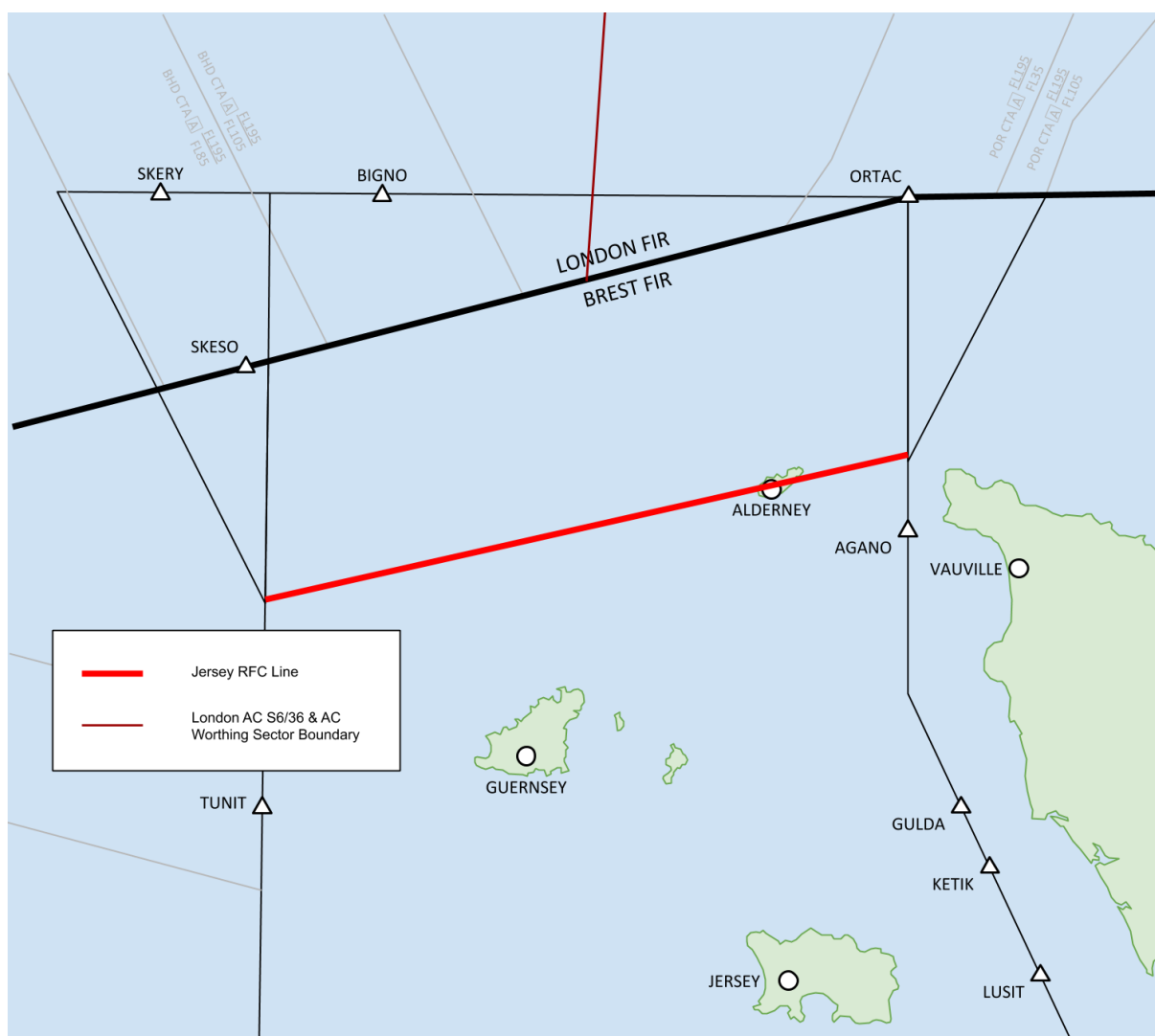
**2.4.2.10 Jersey RFC Line**

The Jersey RFC Line, as shown in red in Figure LAC-5 below, has been defined to reduce coordination with Brest for climbing northbound traffic.

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 REVТУ.

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.

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

### BILNI Hold

For Aircraft inbound to London Heathrow via OCK, London Gatwick via WILLO and Northolt traffic via OTMET/GIBSO above FL200.

|                       |                            |
|-----------------------|----------------------------|
| <b>BILNI</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 106°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | FL200 – FL300              |
| <b>Speed</b>          | 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.

|                       |                            |
|-----------------------|----------------------------|
| <b>DOMUT</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 039°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | FL230+                     |
| <b>Speed</b>          | 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.

|                       |                            |
|-----------------------|----------------------------|
| <b>GOKTU</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 017°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | FL200 – FL300              |
| <b>Speed</b>          | 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.

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

## SAM Hold

|                       |                          |
|-----------------------|--------------------------|
| <b>SAM</b>            | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 029°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | 2000 ft – FL100          |
| <b>Speed</b>          | 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.

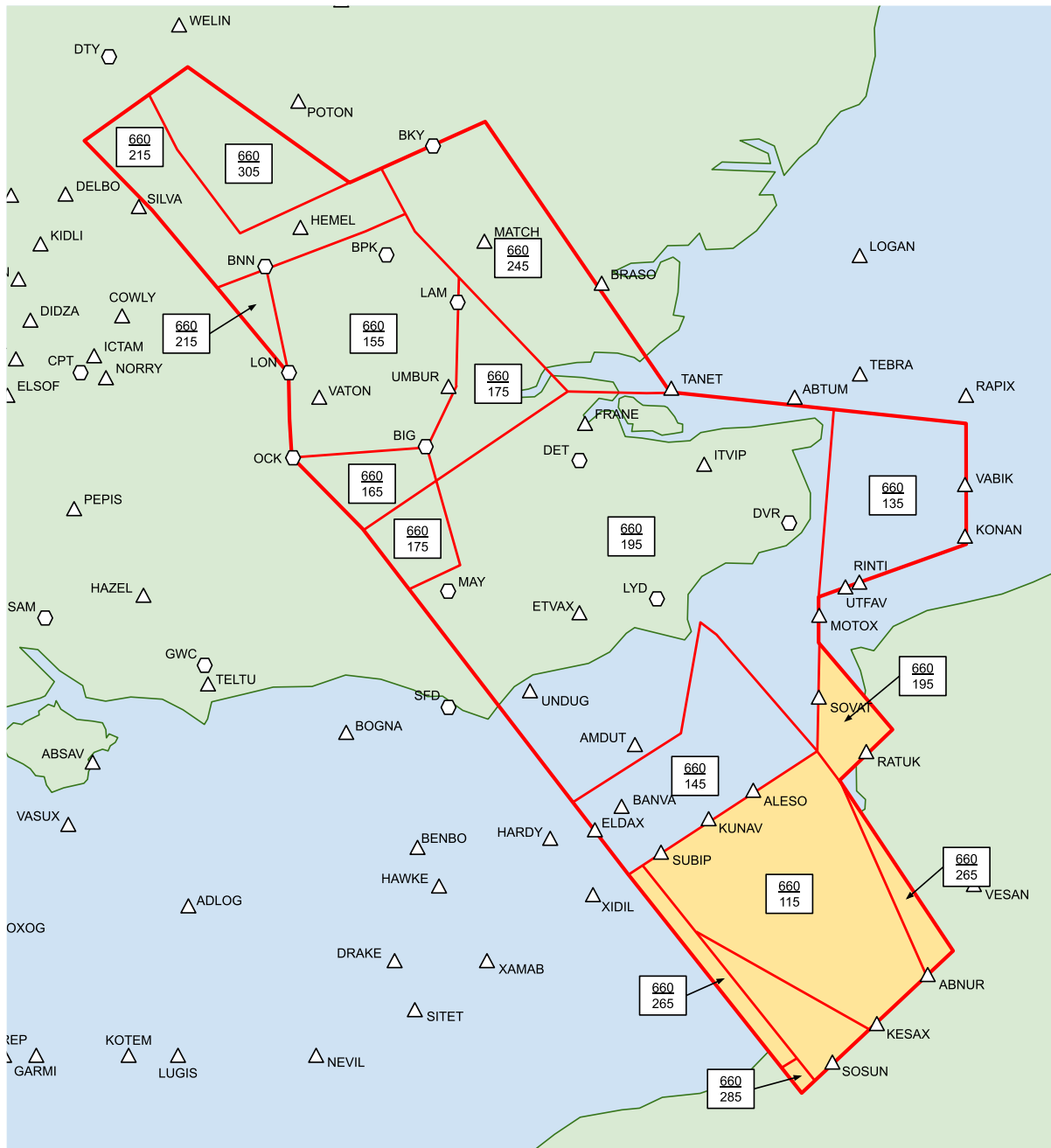
### Chapter 3 South LAG | AC Dover

#### 3.1 Area of Responsibility

AC Dover (LON\_D\_CTR) is one of the AC South group sectors, covering the area over east Sussex and Kent, as well as the English Channel. It extends from the top of the TC SE sector up to FL660 and above the TC NE, TC Midlands, and TC East sectors to FL660 at its northern edges.

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

Figure LAC-6 – London AC Dover Area of Responsibility



##### 3.1.1 Sector Frequency

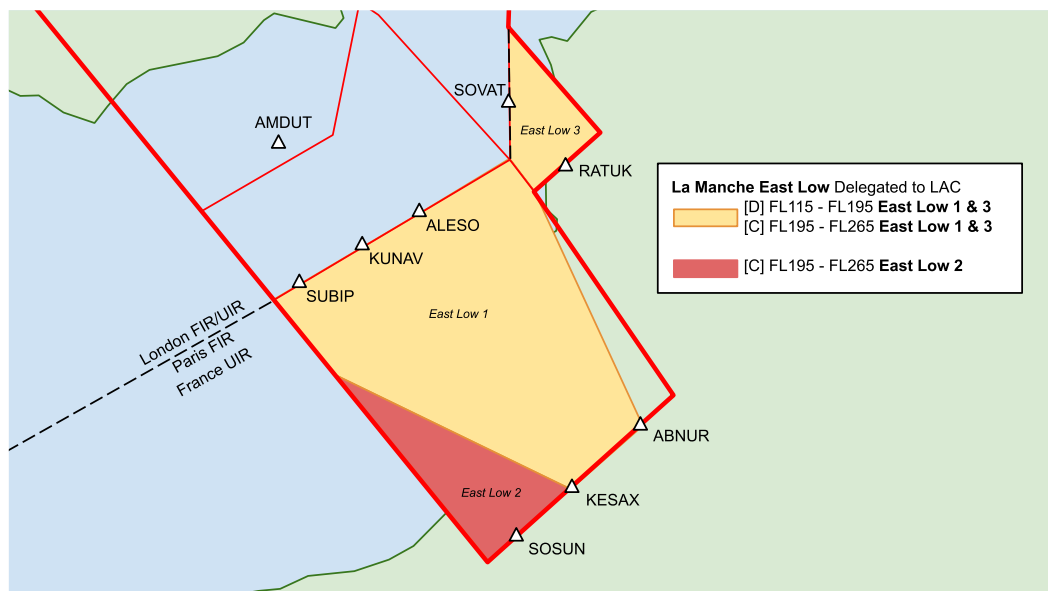
AC Dover operates on frequency 134.905

### 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.

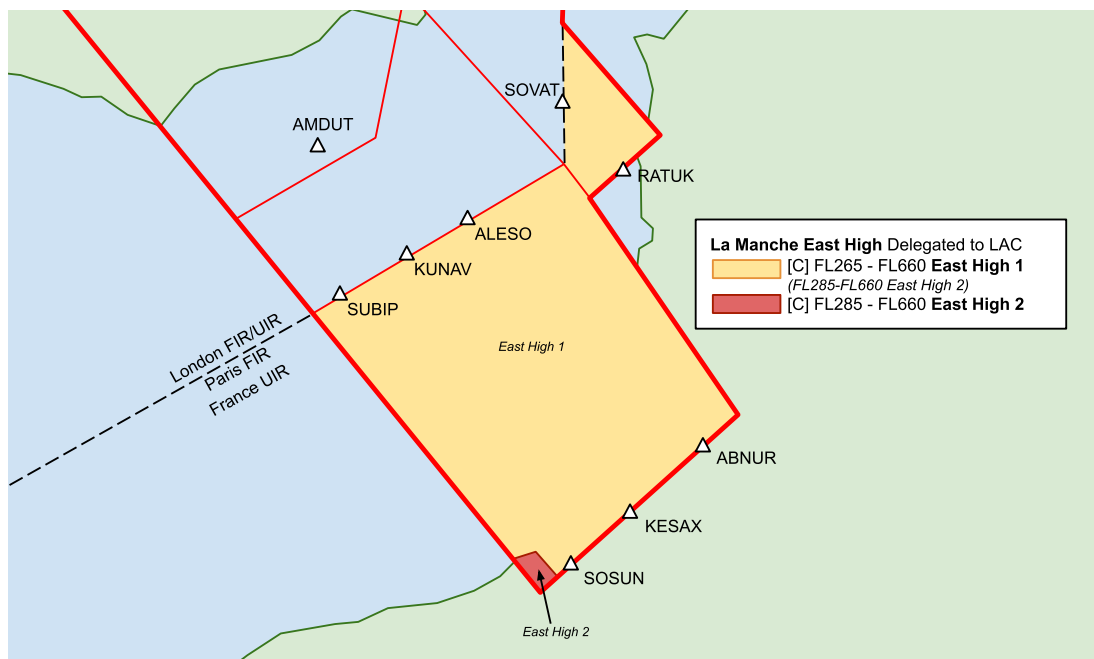
Figure LAC-7 – La Manche East Low Delegated Airspace



#### 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 | <b>Not</b> 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 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.<br>(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 when AC Dover and AC Worthing are banded. When AC Dover is split from AC Worthing, traffic is **not** RFT.

## 3.3.2 LTC Standing Agreements

### 3.3.2.1 TC NE

#### From AC Dover to TC NE

| To          | Agreement | Conditions  |
|-------------|-----------|---|
| Essex Group | ↓ FL160   | <b>Not</b> 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 | Via LAM. 'Skipped' by TC NE (Notes 1 & 2) |
| Heathrow Group, EGKK | ↑ FL180                   | Via DVR/WIZAD (Note 3)                    |
| Thames Group         | ↑ FL170                   | Via DVR                                   |
| EGSS                 | ↑ FL180                   | <b>Night Only</b> , Via DVR               |

**Note 1:** To be positioned on a 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 by TC SE with both TC NE and AC Dover.

**Note 2:** This traffic is RFC and RFT in TC NE airspace and must cross the northern edge of the London CTR at or above FL155 to leave TC NE airspace. AC Dover must coordinate with TC NE if this cannot be achieved.

**Note 3:** This traffic shall be step climbed if required to ensure 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 |            |
| EBOS, EBKT, EBFN | ↓ FL190         |            |

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

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**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 ELDA                                 | (See Note) |
| Solent Group                     | FL160 lvl 5 NM before OCK                                  |            |
| EGTK                             | FL160 lvl 35 NM before CPT /<br>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 TN (FL115-FL265)

##### From Paris TN to AC Dover

| To                               | Agreement   | Condition |
|----------------------------------|---|-----------|
| Heathrow Group                   | Westbound levels FL200-<br>All levels FL210 – FL260 | Via ALESO |
| EGKA                             | FL200 or below lvl KESAX                            |           |
| EGKK, Essex Group                | All levels FL210 – FL260                            | Via KESAX |
| Solent Group, EGLF, Wessex Group | FL260 or below lvl KESAX                            |           |

| From                         | Agreement     | Condition                  |
|------------------------------|---------------|----------------------------|
| LFPG, LFPB, LFPT, LFOB, LFOP | Maximum FL260 | Via RATUK (Notes 1, 2 & 3) |
| LFPG, LFPB, LFPT, LFOB, LFOP | Maximum FL260 | Via KESAX (Note 2)         |

**Note 1:** This traffic is RFT upon transfer of communication and RFC with both Paris and Reims on passing (abeam) VESAN.

**Note 2:** Traffic may be presented in the climb to the NFL.

**Note 3:** Fast climbing Paris TMA departures may be transferred from Paris to Reims ACC, who shall then coordinate the aircraft individually with London if not at its RFL by RATUK.

#### 3.3.3.2 Reims UN/UB/HN (FL265+)

##### From AC Dover to Reims UB (FL195-FL345) or Reims HN (FL345+)

| From | Agreement                      | Condition                  |
|------|--------------------------------|----------------------------|
| EGKK | FL310                          | Via UTFAV (Notes 1, 2 & 3) |
| EGGW | Eastbound levels FL310 – FL350 | Via UTFAV (Notes 1 & 2)    |

**Note 1:** Traffic may be presented in the climb to the XFL.

**Note 2:** Traffic is to be presented on track to UTFAV/RUCAC and is RFC passing 5 NM after UTFAV and RFT after passing RUCAC.

**Note 3:** FL290 and FL270 may also be used if FL310 is unavailable.

##### From Reims UN (FL265-FL345) & HN (FL345+) to AC Dover

| To                               | Agreement                                    | Condition |
|----------------------------------|--|-----------|
| Essex Group                      | All levels FL270+                            | Via SOSUN |
| EGKK                             | All levels FL270+<br>Maximum FL350 lvl KESAX |           |
| Heathrow Group                   | All levels FL270+                            | Via ABNUR |
| Solent Group, EGLF, Wessex Group | FL280 or FL270 lvl SOSUN                     |           |

### 3.3.3.3 Brussels West Low (FL245-)

#### From AC Dover to Brussels West Low

| To   | Agreement                | Condition  |
|--|--------------------------|------------|
| Brussels Group, EBLG, EH**,<br>LFOK, LFPB, LFPC, LFPG, LFPN,<br>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.

### 3.3.3.4 Maastricht UAC – KOKSY (FL245+)

#### From AC Dover to Maastricht UAC Koksy

| From  | Agreement  | Condition   |
|---|--|-------------|
| London Group, EGLF, Wessex<br>Group, Solent Group | ↑ any level between FL250 –<br>FL290             | (Notes 1-3) |
|   | <b>OR</b><br><br>FL310 or FL330 or FL350 lvl KOK |             |

**Note 1:** Traffic shall be positioned through the KOKSY Gate (see LAC 3.4.4.7).

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

**Note 3:** Departures from other UK airfields and all traffic cleared to FL370 or above must be level by 10 NM east of DVR unless otherwise coordinated.

### 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 AC Daventry is released for descent within the confines of Dover, subject to known traffic. Known traffic to Daventry 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.

#### 3.4.2 Coordination with TC Midlands

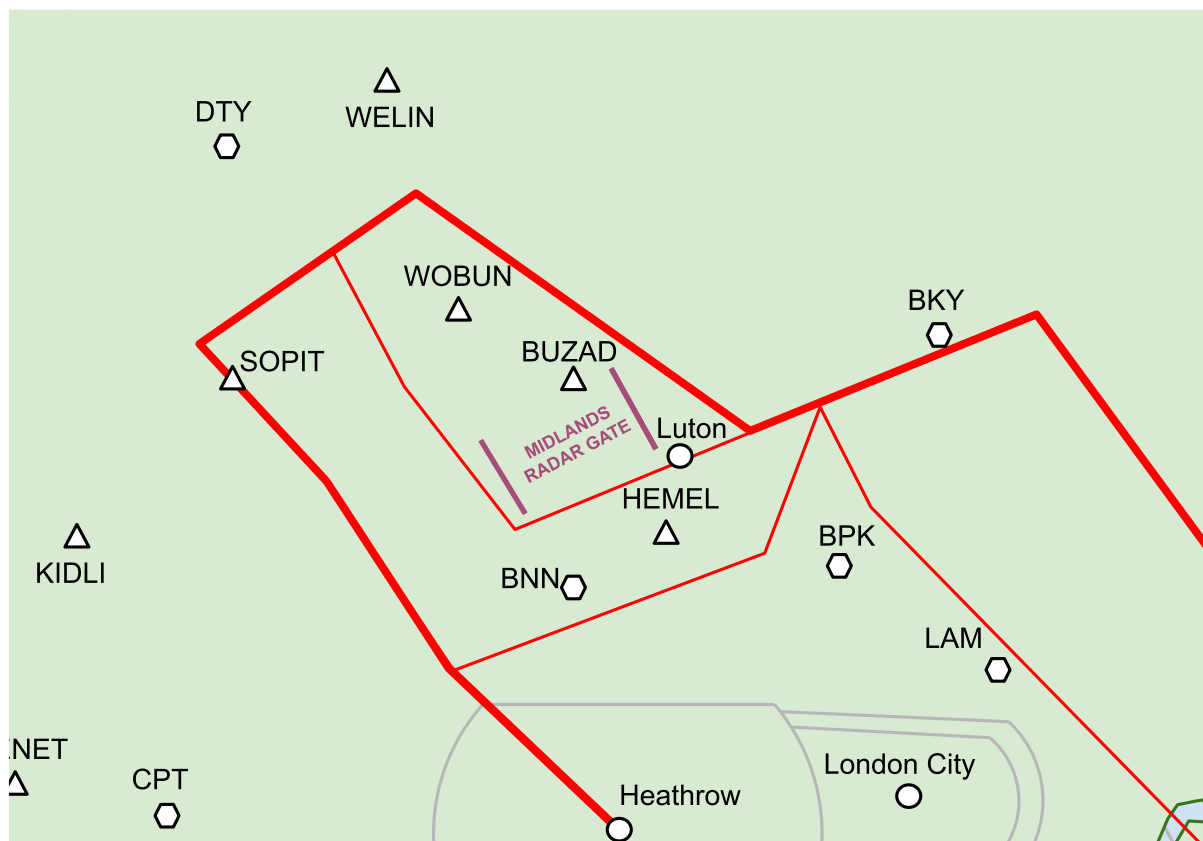
##### 3.4.2.1 Midlands Radar Gate

The Midlands Radar Gate is 9 NM wide, aligned parallel to ATS route T420.

AC Dover shall position arrivals to the Midlands Group airports through the Midlands Radar Gate on own navigation or a heading (see *Note*). Traffic to EGNX should be positioned east of traffic to EGBB.

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

Figure LAC-9 – Midlands Radar Gate



### 3.4.3 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.

#### 3.4.3.1 Sectorisation

The coverage priority (left to right) for Brussels West Low (FL65-FL245) at the interface with London ACC is as follows:

|                              |                                |                              |                              |                              |
|------------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|
| <b>EBBU_W_CTR</b><br>131.100 | <b>EBBU_LOW_CTR</b><br>126.980 | <b>EBBU_N_CTR</b><br>128.805 | <b>EBBU_C_CTR</b><br>127.230 | <b>EBBU_E_CTR</b><br>129.575 |
|------------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|

#### 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 |
|----------|--------------------|---------------------|----------------------------|
| L9 / Q70 | VABIK / KONAN      | VABIK / KONAN       | VABIK / KONAN              |

##### 3.4.3.3.2 Traffic Entering London

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

#### 3.4.3.4 Level Planning

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

#### 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.

#### 3.4.3.7 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 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.

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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.

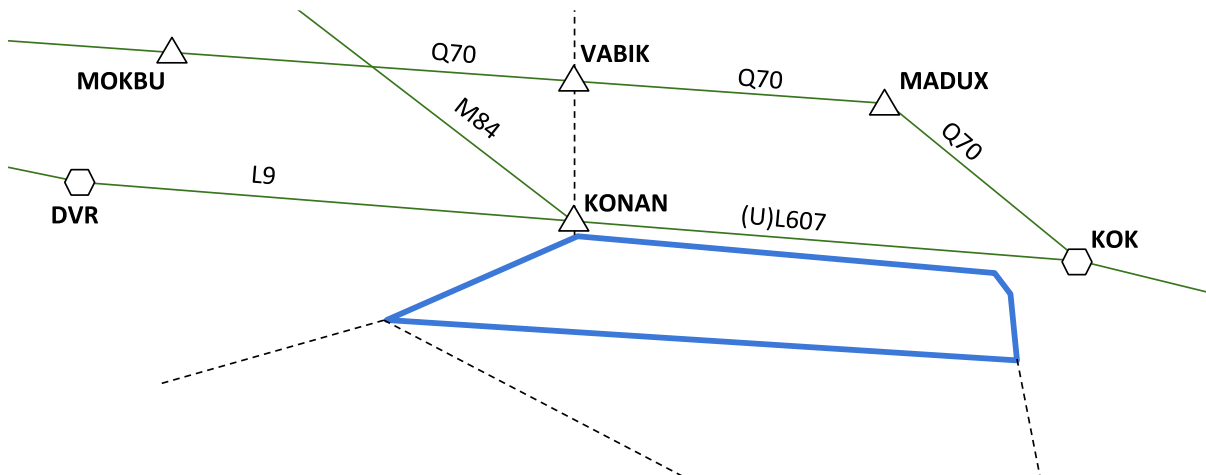
UL610: Neither Maastricht UAC (KOKSY) nor AC Clacton shall vector westbound traffic to enter the KOKSY Buffer Zone unless otherwise coordinated with Maastricht UAC (KOKSY) or AC Dover, as appropriate. The same condition applies for eastbound flights by AC Dover and Maastricht UAC (KOKSY), who shall ensure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

**3.4.4 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.

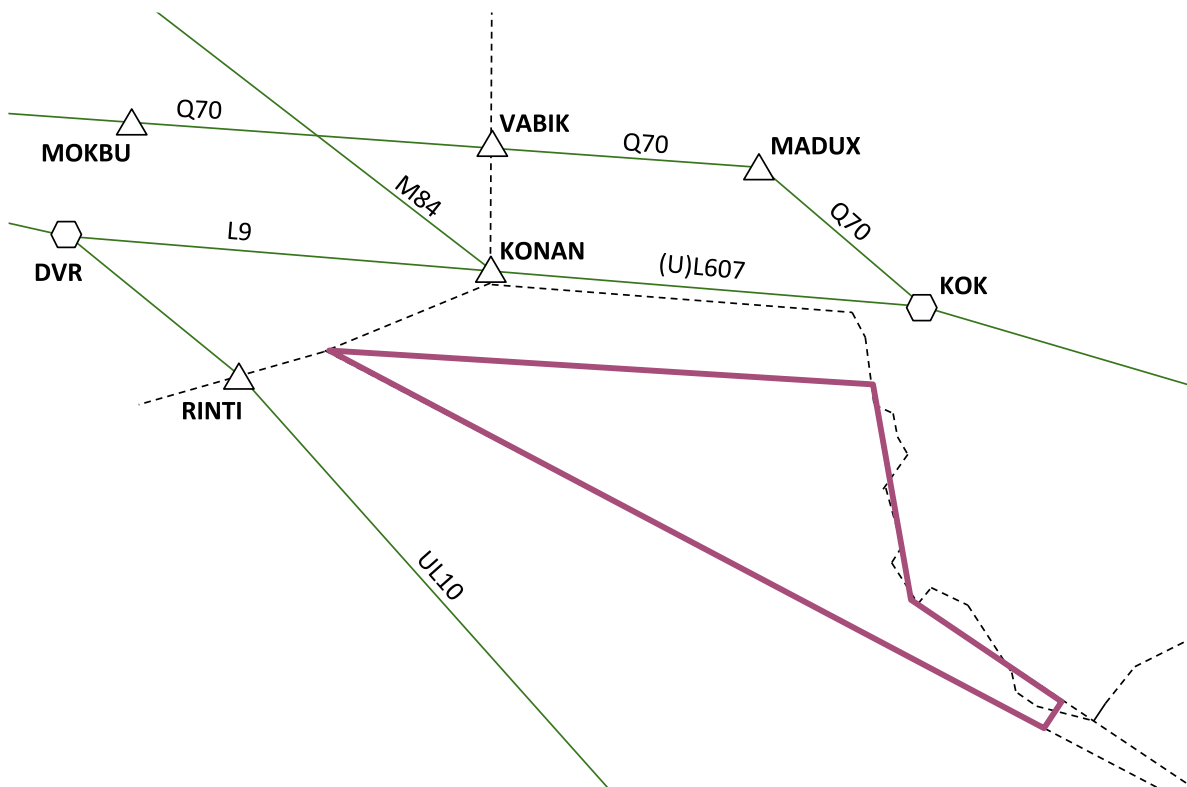
Between the London FIR boundary and KOK, up to 5 NM south of the centreline of ATS Route L607 (and as shown in Figure LAC-10), within the France UIR the provision of ATS is performed by Maastricht UAC (KOKSY) above FL245.

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) above FL245.

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



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

### 3.4.4.1 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<br>132.205 | EDYY_N_CTR<br>135.980 | EBBU_U_CTR<br>125.980 | EBBU_W_CTR<br>131.100 |
|-----------------------|-----------------------|-----------------------|-----------------------|

### 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

#### 3.4.4.3.1 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 |

#### 3.4.4.3.2 Traffic Entering London

N/A

### 3.4.4.4 Level Planning

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

### 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 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.

#### 3.4.4.6.1 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 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.

### 3.4.4.7 KOKSY Buffer Zone and KOKSY Gate

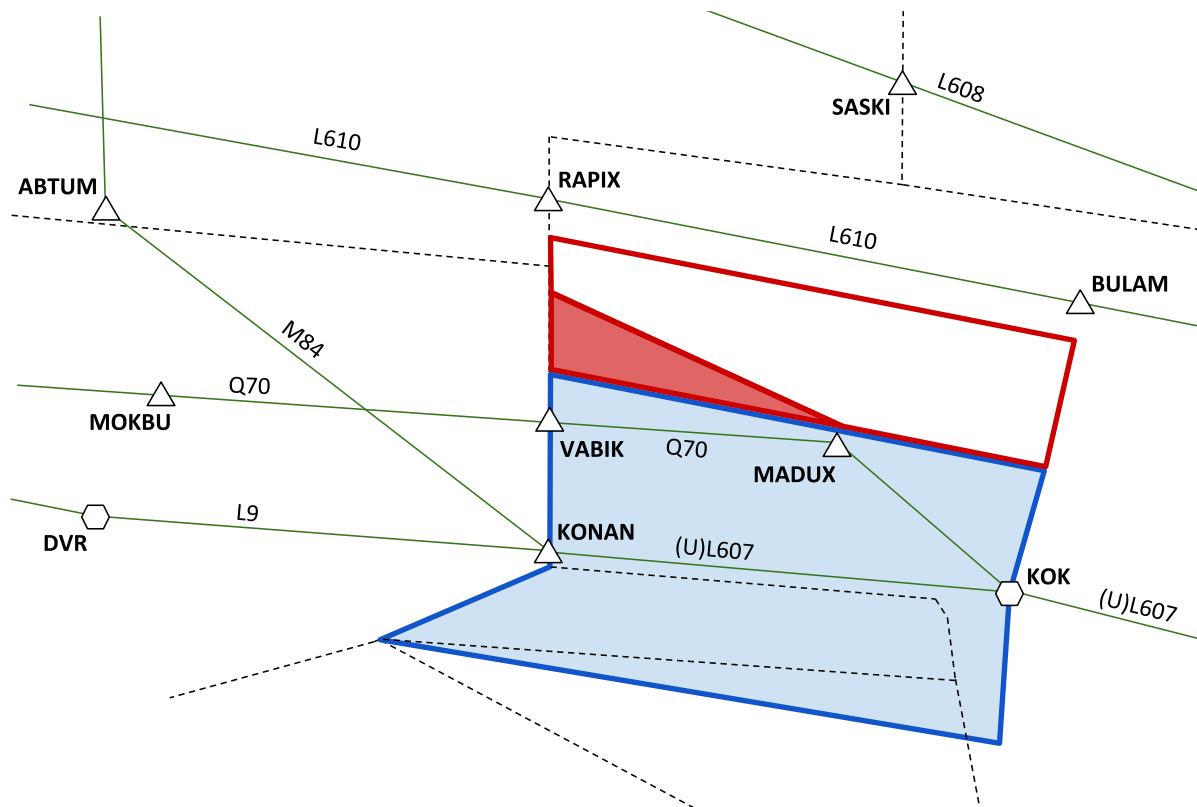
The **KOKSY Buffer Zone** (Red outlined area in Figure LAC-12) is established at all levels, except in the red shaded area where it is FL245+, to ensure separation between westbound traffic on the L610 and eastbound traffic on the Q70/(U)L607. Any breaches of the Buffer Zone shall be coordinated with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

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Traffic transferred from London AC Dover to Maastricht UAC (KOKSY) either on own navigation, or on 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

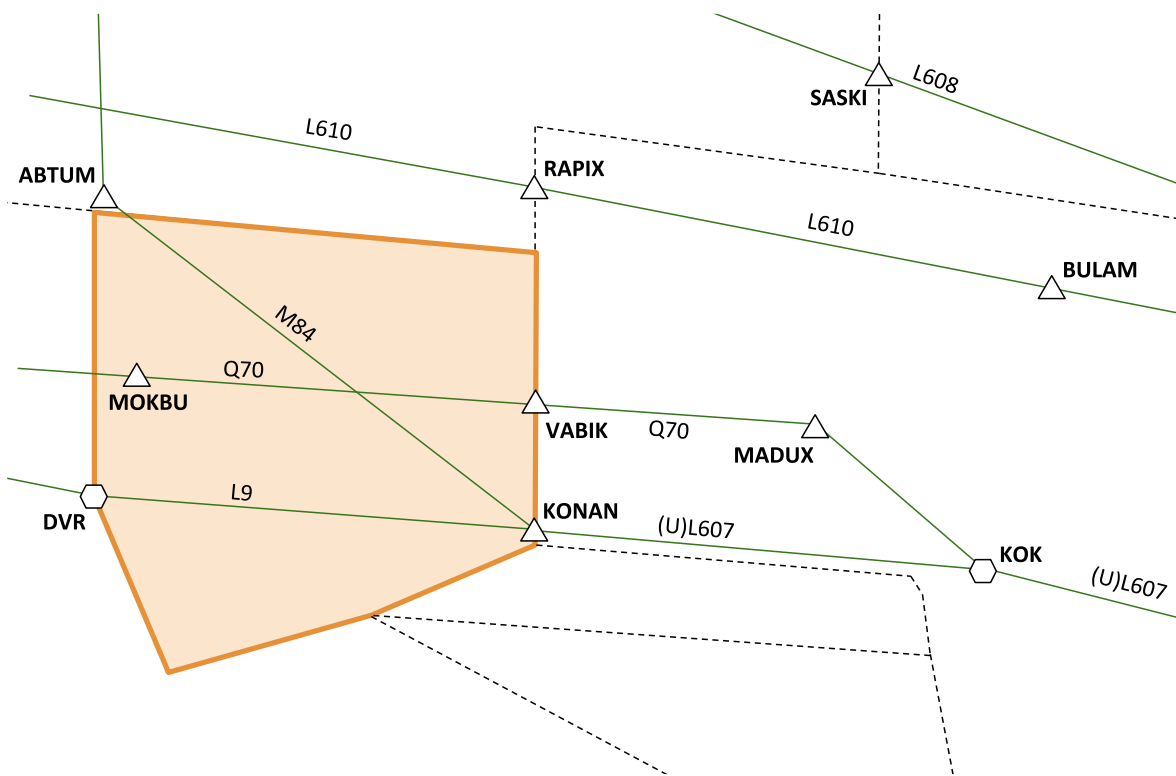


**3.4.4.8 Dover RFC Area**

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 10 NM east of DVR. If the traffic is not level, it must be co-ordinated with Maastricht UAC (KOKSY). All traffic meeting the level by restriction is considered known to Maastricht UAC (KOKSY).

Figure LAC-13 – DVR RFC Area



### 3.4.5 Paris & Reims ACCs

The French ACCs Paris and Reims both border London AC Dover. The division of airspace between the two is at FL265. A major portion of airspace is delegated from Paris & Reims 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 3.4.4.

#### 3.4.5.1 Sectorisation

##### 3.4.5.1.1 Paris ACC

The coverage priority (left to right) for Paris ACC (FL115-265) at the interface with London ACC is as follows:

##### Paris TN (FL115-FL265) [SOSUN / KESAX / ABNUR / RATUK / DEVAL / IRKUN]

|                              |                    |
|------------------------------|--------------------|
| <b>PAR_TN_CTR</b><br>135.550 | <b>Paris TN+TB</b> |
|------------------------------|--------------------|

##### Paris TB (FL115-FL265) [RINTI]

|                              |                    |
|------------------------------|--------------------|
| <b>PAR_TB_CTR</b><br>128.275 | <b>Paris TN+TB</b> |
|------------------------------|--------------------|

##### Paris TN+TB Combined

|                                |                                |                                |                               |                           |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------|
| <b>PAR_TNTB_CTR</b><br>135.660 | <b>PAR_AENB_CTR</b><br>135.580 | <b>PAR_RPAW_CTR</b><br>133.925 | <b>PAR_LOW_CTR</b><br>135.410 | <b>PAR_CTR</b><br>128.275 |
|--------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------|

##### Lille APP (FL115-)

Below FL115, Lille APP provides coverage at the interface with AC Dover:

|                            |                 |
|----------------------------|-----------------|
| <b>LFQQ_APP</b><br>126.480 | <b>Paris TB</b> |
|----------------------------|-----------------|

##### 3.4.5.1.2 Delegation of Airspace from Paris to Reims

An area south of the UTFAV is delegated from Paris TB to Reims UB from FL195-FL265 for the purpose of climbing outbounds. EGKK and EGGW departures via UTFAV shall be transferred directly to Reims.

##### 3.4.5.1.3 Reims ACC

The coverage priority (left to right) for the Reims ACC (FL265+) sector at the interface with London ACC is as follows:

##### Reims North (UN+UB+HN Combined) [All COPs]

|                              |                            |                           |
|------------------------------|----------------------------|---------------------------|
| <b>LFEE_N_CTR</b><br>127.555 | <b>LFEE_CTR</b><br>133.005 | <b>PAR_CTR</b><br>128.275 |
|------------------------------|----------------------------|---------------------------|

##### Reims UN (FL265-FL345) [SOSUN / KESAX / ABNUR / RATUK]

|                               |                    |
|-------------------------------|--------------------|
| <b>LFEE_UN_CTR</b><br>133.255 | <b>Reims North</b> |
|-------------------------------|--------------------|

**Reims UB (FL265-FL345) [MOTOX / UTFAV]**

|                        |             |
|------------------------|-------------|
| LFEE_UB_CTR<br>133.010 | Reims North |
|------------------------|-------------|

**Reims HN (FL345+) [All COPs]**

|                        |             |
|------------------------|-------------|
| LFEE_HN_CTR<br>132.505 | Reims North |
|------------------------|-------------|

**3.4.5.2 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.

**3.4.5.3 Transfer of Control and Communication**

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

Unless otherwise specified in the tables below, transfer of communication shall occur at or before the relevant COP on the AoR boundary. The transfer of traffic on headings requires coordination prior to transfer of communication.

**3.4.5.3.1 From London ACC to Reims ACC**

| Coordination Point | Transfer of Control | Transfer of Communications |
|--------------------|---------------------|----------------------------|
| UTFAV              | RUCAC               | At or before RUCAC         |
| MOTOX              | RUCAC               | At or before RUCAC         |

**3.4.5.3.2 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         |
| ABNUR              | ABNUR (Note 2)      | At or before ABNUR         |

**Note 1:** All traffic transferred from Reims ACC to London ACC is RFT when abeam NITAR, subject to known traffic. This is in addition to the release procedures specified in 3.4.4.8 below.

**Note 2:** Traffic via ABNUR is RFD within the offering Reims sector within 10 NM of ABNUR, subject to known traffic.

**3.4.5.4 Level Planning**

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

**3.4.5.5 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.

**3.4.5.6 Separation between ATS Routes**

Northbound traffic via SOSUN, KESAX and ABNUR are deemed laterally separated at the AoR boundary.

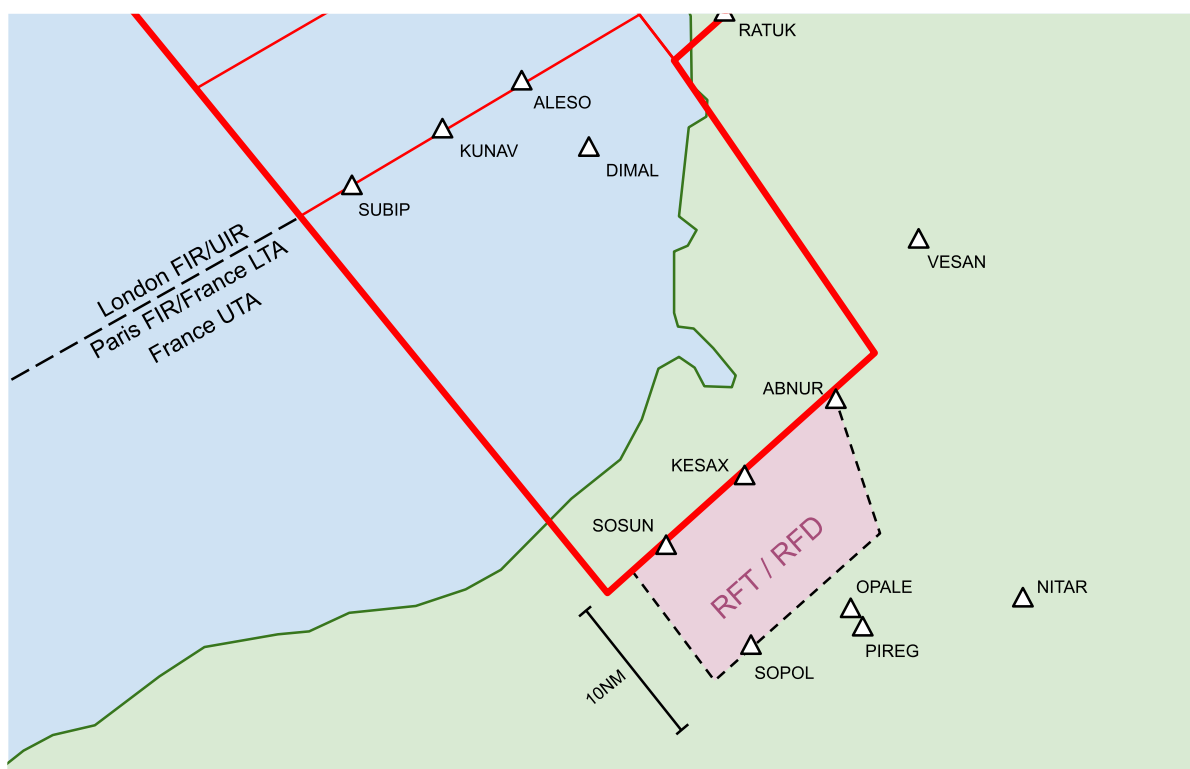
**3.4.5.7 Silent Handover (Silent Transfer of Radar Control)**

The conditions for Silent Handover are as per GEN 5.6.2.

**3.4.5.8 Reims ACC Release Area**

Traffic transferred from Reims ACC to London AC Dover is released for turns and descent within all Reims sectors (lowest FL265) when inside the RFT/RFD Box, as shown in Figure LAC-14. This is in addition to the release procedures in LAC 3.4.4.3.2 Notes 1 & 2 above.

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.

|                       |                              |
|-----------------------|------------------------------|
| <b>TIGER</b>          | RNAV Hold, 1.5-minute legs   |
| <b>Axis</b>           | 315°                         |
| <b>Direction</b>      | RIGHT hand                   |
| <b>Holding Levels</b> | FL150 – FL240                |
| <b>Speed</b>          | 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.

|                       |                          |
|-----------------------|--------------------------|
| <b>AMDUT</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 312°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL160 – FL190            |
| <b>Speed</b>          | 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.

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

#### VATON Hold

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

|                       |                            |
|-----------------------|----------------------------|
| <b>VATON</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 025°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | FL180 – FL200              |
| <b>Speed</b>          | 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.

#### 4.1.2 Delegated Airspace

There is no delegated airspace in the AC Daventry sector.

4.2 General Operating Procedures

4.2.1 Route Restrictions

4.2.1.1 Flight Level Capping

| Routing                     | FL Capping       |
|-----------------------------|------------------|
| MTMA/Midlands Group to LTMA | FL190 (See Note) |
| LTMA (except EGKK) to MTMA  | FL180 (See Note) |
| EGKK, EGKB to MTMA          | FL260            |

**Note:** This level cap ensures traffic will remain below AC Daventry and within the TC Midlands sector.

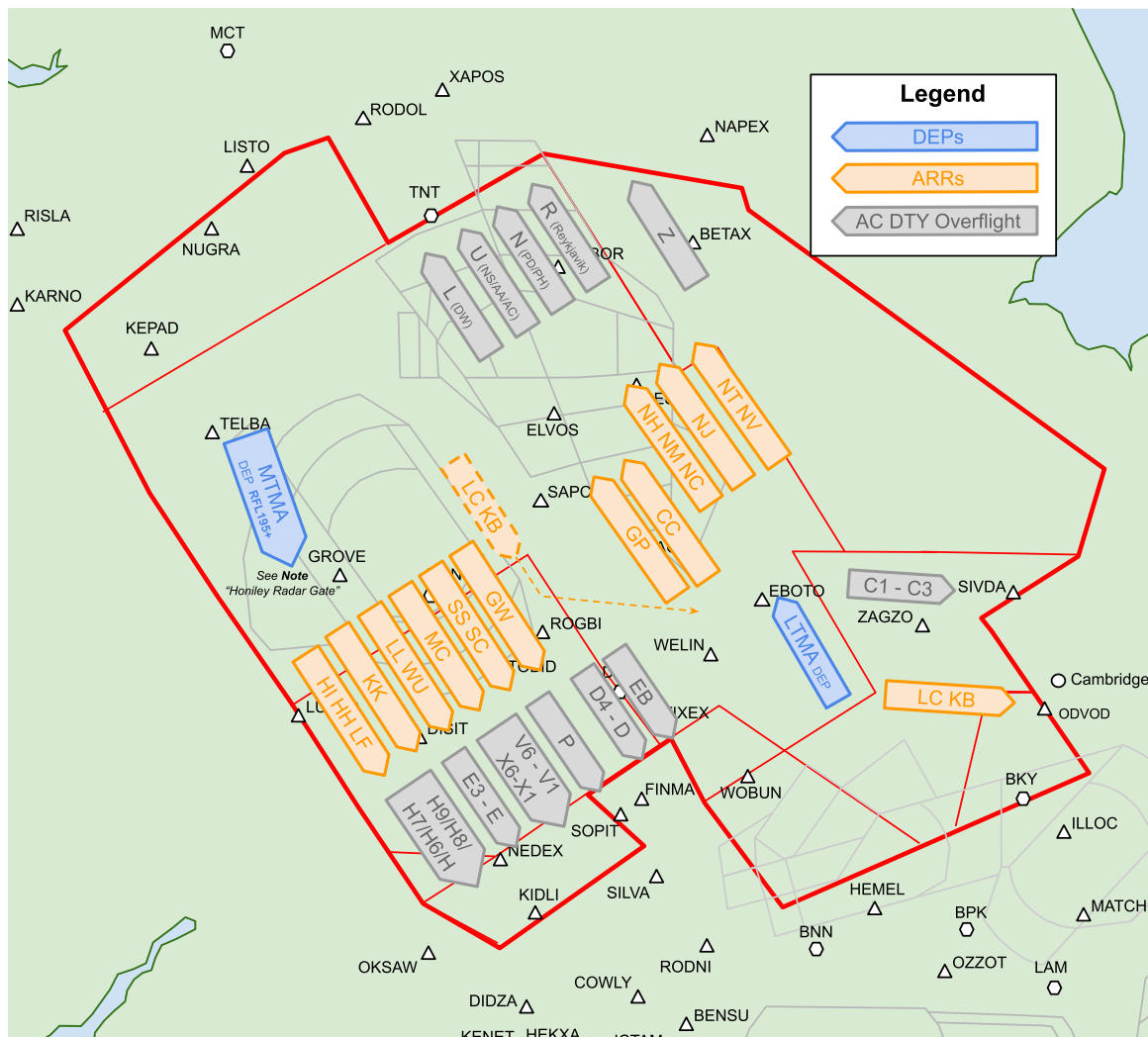
4.2.2 Initial Route Clearance

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

4.2.3 Traffic Positioning in the Daventry Corridor

AC Daventry shall endeavour to position traffic to adjacent sectors in accordance with the figure below.

Figure LAC-16 – Traffic Positioning in the Daventry Corridor



### 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 lvl PEPUL |            |
| EGKK                             | FL200 lvl DISIT |            |
| EGLL, EGWU                       | FL200 lvl TOBID |            |
| Essex Group, EGMC                | FL200 lvl ROGBI |            |

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 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 lvl 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 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 <b>and</b> EGNV | FL280 lvl BETAX / 25 NM before MAMUL | May be offered to Lakes during quieter periods. (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 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

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

##### LTMA Inbounds

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

##### 4.4.1.2 Northbound Traffic

All traffic coordinated by AC Daventry with AC Lakes at levels at or above FL290 must be level by the sector boundary is released for climb if below its RFL.

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 AC Daventry is released for descent within the confines of Dover, subject to known traffic. Known traffic 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 AC 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, 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/JJ, 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 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/JJ, 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



## 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.

|                       |                            |
|-----------------------|----------------------------|
| <b>DELBO</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 153°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | FL150 – FL200              |
| <b>Speed</b>          | 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

|                       |                            |
|-----------------------|----------------------------|
| <b>HON</b>            | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 144°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | FL150 – FL350              |
| <b>Speed</b>          | 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.

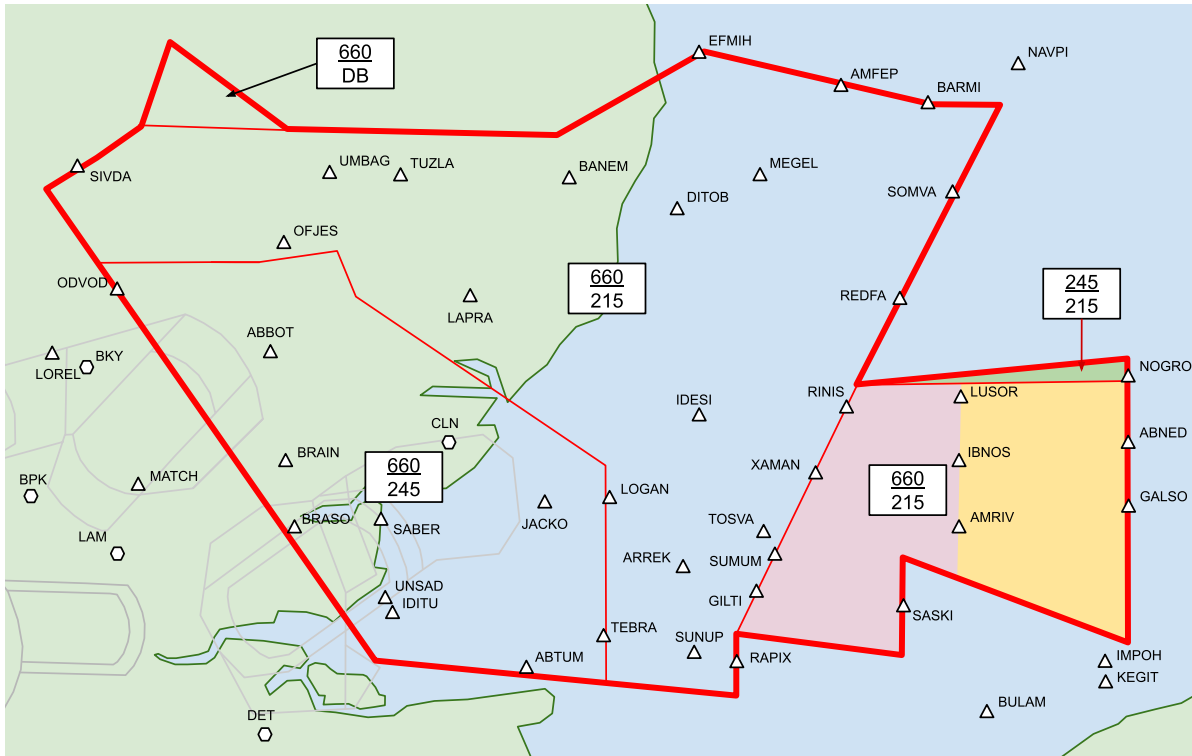
## Chapter 5 Central LAG | AC Clacton

### 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



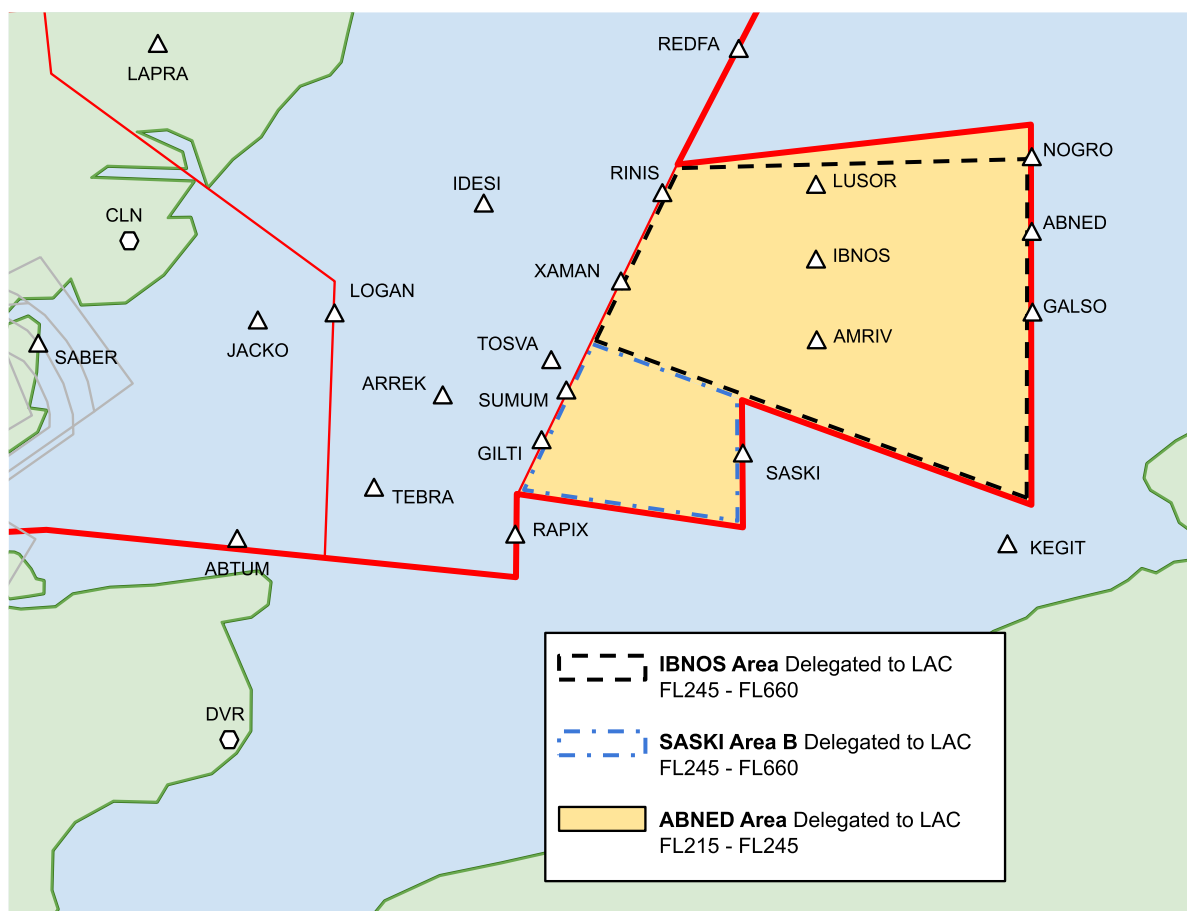
#### 5.1.1 Sector Frequency

AC Clacton operates on frequency 118.480.

### 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 lvl LIVSU / TUGPO / UNSAD         |            |
| Severn Group         | FL300 lvl LIVSU / TUGPO / UNSAD / IDITU |            |

##### 5.3.1.2 AC North Sea

###### From AC North Sea to AC Clacton

| To   | Agreement        | Conditions  |
|--|------------------|---|
| Essex Group  | FL260 lvl AMFEP  | (See Note)  |
| Heathrow Group, Solent Group, EGLF, Wessex Group, EGVN, EGTK | FL300 lvl BARM I | Traffic is <b>not</b> RFT/RFD within AC North Sea |
| EGKK   | FL260 lvl BARM I | 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 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                                      |                   |
| Brize Group, EGTK, Solent Group, EGLF, Wessex Group                 | FL250 lvl TEBRA                                      |                   |
| EGKK  | FL220 lvl ODROB                                      | Via P7            |
| EGKK  | FL220 lvl 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;<br>All levels FL290-FL390 | Includes opposite direction levels<br>(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 North Low (FL245-)**

**From Brussels North Low 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 EFMIH

All LTMA Group departures via EFMIH (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:

|                              |                                |                                |                              |                              |
|------------------------------|--------------------------------|--------------------------------|------------------------------|------------------------------|
| <b>EHAA_W_CTR</b><br>123.705 | <b>EHAA_LOW_CTR</b><br>125.750 | <b>EHAA_ALL_CTR</b><br>134.375 | <b>EHAA_S_CTR</b><br>123.850 | <b>EHAA_E_CTR</b><br>124.880 |
|------------------------------|--------------------------------|--------------------------------|------------------------------|------------------------------|

#### 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 |
|----------------------------------|--------------------|---------------------|----------------------------|
| <b>L620 / M183 / M197 / P137</b> | REDFA              | REDFA               | At or before REDFA         |

#### 5.4.2.3.2 Traffic Entering London

| Route                          | Coordination Point    | Transfer of Control | Transfer of Communications |
|--------------------------------|-----------------------|---------------------|----------------------------|
| <b>M40 / L980 / Z344 / Q63</b> | 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.

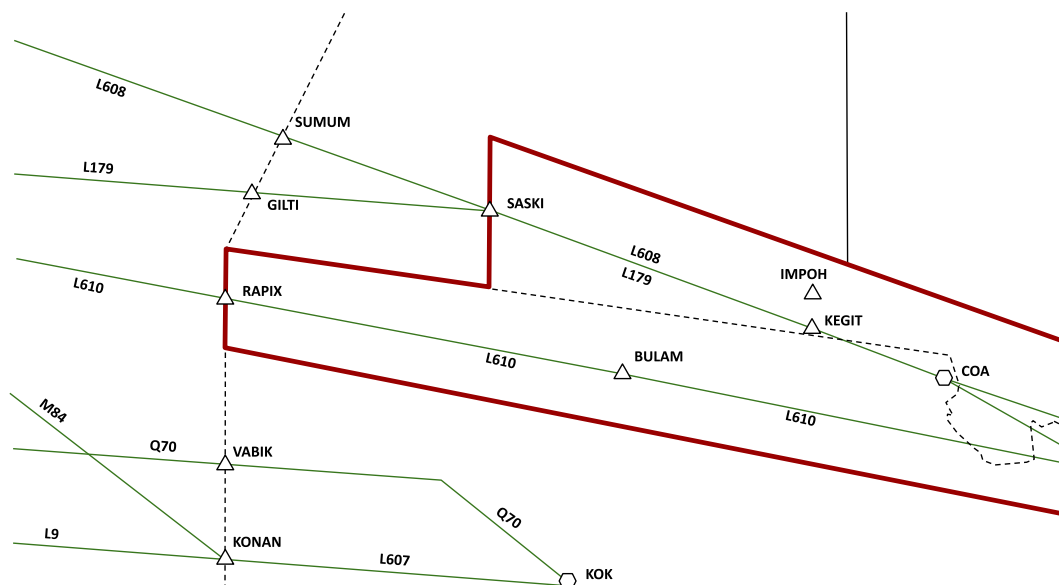
### 5.4.3 Brussels ACC

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 North Low. Maastricht UAC (KOKSY) will not assign FL250 in the BULAM area without prior co-ordination with Brussels North Low.

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 North Low (FL95-FL245) at the interface with London ACC is as follows:

| EBBU_N_CTR | EBBU_C_CTR | EBBU_W_CTR | EBBU_LOW_CTR | EBBU_E_CTR |
|------------|------------|------------|--------------|------------|
| 128.805    | 127.230    | 131.100    | 126.980      | 129.575    |

#### 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<br>135.960 | Amsterdam ACC (FL245-) |
|-----------------------|------------------------|

##### KOKSY Sector

|                       |                       |                       |                               |
|-----------------------|-----------------------|-----------------------|-------------------------------|
| EDYY_K_CTR<br>132.205 | EDYY_N_CTR<br>135.980 | EBBU_U_CTR<br>125.980 | Brussels ACC –<br>West Sector |
|-----------------------|-----------------------|-----------------------|-------------------------------|

#### 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:

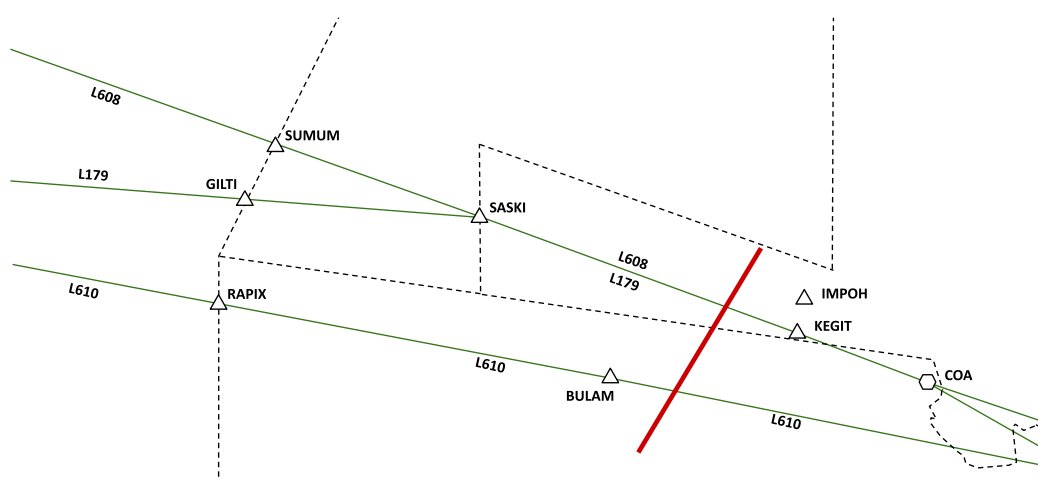
- The minimum lateral separation is never less than 5 NM.
- The transferring controller places the assigned heading in the tag and instructs the aircraft to report this on first contact with the receiving controller.
- If the receiving controller anticipates that an aircraft is on an assigned heading,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

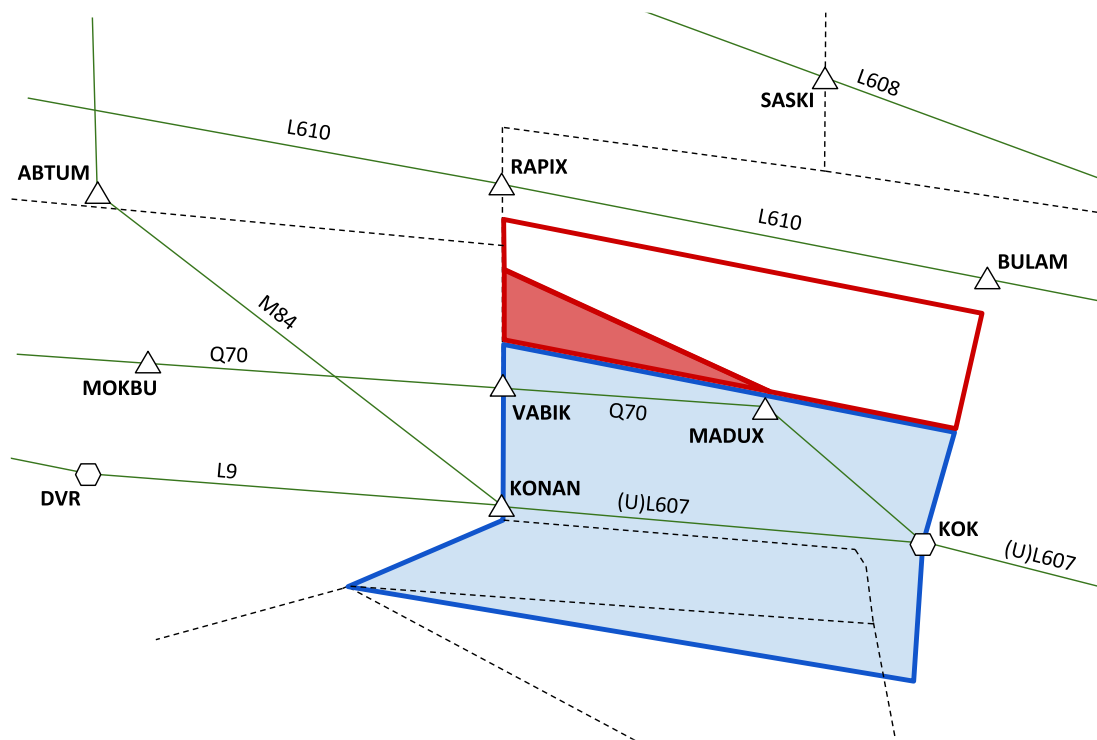
There is 10 NM between the Q70 and (U)L610 ATS routes at their closest point, so an area of airspace called the KOKSY Buffer Zone (Red outlined area in Figure LAC-22) is established between the two ATS routes to ensure traffic remains separated.

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 hold may be used for westbound aircraft en-route to or overflying the London TMA from ATS routes L608, L980 and P7.

|                       |   |
|-----------------------|---|
| <b>LOGAN</b>          | RNAV Hold, 1.5-minute legs (1-minute legs up to and including FL140)                          |
| <b>Axis</b>           | 288°  |
| <b>Direction</b>      | LEFT hand   |
| <b>Holding Levels</b> | FL100 – FL410   |
| <b>Speed</b>          | Maximum 220 kts IAS up to and including FL140<br>Standard ICAO Holding Speeds FL150 and above |

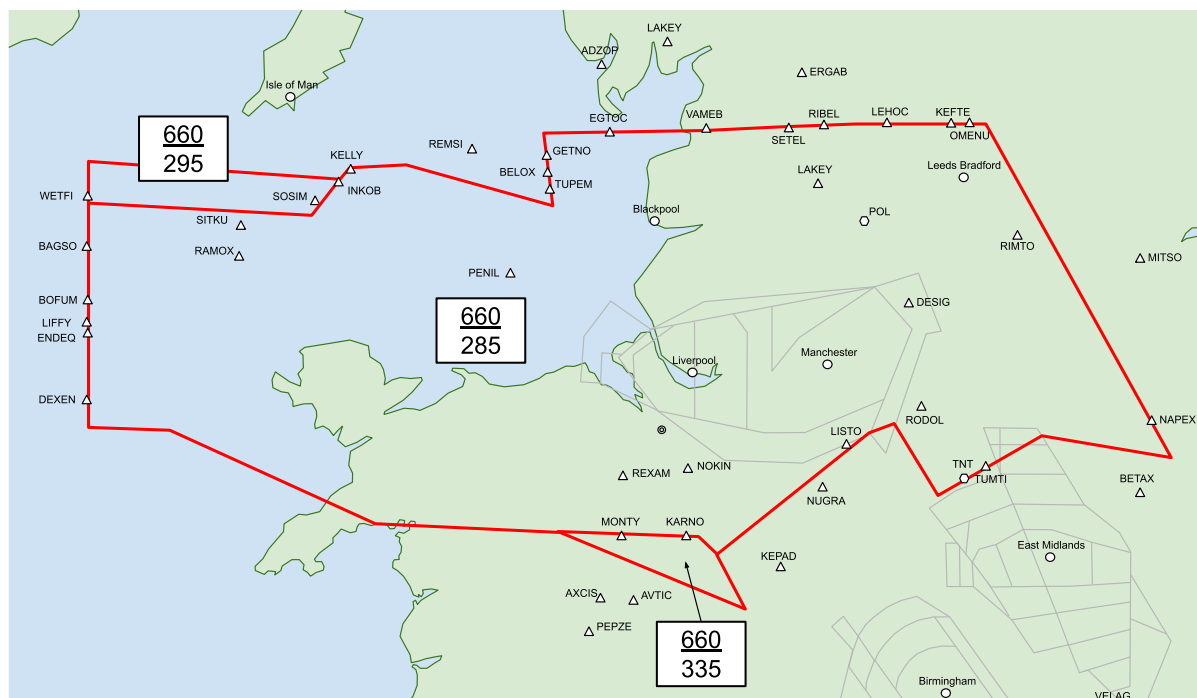
## Chapter 6 North LAG | AC Lakes

### 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 North position (LON\_N\_CTR) 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.

## 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 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 | Via  |
|------------------|-----------|------|
| EGFF, EGSY, EGGD | ↓ FL290   | N862 |

#### 6.3.2 MPC Standing Agreements

##### 6.3.2.1 PC West

From PC West to AC Lakes

| From         | Agreement                         |
|--------------|-----------------------------------|
| Dublin Group | FL280 lvi DONAX/ROLEX/ALAVA/BAGIT |
| EGNM         | FL280 lvi 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 lvi ROLEX/BAGIT/DONAX | Via (U)L975, (U)Y124, Q37. (See Note) |

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

##### 6.3.2.2 PC Northeast

From AC Lakes to PC Northeast

| To            | Agreement | Conditions   |
|---------------|-----------|--|
| EGNT and EGNV | ↓ FL290   | Via BETAX/MAMUL when worked by Lakes during quieter periods. |

### 6.3.3 External Standing Agreements

#### 6.3.3.1 ScAC Borders

From ScAC Borders to AC Lakes

| To                                       | Agreement       | Conditions |
|--|-----------------|------------|
| Brize Group, Severn Group, EGTE and EGTK | FL330 lvi EGTOC |            |
| EGSH, EGUN, EGUL and EGYM                | FL330 lvi VAMEB |            |

#### 6.3.3.2 ScAC Rathlin

From ScAC Rathlin to AC Lakes

| From                       | Agreement       | Conditions  |
|----------------------------|-----------------|---|
| EGAA, EGAC (RFL290+) (L15) | FL290 lvi SOSIM | RFT after passing FL255, remaining south of the REMSI buffer. (Notes 1 & 2) |
| EGAA, EGAC (RFL290+) (Q39) | FL290 lvi INKOB | RFT after passing FL255, remaining south of the REMSI Buffer. (Notes 1 & 2) |

**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 Lakes as early as possible.

**Note 2:** Traffic inbound to EGFF, EGGD and EGTE shall be positioned to the south of all other traffic and south of KELLY.

| To   | Agreement       | Conditions  |
|--|-----------------|---|
| EGSH, EGUN, EGUL and EGYM  | FL330 lvl KELLY | RFT to remain south of the REMSI buffer (see <a href="#">ScAC 5.4.1.2</a> ).<br>RFD after passing IOM.                    |
| Brize Group, Severn Group, EGTE, EGTK, EGSH, EGUN, EGUL and EGYM | FL330 lvl SOSIM | RFT to remain south of the REMSI buffer (see <a href="#">ScAC 5.4.1.2</a> ).<br>RFD after passing IOM.<br>(Note 2, above) |

**From LAC Lakes to Rathlin**

Traffic inbound to:

- EGAC should be positioned towards **NINEB**, north of traffic to EGAA
- EGAA should be positioned towards **UVPOK**, south of traffic to EGAC

**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/JJ | E3 – E            | V6 – V<br>X1 – X | P | D3 – D | EB/EX/AS | C3, AM/C2, C1 |  |

#### LTMA Inbounds

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

#### 6.4.1.2 Northbound Traffic

All traffic coordinated by AC Daventry with AC Lakes at levels at above FL290 must be level by the sector boundary and is released for climb if below its RFL.

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 The REMSI Buffer Zone**

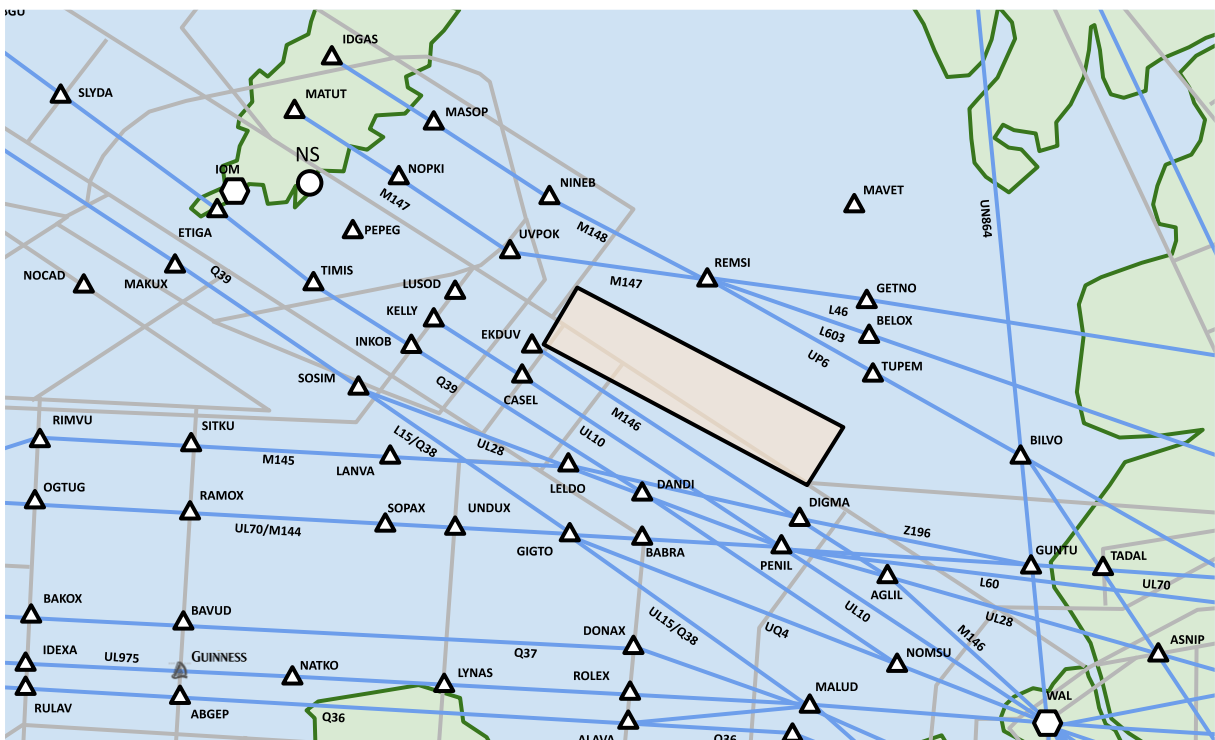
The REMSI Buffer Zone (see Figure LAC-24 below) is established to ensure separation between eastbound traffic from the Belfast TMA and ScAC Rathlin versus westbound traffic inbound to the Belfast TMA via REMSI or entering FRA.

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 Borders**

**6.4.3.1 Traffic Leaving Lakes**

**6.4.3.2 Positioning**

Lakes and PC West shall endeavour to position traffic inbound to the Scottish TMA as follows (west to east):

EGPK

EGPF

EGPH/PN

**6.4.3.2.1 Level Planning (Westbound)**

Lakes and PC West shall plan westbound traffic via RIBEL/LEHOC in accordance with the following table:

| Levels | Availability   |
|--------|--|
| FL285- | Westbound levels only. Not permitted via LEHOC without coordination. |
| FL285+ | All levels. (See Note)   |

*Note: Lakes and PC West shall notify Borders (either verbally or electronically) of any planned level that differs from the aircraft’s RFL. However, acknowledgement/acceptance is not required prior to transferring the aircraft to Borders.*

**6.4.3.2.2 Traffic at Cruising Levels**

Lakes and PC West should normally transfer all SctTMA overflights and inbounds via RIBEL at cruising levels. If required, Scottish TMA Group arrivals should be coordinated below SctTMA overflights.

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

Traffic departing from the Midlands Group and EGNJ overflying the Scottish TMA shall be allocated a maximum level of FL280.

**6.4.3.2.3 RFT/RFD of traffic from LAC Lakes**

Aircraft inbound to the Scottish TMA transferred from Lakes to Borders are RFD to FL290, subject to known traffic. Any further descent requires coordination, including when PC West is bandboxed with Lakes.

Only traffic transferred on its own navigation is RFT. Borders will not vector traffic any further than 5 NM west of RIBEL while still within Lakes airspace.

**6.4.3.3 Traffic Entering Lakes**

**6.4.3.3.1 Level Planning (Eastbound)**

Unless subject to standing agreement, southbound traffic via EGTOC and VAMEB can be expected at the RFL by the sector boundary.

For traffic that cannot reach its RFL, Borders will either coordinate the traffic to be climbing or coordinate a lower level.

Scottish TMA Group departures should be coordinated at **odd levels**.

If required, London TMA arrivals should be coordinated below London FIR overflights and may be offered at even levels.

**6.4.3.3.2 Positioning**

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



**6.4.3.3.3 RFT/RFC of traffic to LAC Lakes**

Aircraft outbound from the Scottish TMA Group transferred from Borders to Lakes are RFC, subject to known traffic and regardless of the RFL.

All traffic via EGTOC and VAMEB transferred from Borders to Lakes is RFT, including if transferred on a heading.

**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)**

|  |
|--|
| <p><b>EISN_(E_)CTR</b><br/>134.260</p> |
|--|

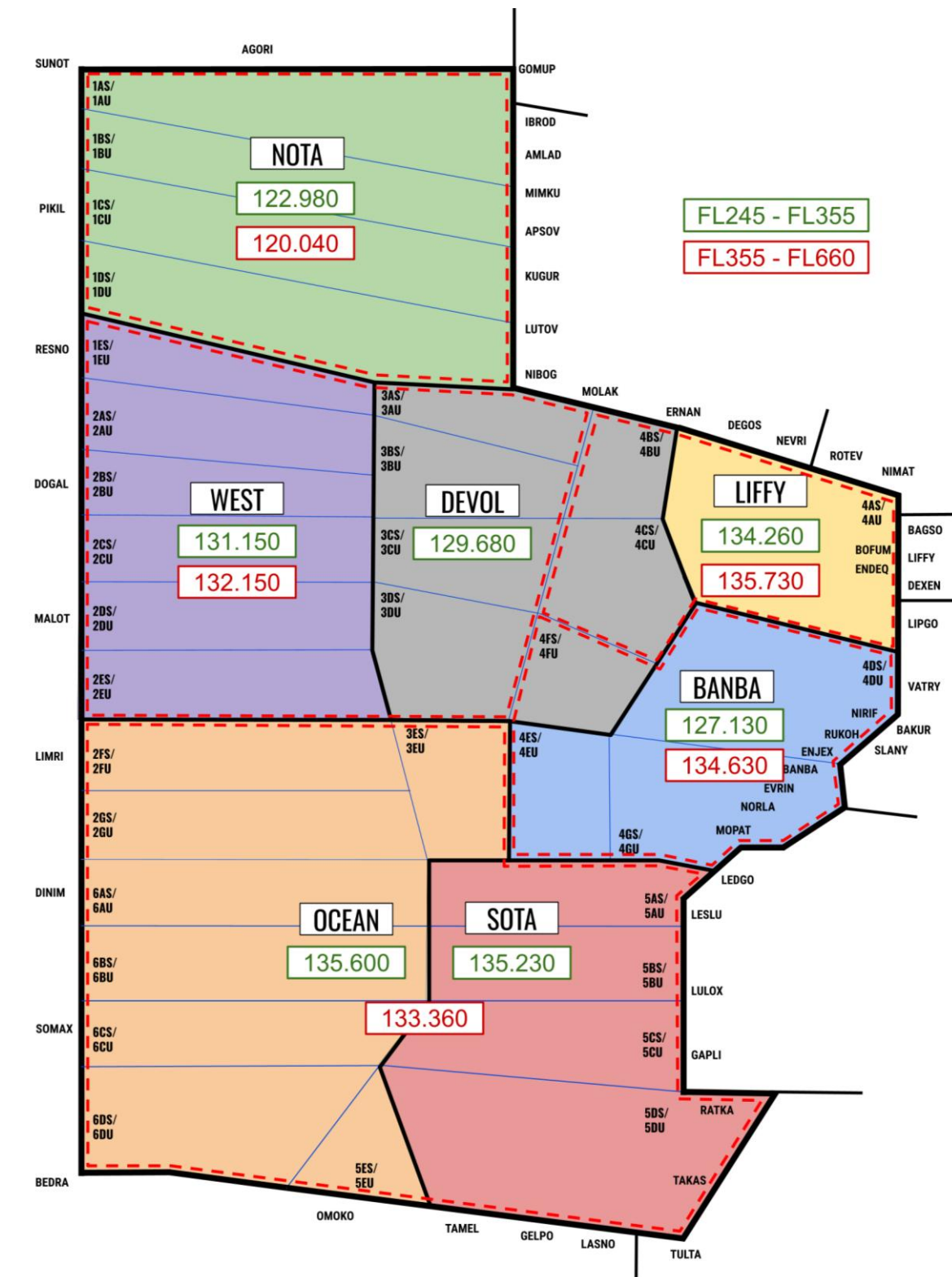
**Shannon LIFFY – Super (FL355+)**

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| <p><b>EISN_ES_CTR</b><br/>135.730</p> | <p><b>Shannon LIFFY – Upper</b></p> |
|---------------------------------------|-------------------------------------|

**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 |
| FRA           | WETFI              | WETFI                  | Abeam RAMOX                    | N/A                            |
| M144 / (U)L70 | BAGSO              | BAGSO                  | RAMOX                          | N/A                            |
| Q37           | BOFUM              | BOFUM<br>(Note 1)      | N/A                            | Abeam DUB                      |
| (U)L975       | LIFY               | LIFY<br>(Note 1)       | N/A                            | Abeam DUB                      |
| Q36           | ENDEQ              | ENDEQ<br>(Note 1)      | N/A                            | Abeam DUB                      |
| (U)Y124       | DEXEN              | DEXEN<br>(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.

## 6.4.4.7 RFC/RFT of Westbound Traffic to Shannon ACC

All westbound traffic transferred to Shannon via BAGSO and WETFI is RFC to any level and RFT after passing (abeam) RAMOX. This traffic must not enter Scottish Rathlin sector without co-ordination.

## 6.4.4.8 Permitted Cross-Border FRA Directs

Shannon overflights may be cleared by London direct to their Oceanic Entry Point (OEP), except that traffic with an OEP north of RESNO may only be cleared to REVNU (if not filed via REVNU, the traffic shall be left on its flight planned route).

Where traffic is given a direct route, the transferring controller 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.

## 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.

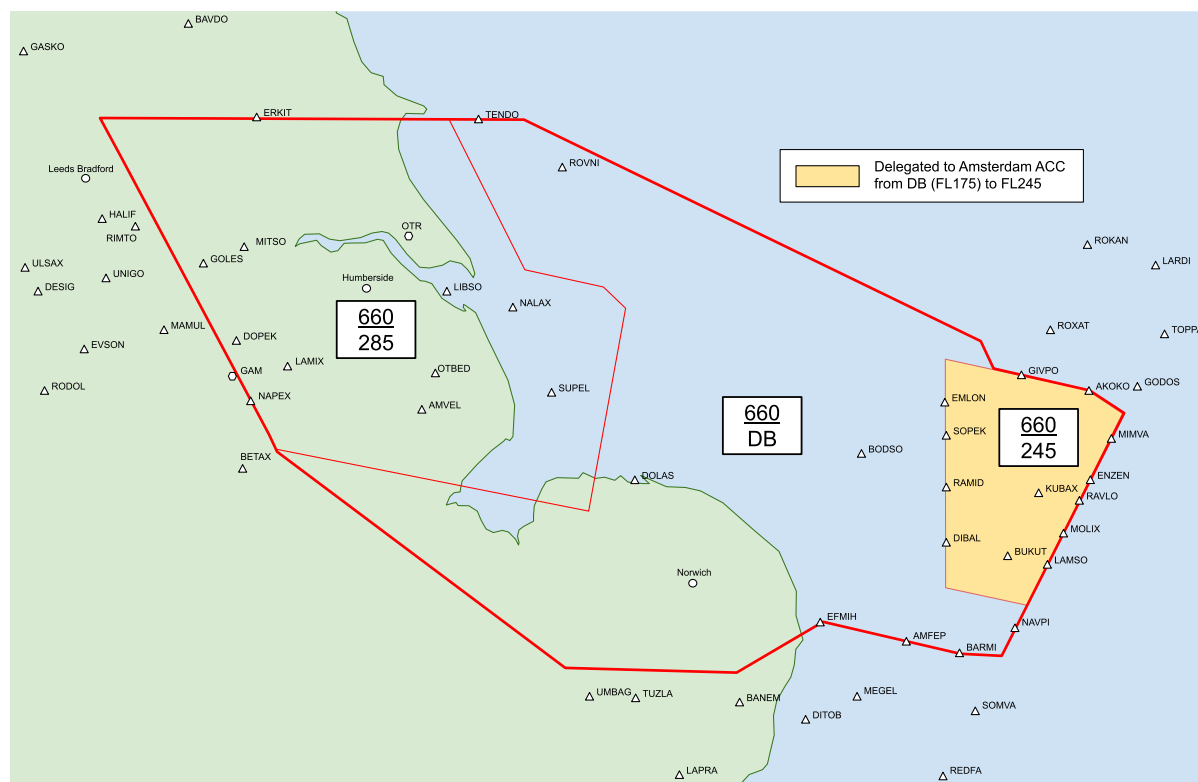
## Chapter 7 North LAG | AC North Sea

### 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 North position (LON\_N\_CTR) 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.

#### 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-26 known as the MOLIX Area, ATS is delegated from London to Amsterdam.

## 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 AMFEP | (See Note)  |
| Heathrow Group, Solent Group, EGLF, Wessex Group, EGVN, EGTK | FL300 lvl BARM1 | Traffic is <b>not</b> 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)<br>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 and EGNV              | FL290 lvl NALAX              | Via ERKIT. (Note 3)  |
| EGNT and EGNV              | FL290 lvl 15 NM before MITSO | Via RIMTO 2N. (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 ENZEN. (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** (excl. Groningen Group, EHBK/TW) | 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 |            |

##### From AC North Sea to Maastricht UAC – DELTA

| To                       | Agreement           | Conditions |
|--------------------------|---------------------|------------|
| Groningen Group, EHBK/TW | Max FL330 lvl LAMSO |            |

#### 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 EFMIH

All LTMA Group departures via EFMIH (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 | EZTIM              | EZTIM               | At or before EZTIM         |
| P5 CDR    | BUZDE              | BUZDE               | At or before BUZDE         |
| UL975 CDR | ERDOW              | ERDOW               | At or before ERDOW         |

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         |
| P144 CDR  | SAMHO              | SAMHO               | At or before SAMHO         |
| P5 CDR    | BUZDE              | BUZDE               | At or before BUZDE         |
| UL975 CDR | ERDOW              | ERDOW               | At or before ERDOW         |

#### 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:

|                              |                                |                                |                              |                              |
|------------------------------|--------------------------------|--------------------------------|------------------------------|------------------------------|
| <b>EHAA_W_CTR</b><br>123.705 | <b>EHAA_LOW_CTR</b><br>125.750 | <b>EHAA_ALL_CTR</b><br>134.375 | <b>EHAA_S_CTR</b><br>123.850 | <b>EHAA_E_CTR</b><br>124.880 |
|------------------------------|--------------------------------|--------------------------------|------------------------------|------------------------------|

#### 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 |
|-------------|--------------------|---------------------|----------------------------|
| <b>L17</b>  | RAMID              | RAMID               | At or before RAMID         |
| <b>L603</b> | DIBAL              | DIBAL               | At or before DIBAL         |

##### 7.4.3.3.2 Traffic Entering London

| Route       | Coordination Point | Transfer of Control | Transfer of Communications |
|-------------|--------------------|---------------------|----------------------------|
| <b>L602</b> | MIMVA              | EMLON               | At or before EMLON         |
| <b>L60</b>  | ENZEN              | 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<br>135.960 | Amsterdam ACC (FL245-) |
|-----------------------|------------------------|

#### 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 Entering London

| Route | Coordination Point | Transfer of Control | Transfer of Communications |
|-------|--------------------|---------------------|----------------------------|
| L602  | MIMVA              | MIMVA               | At or before MIMVA         |
| Y70   | RAVLO              | RAVLO               | At or before RAVLO         |

##### 7.4.4.3.2 Traffic Leaving London

| Route | Coordination Point | Transfer of Control | Transfer of Communications |
|-------|--------------------|---------------------|----------------------------|
| L603  | LAMSO              | LAMSO               | At or before BUKUT         |
| DCT   | NAVPI              | NAVPI               | 5 NM before NAVPI          |

#### 7.4.4.4 Level Planning

There are no Standing Agreements between AC North Sea 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

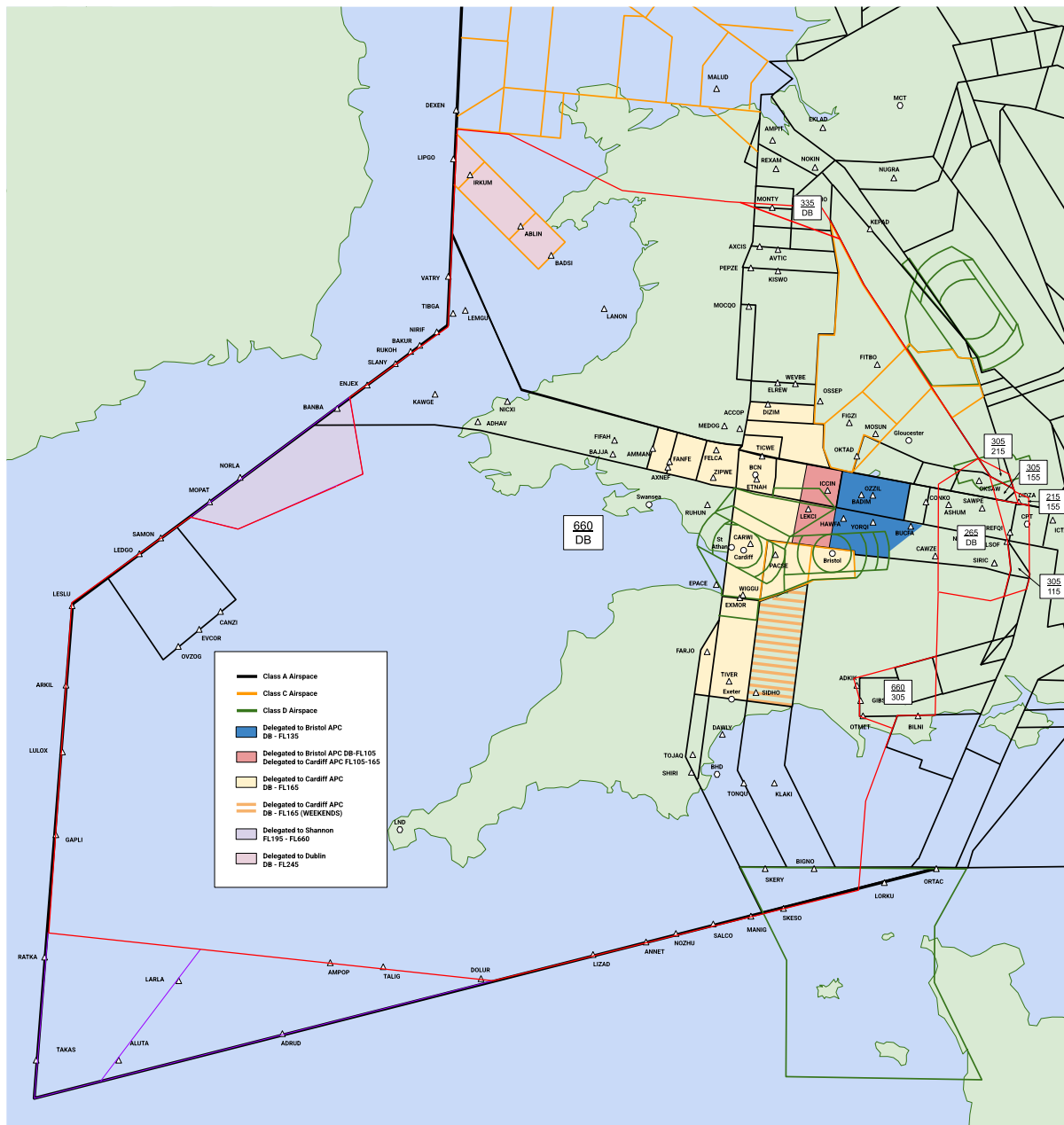
No sector-specific details. For full (up to date) details of en-route holds, see **UK AIP ENR 3.4** and/or relevant STAR charts.

## Chapter 8 West LAG | AC West

### 8.1 Area of Responsibility

AC West (LON\_W\_CTR) is the only published, permanent LAG West sector. The LAG extends from the southwest of England (west of Bournemouth) to the southern and western edges of the FIR. The declared base of controlled airspace is mostly FL195, except within CTAs where it varies considerably. The sector extends up to a maximum of FL660, with some delegated areas and variation in the Compton area. The lower airspace consists of a systemised route structure and Free Route Airspace (FRA) is established above FL245.

Figure LAC-27 – London AC West Area of Responsibility



#### 8.1.1 Sector Frequency

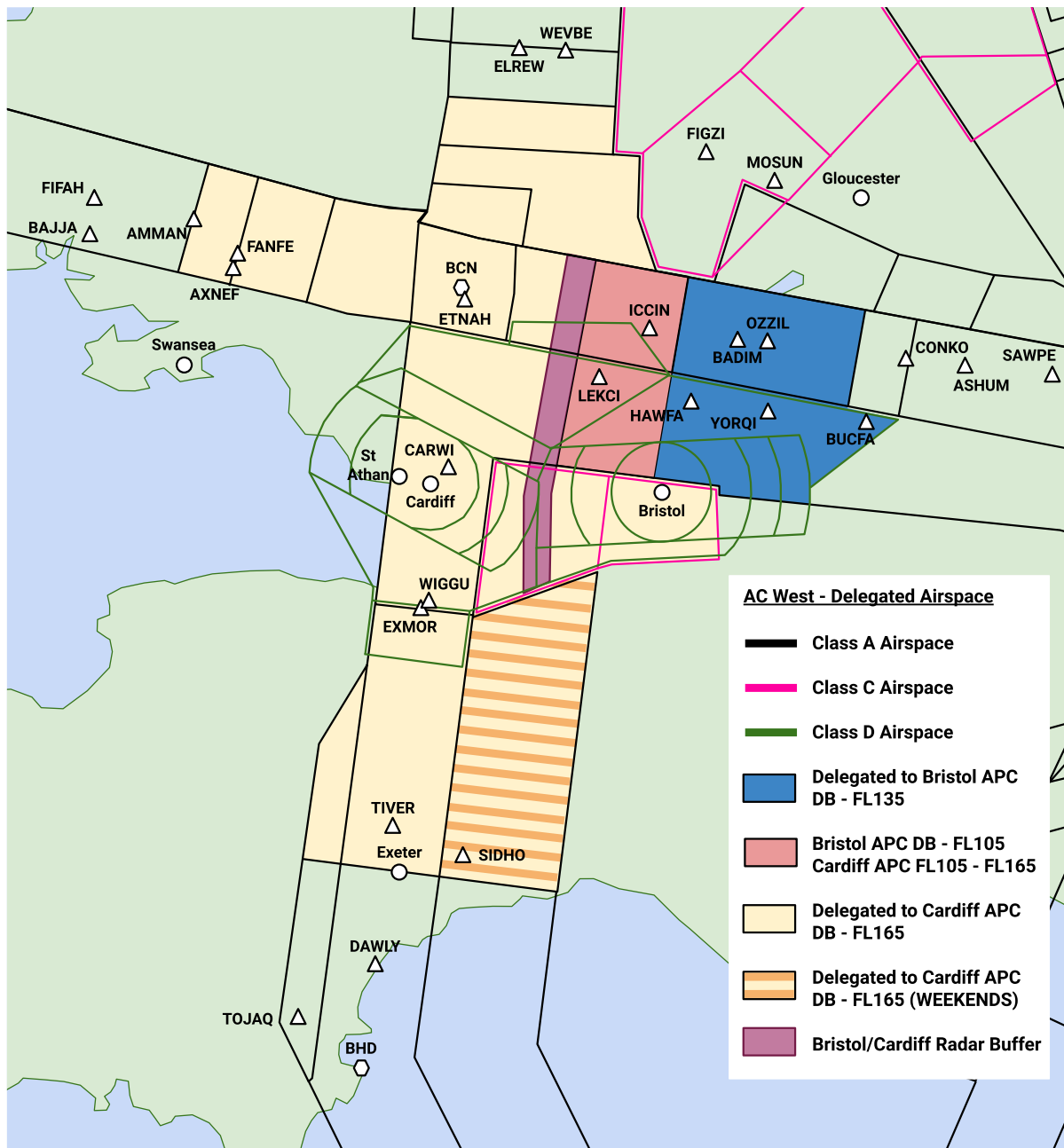
AC West Sector operates on frequency 126.080.

### 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.

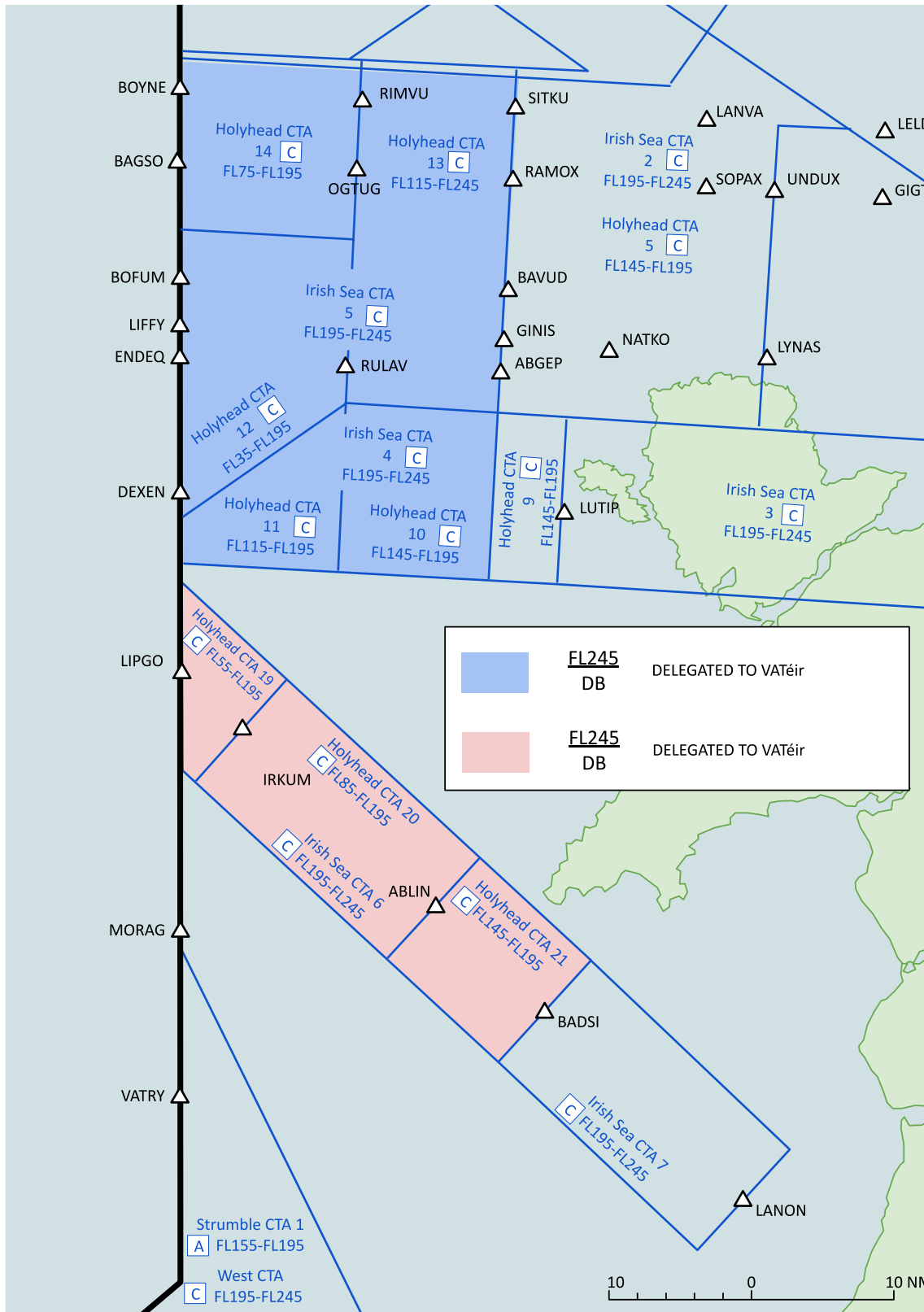
Figure LAC-28 – Delegation of Airspace to Cardiff and Bristol ATC within London AC West



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-29 (a combination of Holyhead CTAs 19, 20 & 21, and Irish Sea CTAs 6 & 7), ATS is delegated from London to Dublin.

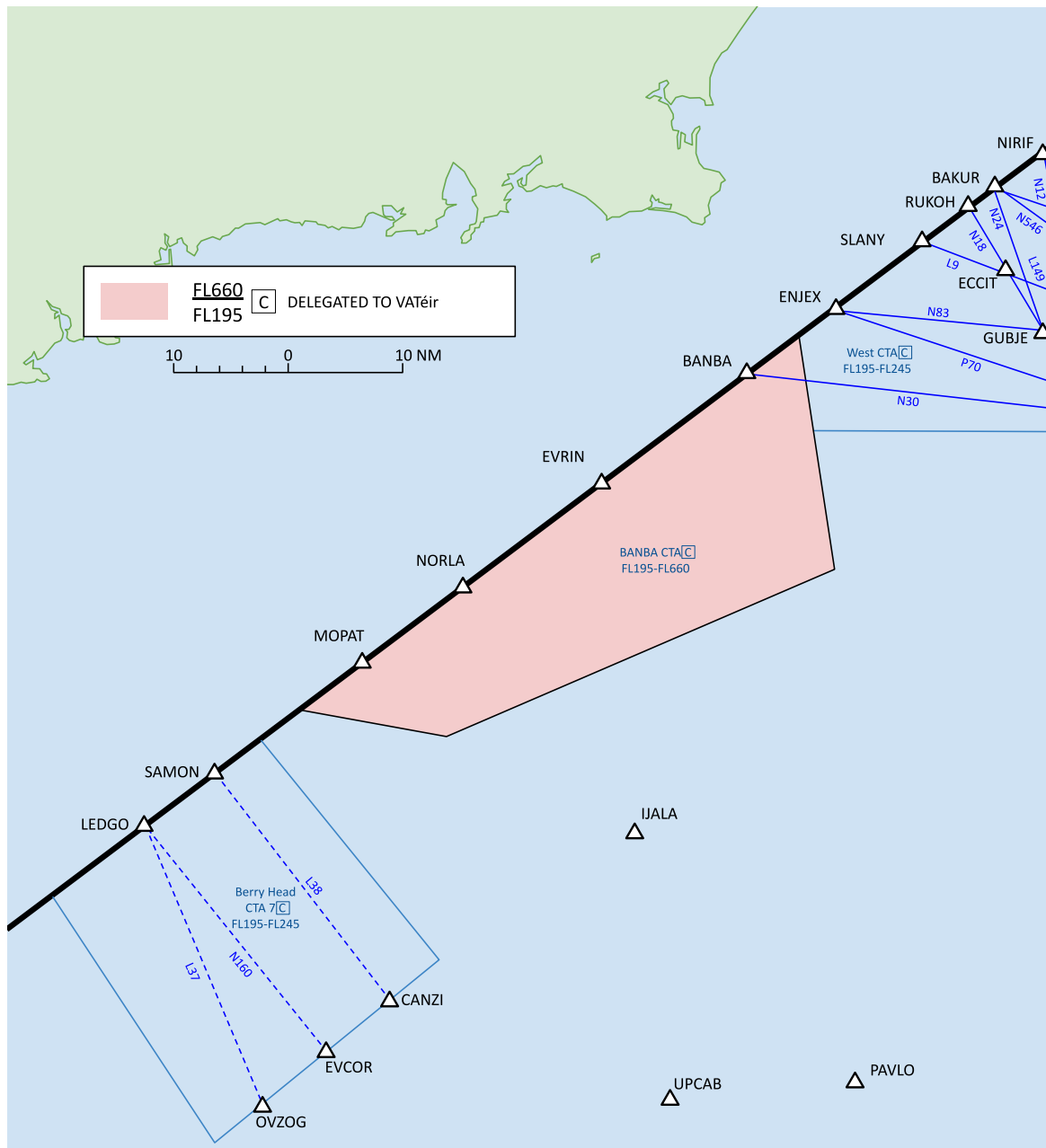
Figure LAC-29 – Delegation of Airspace from London AC West in the Holyhead/Irish Sea CTAs



8.1.2.3 To Shannon ACC – BANBA CTA

From FL195 to FL660 within the red area in Figure LAC-30 (the BANBA CTA), ATS is delegated from London to Shannon.

Figure LAC-30 – Delegation of Airspace from London AC West in the BANBA CTA

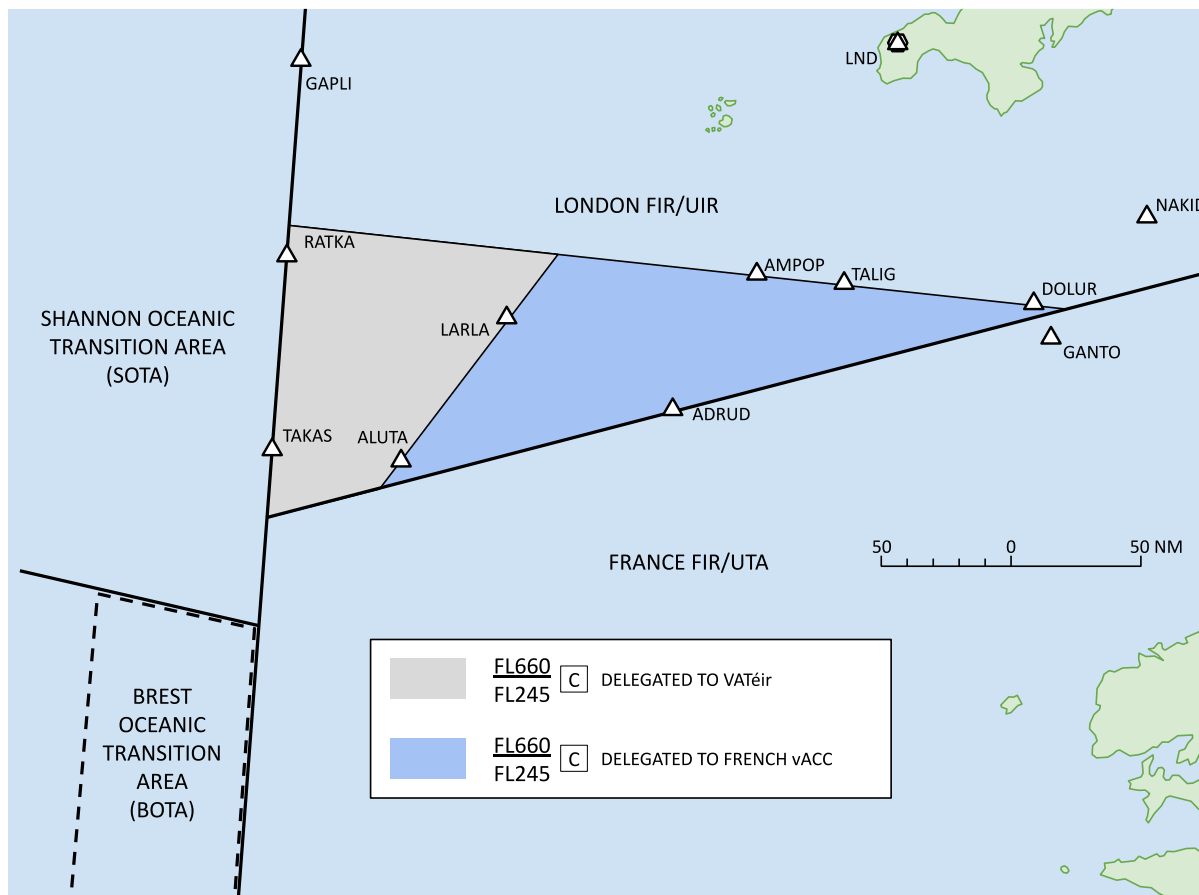


**8.1.2.4 To Shannon ACC and Brest ACC – In the Southwestern Corner of the London FIR**

From FL245 to FL660 within the grey area in Figure LAC-31 known as the TAKAS Box, ATS is delegated from London to Shannon.

From FL245 to FL660 within the blue area in Figure LAC-31 known as the LARLA Triangle, ATS is delegated from London to Brest.

Figure LAC-31 – Delegation of Airspace from London AC West in the Southwestern Corner of the London UIR



## 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 shall only be issued by AC West if covering Jersey Control 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/SC),<br>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 /<br>FL270 lvl 10 NM before OTMET |            |
| Heathrow Group, EGKK, Thames<br>Group | FL270 lvl GIBSO / OTMET  |            |
| Essex Group                           | FL300 lvl GIBSO / OTMET  |            |

| From              | Agreement       | Conditions  |
|-------------------|-----------------|---|
| EGGD, Brize Group | FL180 lvl ELSOF | Not RFT until passing ELSOF. Then<br>released for right turns only. (See<br>Note) |
| EGFF, EGSY        | FL250 lvl ELSOF | Released for right turns only until<br>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.<br>(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 when AC Dover and AC Worthing are banded. When AC Dover is split from AC Worthing, traffic is not RFT.

### 8.3.1.3 AC Lakes

#### From AC Lakes to AC West

| To               | Agreement | Via  |
|------------------|-----------|------|
| EGFF, EGSY, EGGD | ↓ FL290   | 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 TC Midlands to AC West

| From | Agreement       | Via  |
|------|-----------------|--|
| EGNX | FL170 lvl LUXTO | SAPCO DCT LUXTO, available 0025-0835 (2325-0735) |

##### 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 (FL195+)

#### 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 |
| EGTE                     | SKESO | Maximum FL230 |              |

### 8.3.4.3 Brest W Sector (FL195-FL355)

#### From Brest W Sector to AC West

| To   | Via                   | Agreement     | Conditions   |
|------|-----------------------|---------------|--------------|
| EGHQ | AMPOP/TALIG/<br>DOLUR | Maximum FL280 | RFD to FL200 |

### 8.3.4.4 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 /<br>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.

### 8.3.4.5 Shannon Low Level (FL245-)

#### From AC West to Shannon Low Level

| To   | Via         | Agreement                 | Conditions |
|------|-------------|---------------------------|------------|
| EIWF | ENJEX       | ↓ FL180                   |            |
| EICK | LEDGO/SAMON | Max FL240 lvl LEDGO/SAMON | (See Note) |
| EICK | LULOX       | Max FL240 lvl LULOX       |            |

**Note:** Traffic must cross OVZOG/EVCOR/CANZI at FL250 or above and is RFD and RFT after passing these points. The transfer of communications shall take place prior to OVZOG/EVCOR/CANZI.

#### From AC West to Shannon Low Level

| From | Via         | Agreement | Conditions    |
|------|-------------|-----------|---------------|
| EICK | SAMON/LEDGO | Max FL230 | Notes (1 & 2) |

**Note 1:** Traffic may be presented in the climb to the coordinated level at the AoR boundary.

**Note 2:** This traffic is RFC to FL290 within the confines of the LEDGO RFC Area. It is not released for turn until passing SAMON/LEDGO. Shannon ACC shall ensure separation between this traffic and other aircraft within the Shannon FIR.

### 8.3.4.6 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         | Via   | Agreement | Conditions |
|--------------|-------|-----------|------------|
| Dublin Group | BANBA | Max FL350 | (See Note) |
| EICK         | ENJEX | Min FL250 | (See Note) |
| EICK         | NORLA | Min FL250 | (See Note) |

**Note:** Traffic may be presented in the climb to the coordinated level at the AoR boundary.

### 8.3.5 Birmingham APC

#### Transfer of Traffic from AC West to Birmingham APC

| To   | Agreement       | Conditions  |
|------|-----------------|---|
| EGBB | FL130 lvl 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<br>120.755 | EIDW_LN_CTR<br>132.580 | EIDW_UN_CTR<br>129.180 | EISN_(E)_CTR<br>134.260 |
|------------------------|------------------------|------------------------|-------------------------|

**Dublin Upper South (FL125-FL245)**

|                        |                        |                         |
|------------------------|------------------------|-------------------------|
| EIDW_US_CTR<br>135.655 | EIDW_UN_CTR<br>129.180 | EISN_(E)_CTR<br>134.260 |
|------------------------|------------------------|-------------------------|

**8.4.1.1.2 Shannon ACC**

Although Shannon have defined a day-to-day configuration of the high-level airspace (see Figure LAC-32), 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<br>127.130 | EISN_(E)_CTR<br>134.260 |
|-----------------------|-------------------------|

**Shannon BANBA – Super (FL355+)**

|                        |                       |
|------------------------|-----------------------|
| EISN_BS_CTR<br>134.630 | Shannon BANBA – Upper |
|------------------------|-----------------------|

**Shannon SOTA – Upper (FL245-FL355)**

|                       |                       |                         |
|-----------------------|-----------------------|-------------------------|
| EISN_S_CTR<br>135.230 | EISN_B_CTR<br>127.130 | EISN_(E)_CTR<br>134.260 |
|-----------------------|-----------------------|-------------------------|

Shannon SOTA – Super (FL355+)

|                        |                      |
|------------------------|----------------------|
| EISN_SS_CTR<br>133.360 | Shannon SOTA – Upper |
|------------------------|----------------------|

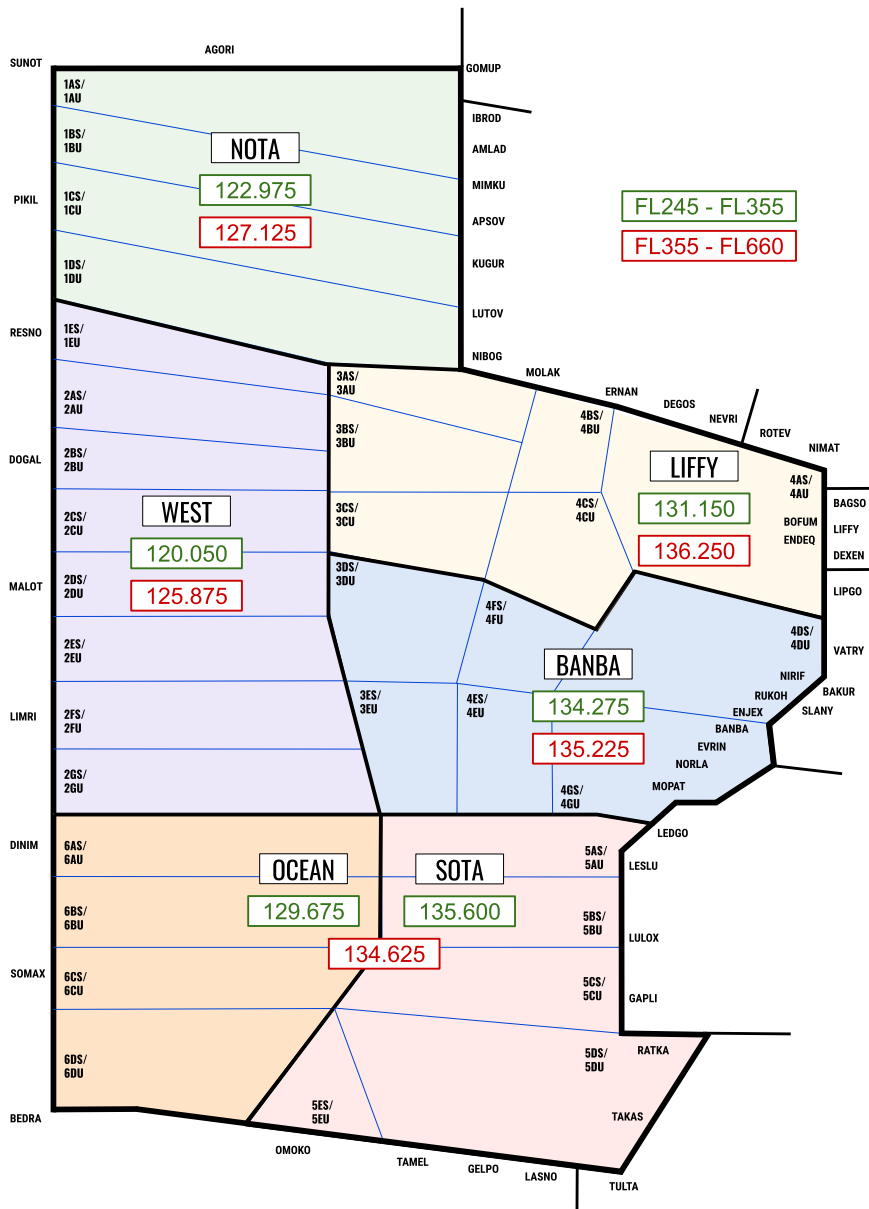
Shannon Low Level (DB-FL245)

|                        |                         |
|------------------------|-------------------------|
| EISN_LS_CTR<br>124.700 | EISN_(E_)CTR<br>134.260 |
|------------------------|-------------------------|

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-32 – 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                          |
| EVRIN              | Eastern edge of BANBA Box                   | (Abeam) IJALA / GUBJE          | EVRIN                          |
| 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 (except EICK arrivals at CANZI)       | 3 mins before CANZI            | 3 mins before SAMON            |
| LEDGO              | LEDGO (except EICK arrivals at OVZOG/EVCOR) | 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 8.3.4.4, 8.3.4.5 and 8.3.4.6.

#### 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-33, next page), without coordination with Shannon ACC. Traffic must not be turned without coordination with Shannon ACC.

#### 8.4.1.8 LEDGO RFC Area

Traffic outbound from EICK via SAMON and LEDGO transferred from Shannon Low Level to London ACC is RFC to FL290 within the LEDGO RFC Area (see Figure LAC-34, next page), without co-ordination with Shannon Upper. Aircraft must not be turned without co-ordination until passing SAMON / LEDGO.

#### 8.4.1.9 RFC/RFT of Westbound traffic to Shannon ACC

All westbound traffic transferred to Shannon is RFC and RFT (up to a maximum of 45°) within the offering sector only.

All traffic inbound to Irish airfields (EI\*\* & EGA\*) is RFD 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.

#### 8.4.1.10 Permitted Cross-Border FRA Directs

Where traffic is given a direct route, the transferring controller 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.

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.

- **London TMA Arrivals** – PEWBI, FONZU, SIDDI
- **Overflights** – FACTU, EMJEE, NUCHU, GAJIT, OXLOW, AMPOP, TALIG, DOLUR, NAKID, LIZAD

Shannon overflights may be cleared by London direct to their Oceanic Entry Point (OEP), except that traffic with an OEP north of RESNO may only be cleared to REVNU (if not filed via REVNU, the traffic shall be left on its flight planned route).

Figure LAC-33 – BAKUR RFC Area

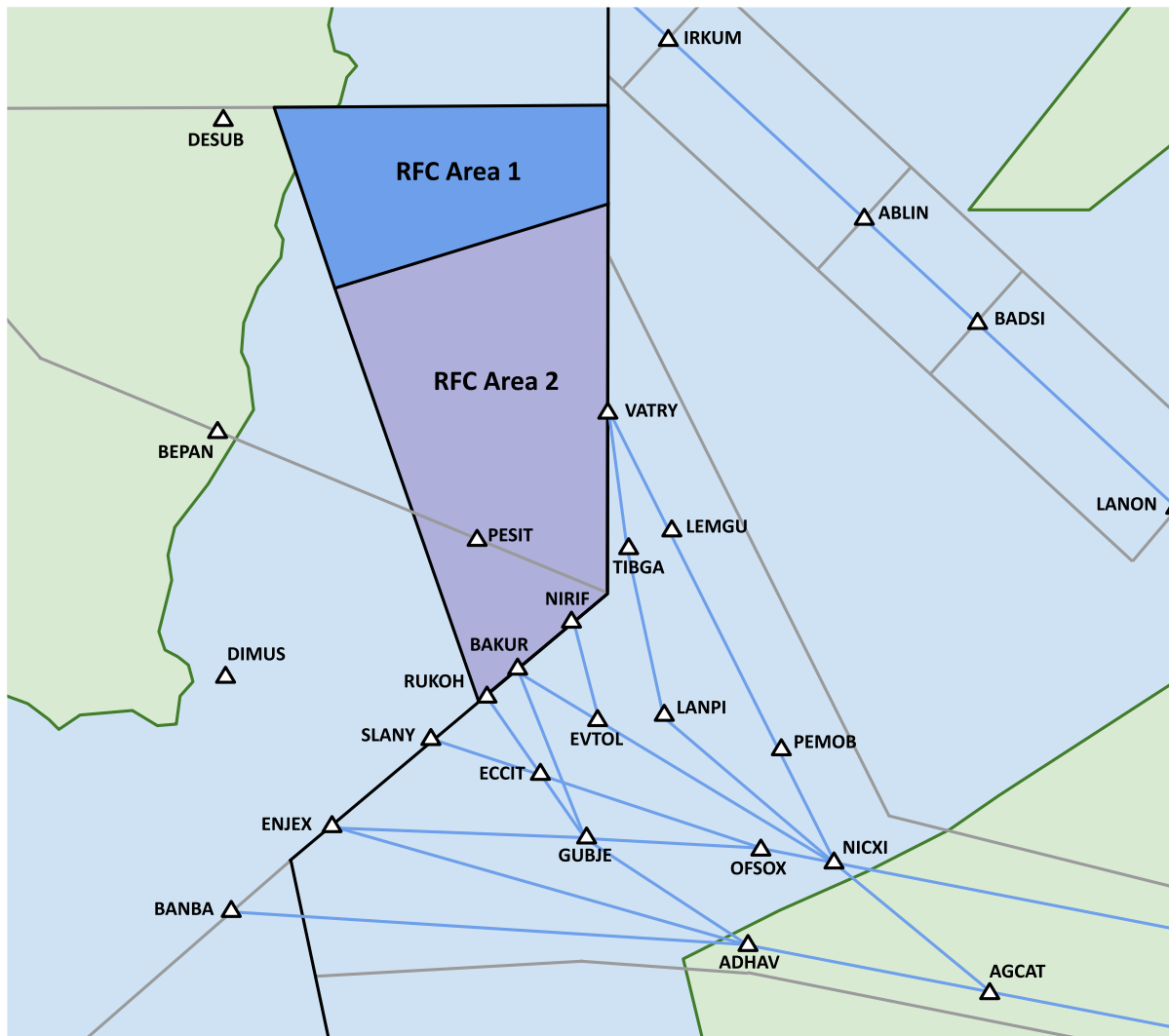
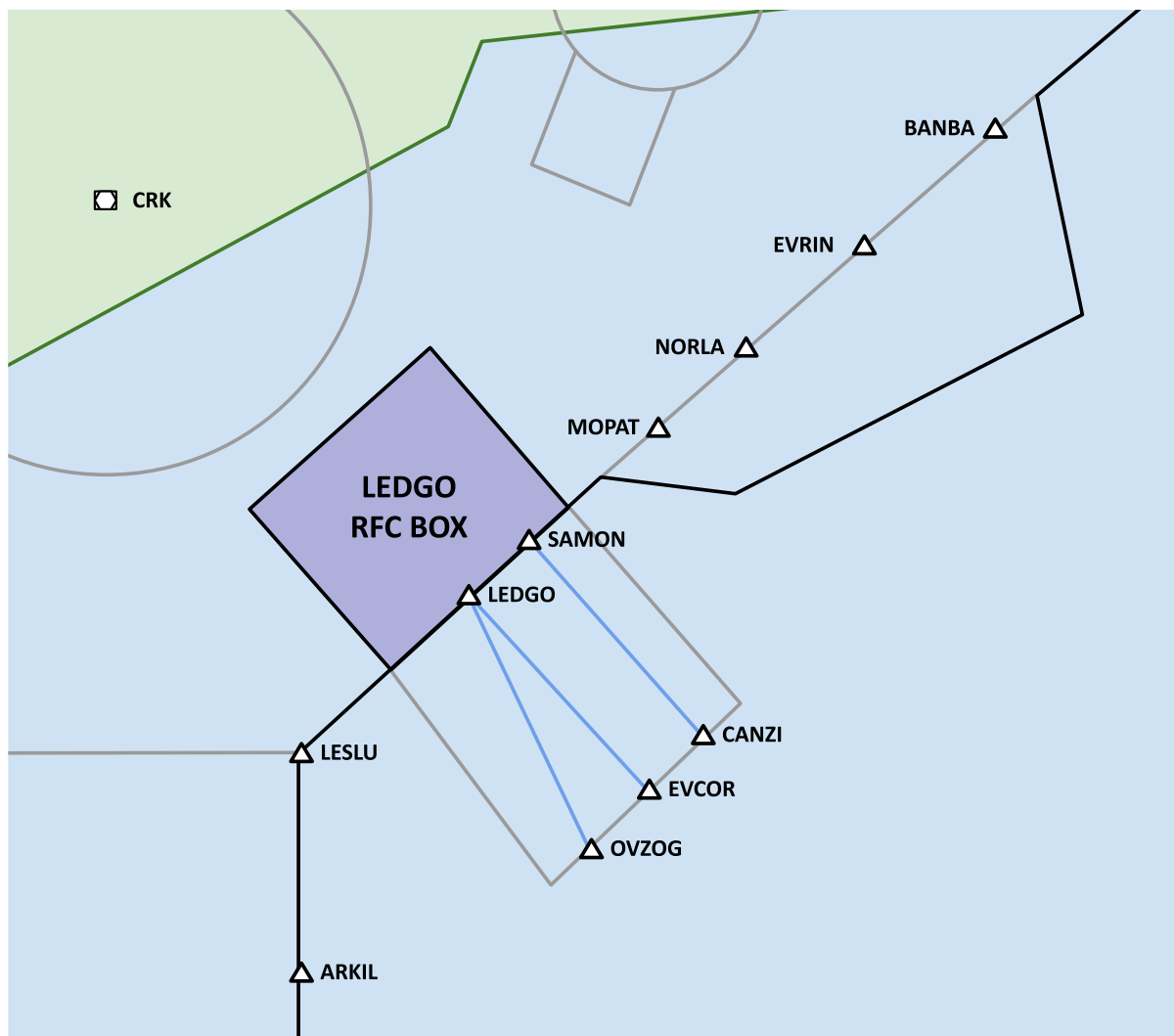


Figure LAC-34 – LEDGO RFC Area



**8.4.2 Brest ACC**

The French Brest ACC (FL195+) borders London AC West. Below Brest, Iroise APP (125.860) provides ATS below FL195, covered top-down by Brest W.

**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 (FL195+)**

|                              |                              |                            |
|------------------------------|------------------------------|----------------------------|
| <b>LFRR_J_CTR</b><br>132.510 | <b>LFRR_W_CTR</b><br>127.860 | <b>LFRR_CTR</b><br>125.500 |
|------------------------------|------------------------------|----------------------------|

**Brest V (FL195+)**

|                               |                              |                              |                            |
|-------------------------------|------------------------------|------------------------------|----------------------------|
| <b>LFRR_VK_CTR</b><br>124.775 | <b>LFRR_J_CTR</b><br>132.510 | <b>LFRR_W_CTR</b><br>127.860 | <b>LFRR_CTR</b><br>125.500 |
|-------------------------------|------------------------------|------------------------------|----------------------------|

**Brest W (FL195-FL355)**

|                              |                            |
|------------------------------|----------------------------|
| <b>LFRR_W_CTR</b><br>127.860 | <b>LFRR_CTR</b><br>125.500 |
|------------------------------|----------------------------|

**Brest WI (FL355-FL375)**

|                               |                               |                              |                            |
|-------------------------------|-------------------------------|------------------------------|----------------------------|
| <b>LFRR_WI_CTR</b><br>135.260 | <b>LFRR_WU_CTR</b><br>133.615 | <b>LFRR_W_CTR</b><br>129.505 | <b>LFRR_CTR</b><br>125.500 |
|-------------------------------|-------------------------------|------------------------------|----------------------------|

**Brest WU (FL375+)**

|                               |                               |                              |                            |
|-------------------------------|-------------------------------|------------------------------|----------------------------|
| <b>LFRR_WU_CTR</b><br>133.615 | <b>LFRR_WI_CTR</b><br>135.260 | <b>LFRR_W_CTR</b><br>129.505 | <b>LFRR_CTR</b><br>125.500 |
|-------------------------------|-------------------------------|------------------------------|----------------------------|

**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), 0 (W Sector), and **Error! Reference source not found.** (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.

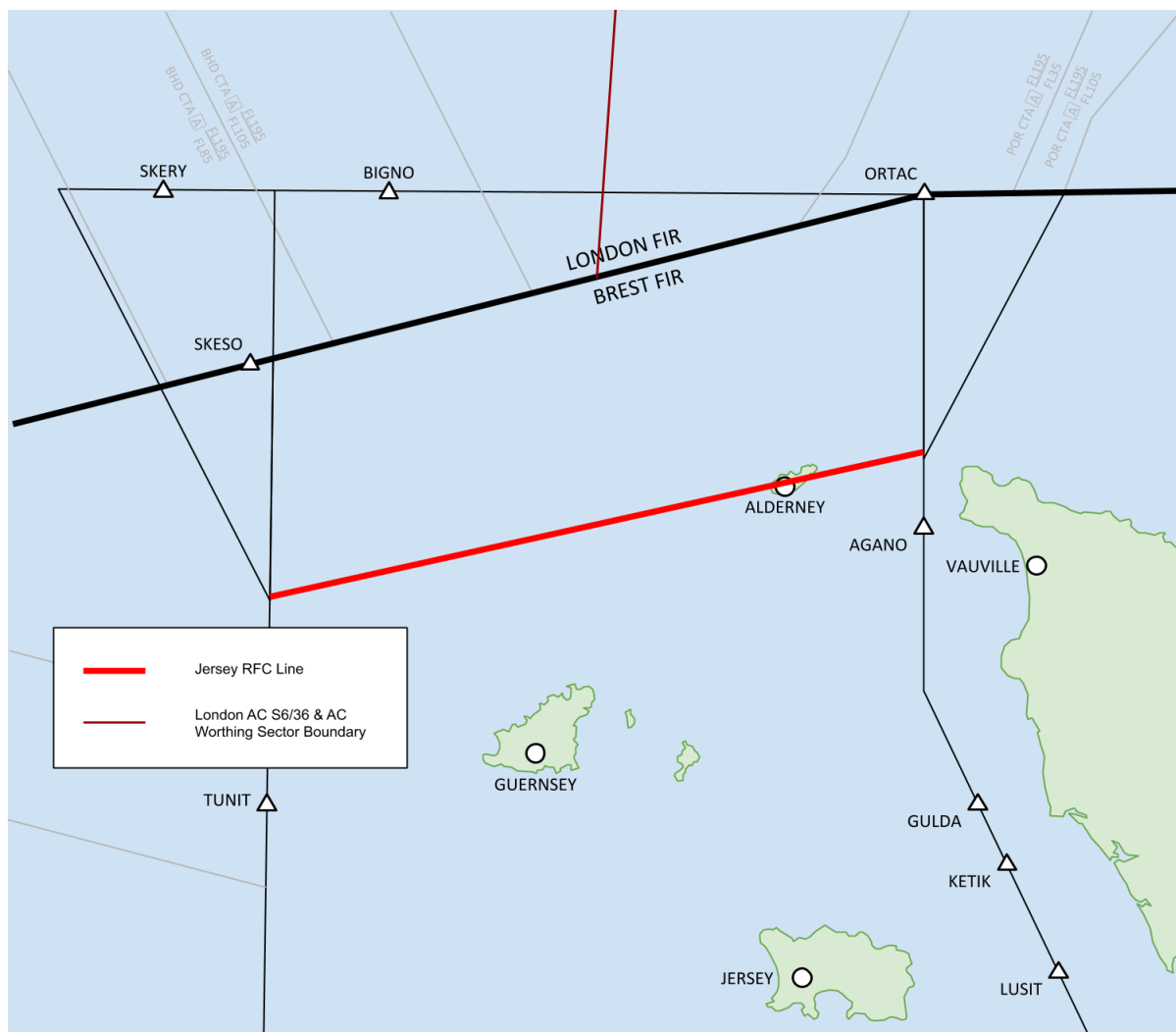
**8.4.2.8 Jersey RFC Line**

The Jersey RFC Line, as shown in red in Figure LAC-35 below, has been defined to reduce coordination with Brest for climbing northbound traffic.

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<br>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.

#### ORZEB Hold

|                       |                            |
|-----------------------|----------------------------|
| <b>ORZEB</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 096°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | FL160-FL240                |
| <b>Speed</b>          | ICAO Holding Speeds        |

#### FITBO Hold

|                       |                            |
|-----------------------|----------------------------|
| <b>FITBO</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 136°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | FL180-FL290                |
| <b>Speed</b>          | 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**

## LTC | LONDON TERMINAL CONTROL

### 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:

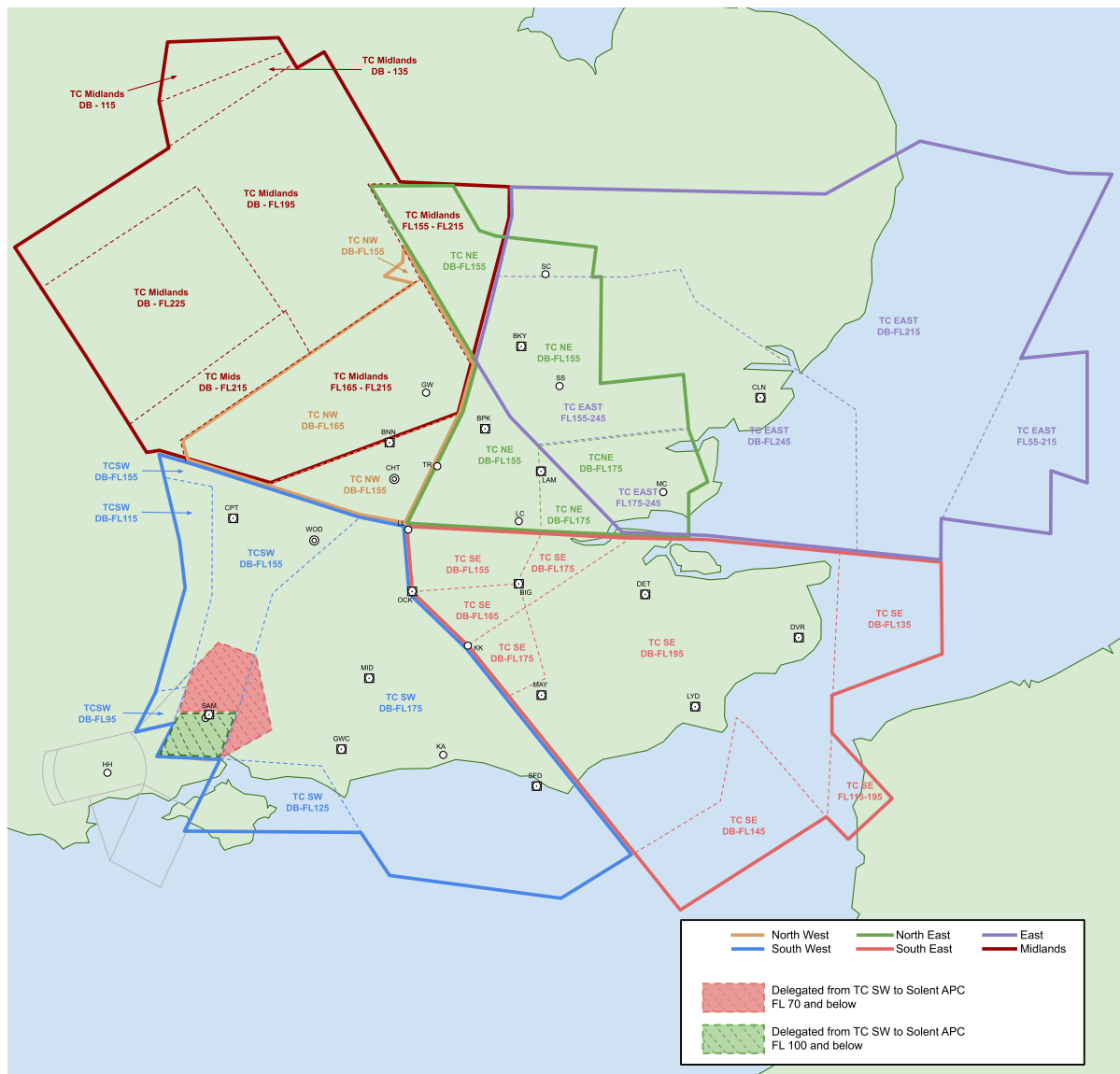
- The first APC/Enroute controller to notice the change shall notify all affected units who also refer to the MSL.
- The first controller shall coordinate the agreement of an effective time that is at least 5 minutes from the time the pressure change was noticed.

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   |
| TC North East – TC NE | TC North East         | LTC_NE_CTR      | 118.825   |
| TC South West – TC SW | TC South West         | LTC_SW_CTR      | 133.180   |
| TC South East – TC SE | TC South East         | LTC_SE_CTR      | 120.530   |
| TC East – TC E        | TC East               | LTC_E_CTR       | 121.230   |
| TC Midlands – TC M    | TC Midlands           | LTC_M_CTR       | 121.030   |

**TC London Bandbox Positions**

| Position        | Coordination Callsign | VATSIM Callsign | Frequency |
|-----------------|-----------------------|-----------------|-----------|
| TC North – TC N | TC North              | LTC_N_CTR       | 119.780   |
| TC South – TC S | TC South              | LTC_S_CTR       | 134.125   |
| TC Bandbox – TC | TC Bandbox            | LTC_CTR         | 135.805   |

**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<br>top-down of<br>TC NW → | LTC_CTR<br>TC Bandbox<br>135.805 | LTC_N_CTR<br>TC North<br>119.780 | LTC_NW_CTR<br>TC North West<br>121.280 |
| TC East<br>top-down of<br>TC NE →     |                                  |                                  | LTC_NE_CTR<br>TC North East<br>118.825 |
| -                                     |                                  | LTC_S_CTR<br>TC South<br>134.125 | LTC_SW_CTR<br>TC South West<br>133.180 |
|                                       |                                  |                                  | LTC_SE_CTR<br>TC South East<br>120.530 |
| LTC_E_CTR<br>TC East<br>121.230       |                                  |                                  |  |
| LTC_M_CTR<br>TC Midlands<br>121.030   |                                  |                                  |  |

## Chapter 2 General Coordination Regulation

### 2.1 Standing Agreements

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](#) for general rules.

#### 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 **Error! Reference source not found.** 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

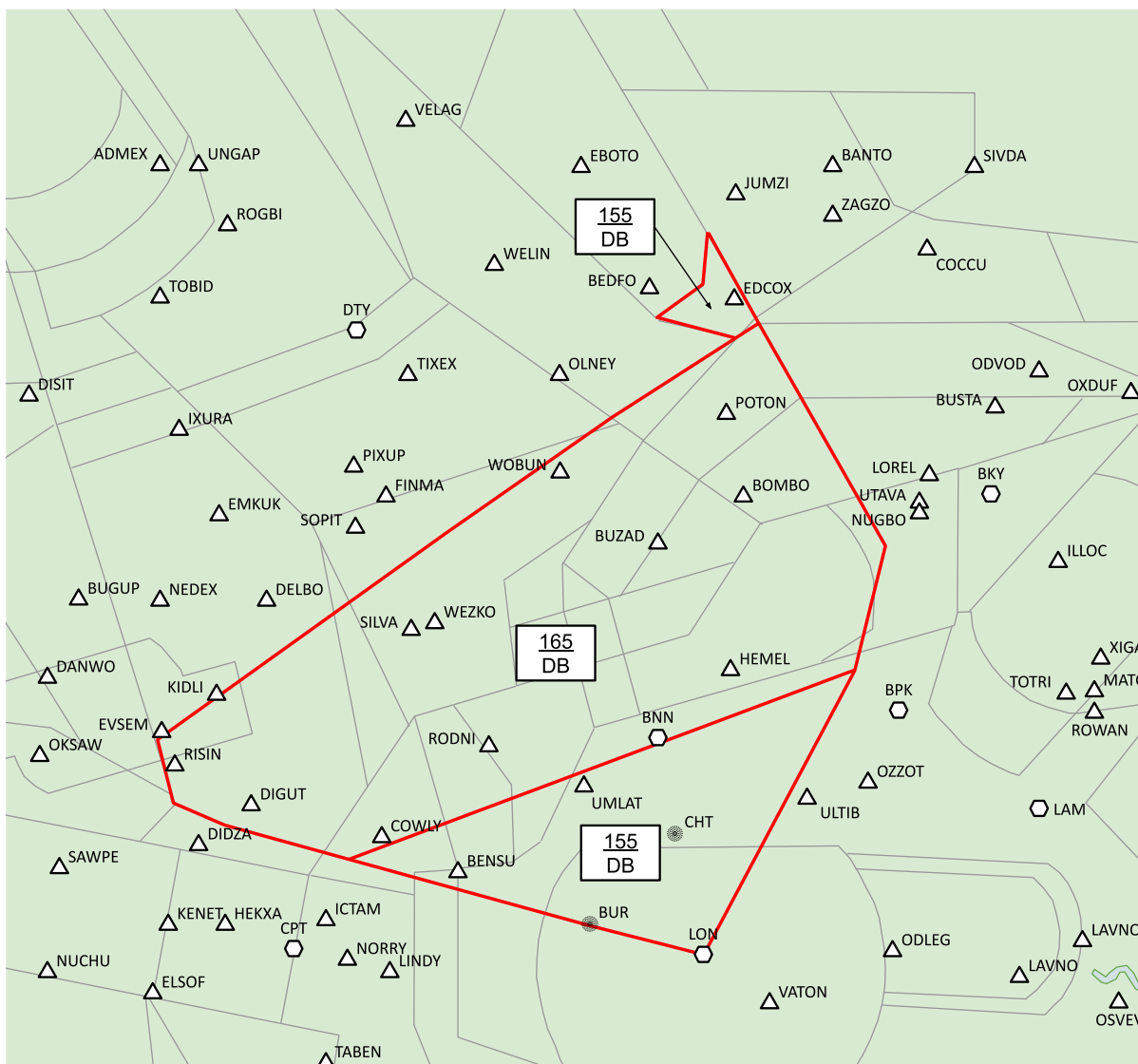
Unless specified otherwise, all flights require a release from the receiving London Terminal Control sector (LTC). This should be obtained by the AIR controller prior to allowing the aircraft to enter the runway. Where AIR is also required to obtain a release from the approach/radar controller, they 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 presentation into the holds into the Heathrow Group (BNN), EGSS/EGSC (LOREL) and EGGW (ZAGZO).

Figure LTC-2 – London TC North West Area of Responsibility



#### 3.1.1 Sector Frequency

TC NW operates on frequency 121.280.

## 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)  |
| -                        | Solent Group       | 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 at 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 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 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 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, EGSC | 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.

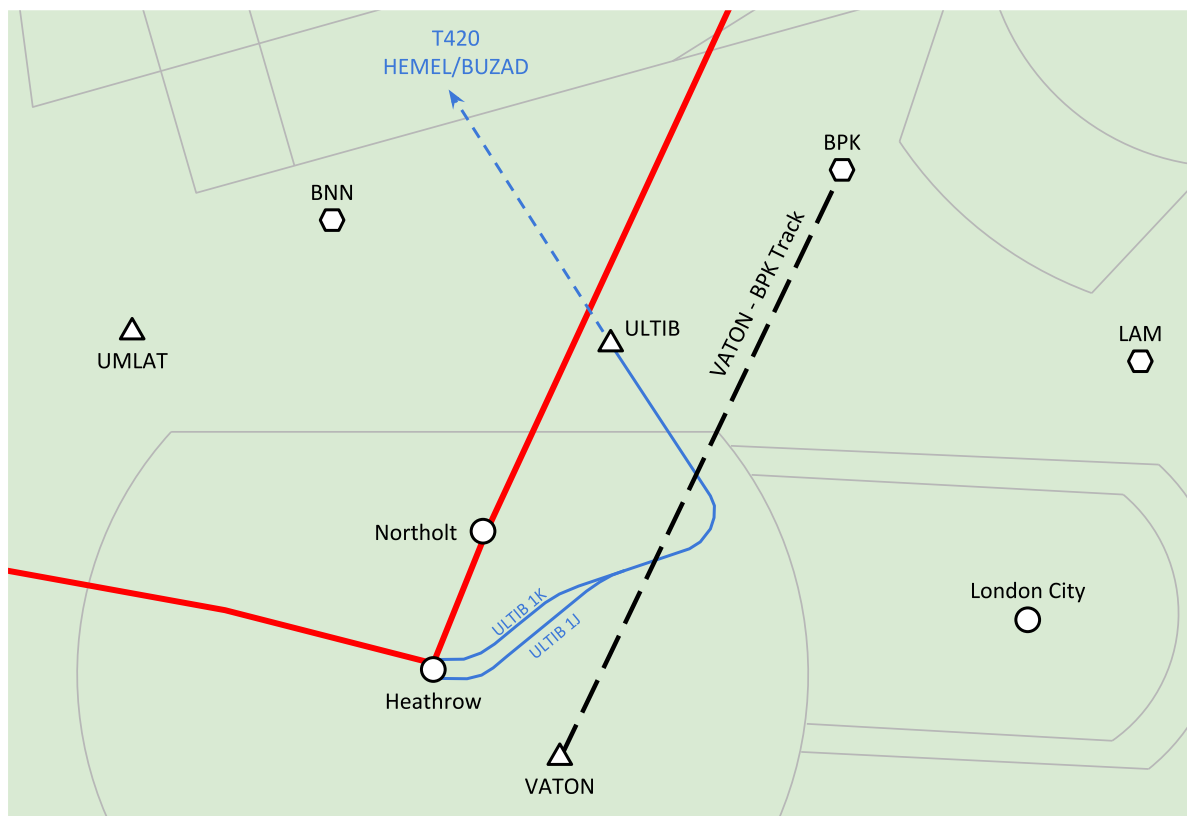
**Note 3:** TC NW is responsible for ensuring separation between this traffic and potentially conflicting Solent/Farnborough and Wessex Group/LTMA departures to TC Midlands within all TC NW airspace. If the departures via CPT are observed to have vacated FL160, then TC Midlands are subsequently responsible 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 3 NM west of the VATON-BPK track without coordination.

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 WEZKO.

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

|                        |  |
|------------------------|--|
| <b>BNN (Bovingdon)</b> | RNAV hold, 1.5-minute legs   |
| <b>Axis</b>            | 116°   |
| <b>Direction</b>       | RIGHT hand   |
| <b>Holding Levels</b>  | MSL+1 – FL170  |
| <b>Speed</b>           | Maximum 220 kts IAS up to FL140<br>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 WEZKO. WEZKO 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 request that TC Midlands initiates holding at WEZKO, 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.

|                       |                      |
|-----------------------|----------------------|
| <b>BOMBO</b>          | RNAV Hold, 5 NM legs |
| <b>Axis</b>           | 091°                 |
| <b>Direction</b>      | LEFT hand            |
| <b>Holding Levels</b> | FL80 – FL140         |
| <b>Speed</b>          | 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.

|                       |                      |
|-----------------------|----------------------|
| <b>WOBUN</b>          | RNAV Hold, 5 NM legs |
| <b>Axis</b>           | 083°                 |
| <b>Direction</b>      | LEFT hand            |
| <b>Holding Levels</b> | FL90 – FL140         |
| <b>Speed</b>          | Maximum 220 kts IAS  |

*Note: The WOBUN hold is separated from the LOREL and BNN hold, but not separated from the BOMBO or WEZKO 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.

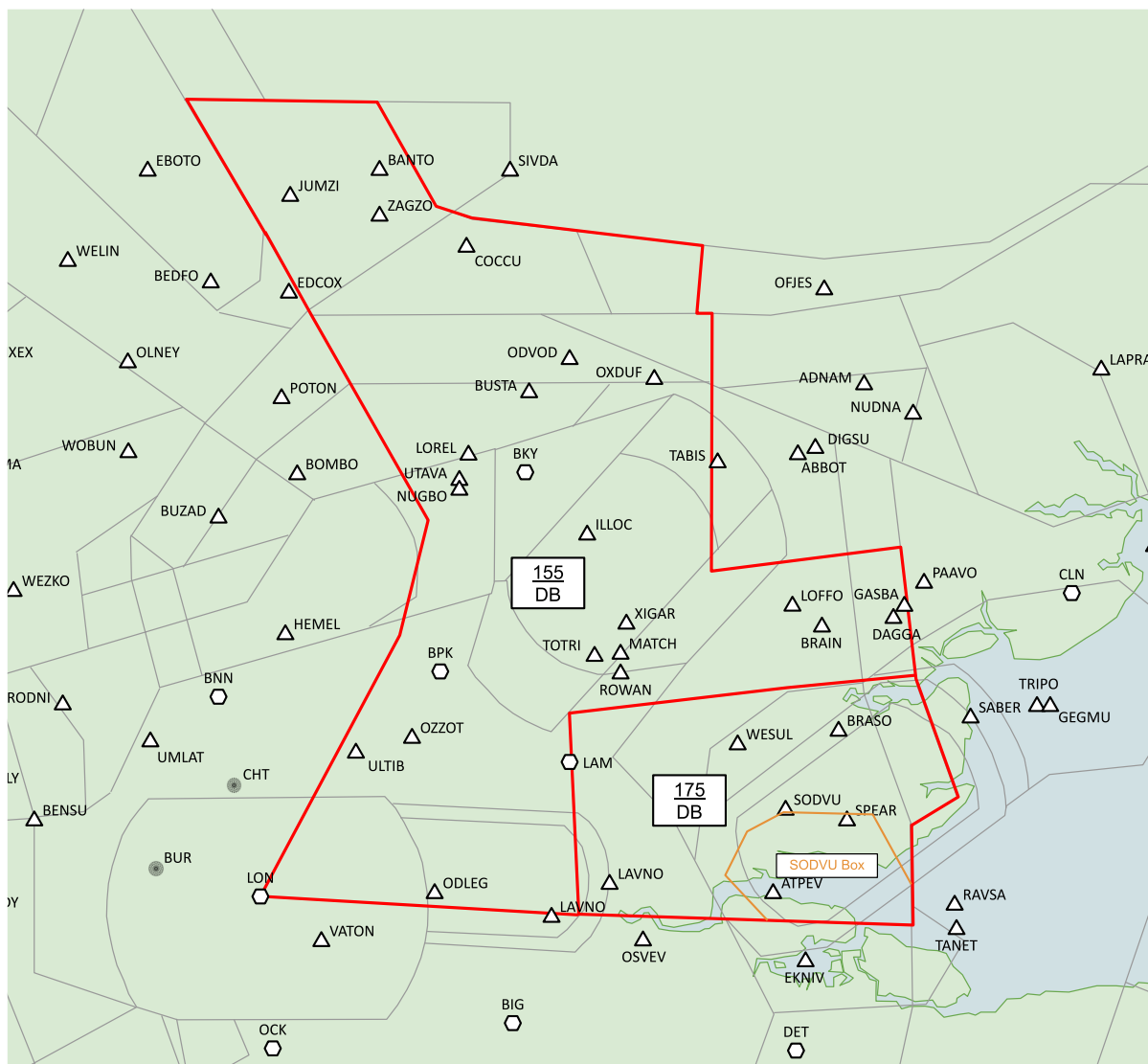
TC NE shall notify TC NW when FL140 or below is available in the LOREL hold.

## 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 operates on frequency 118.825.

### 4.1.2 Delegated Airspace

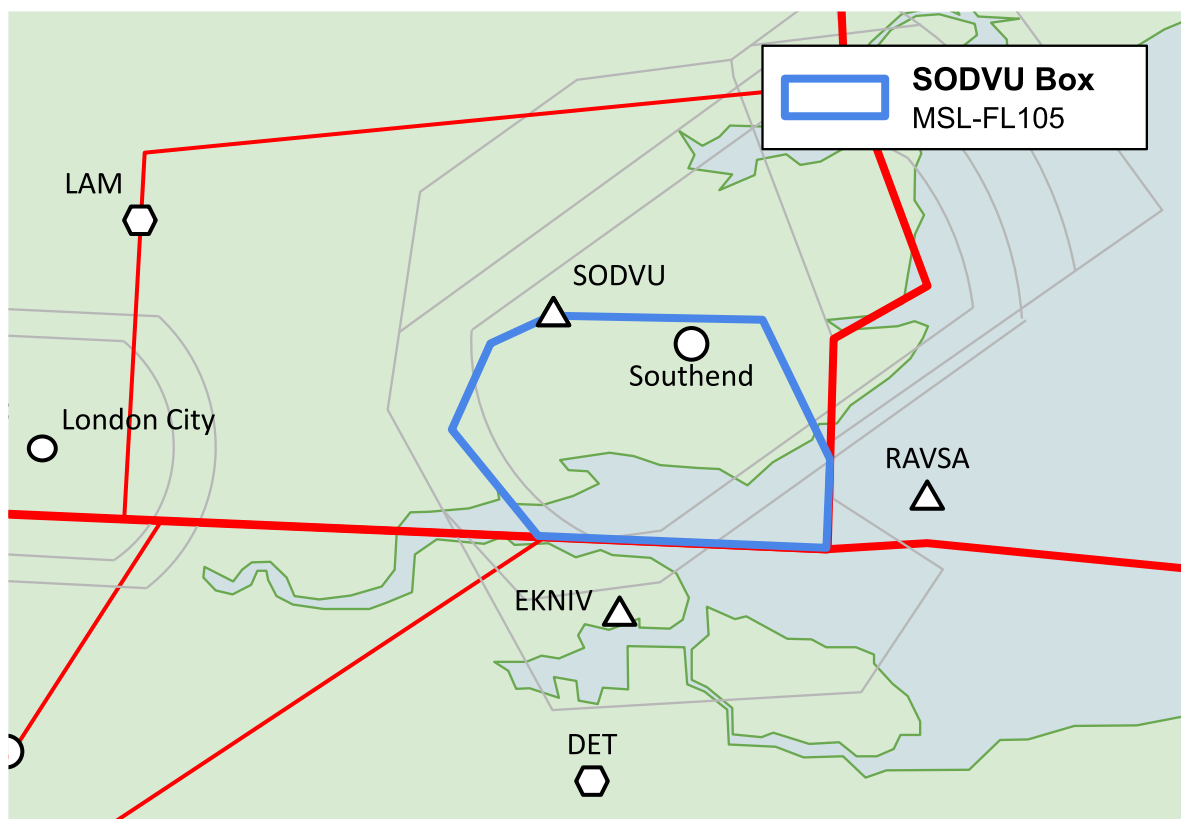
#### 4.1.2.1 SODVU Box

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 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.

##### From TC SE to AC Dover (through TC NE airspace)

| From   | Agreement                   | Conditions                       |
|--------|-----------------------------|----------------------------------|
| (EGKK) | (FL130 lvl TC N/S boundary) | 'Skipped' by TC NE (Notes 1 & 2) |

**Note 1:** To be positioned on a 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 by TC SE with both TC NE and AC Dover.

**Note 2:** This traffic is RFC and RFT in TC NE airspace and must cross the northern edge of the London CTR at or above FL155 to leave TC NE airspace. AC Dover must coordinate with TC NE if this cannot be achieved.

### 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 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).

|                        |   |
|------------------------|---|
| <b>LAM (Lambourne)</b> | RNAV Hold, 1-minute legs (1.5-minute legs FL150+) |
| <b>Axis</b>            | 263°  |
| <b>Direction</b>       | LEFT hand   |
| <b>Holding Levels</b>  | MSL+1 – FL170                                     |
| <b>Speed</b>           | 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).

|                       |                              |
|-----------------------|------------------------------|
| <b>LOREL</b>          | RNAV Hold, 4 NM legs         |
| <b>Axis</b>           | 187°                         |
| <b>Direction</b>      | LEFT hand                    |
| <b>Holding Levels</b> | MSL+1 – FL140 (minimum FL90) |
| <b>Speed</b>          | 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)

|                       |                              |
|-----------------------|------------------------------|
| <b>ZAGZO</b>          | RNAV Hold, 1-minute legs     |
| <b>Axis</b>           | 149°                         |
| <b>Direction</b>      | RIGHT hand                   |
| <b>Holding Levels</b> | MSL+1 – FL140 (minimum FL80) |
| <b>Speed</b>          | 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

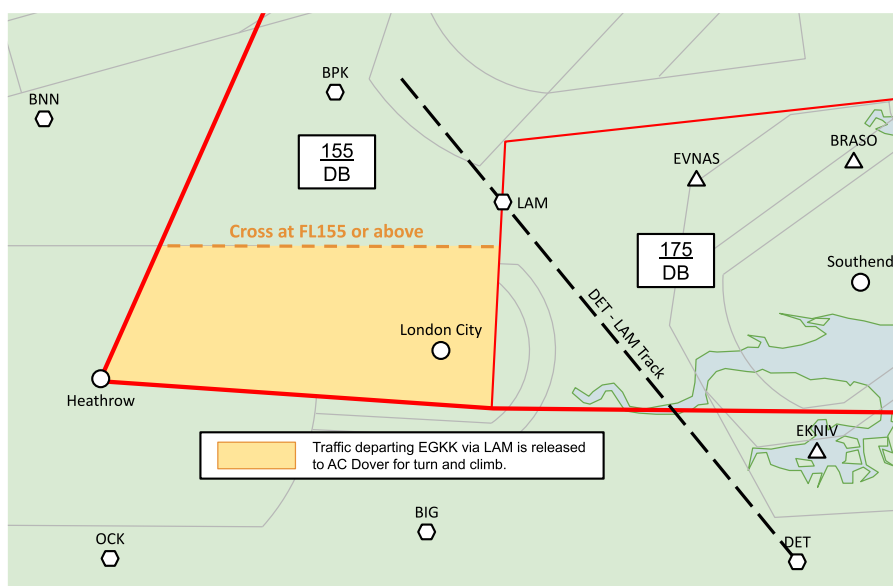
##### 4.4.1 Temporary Level Agreement at LAM Holding Area

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.

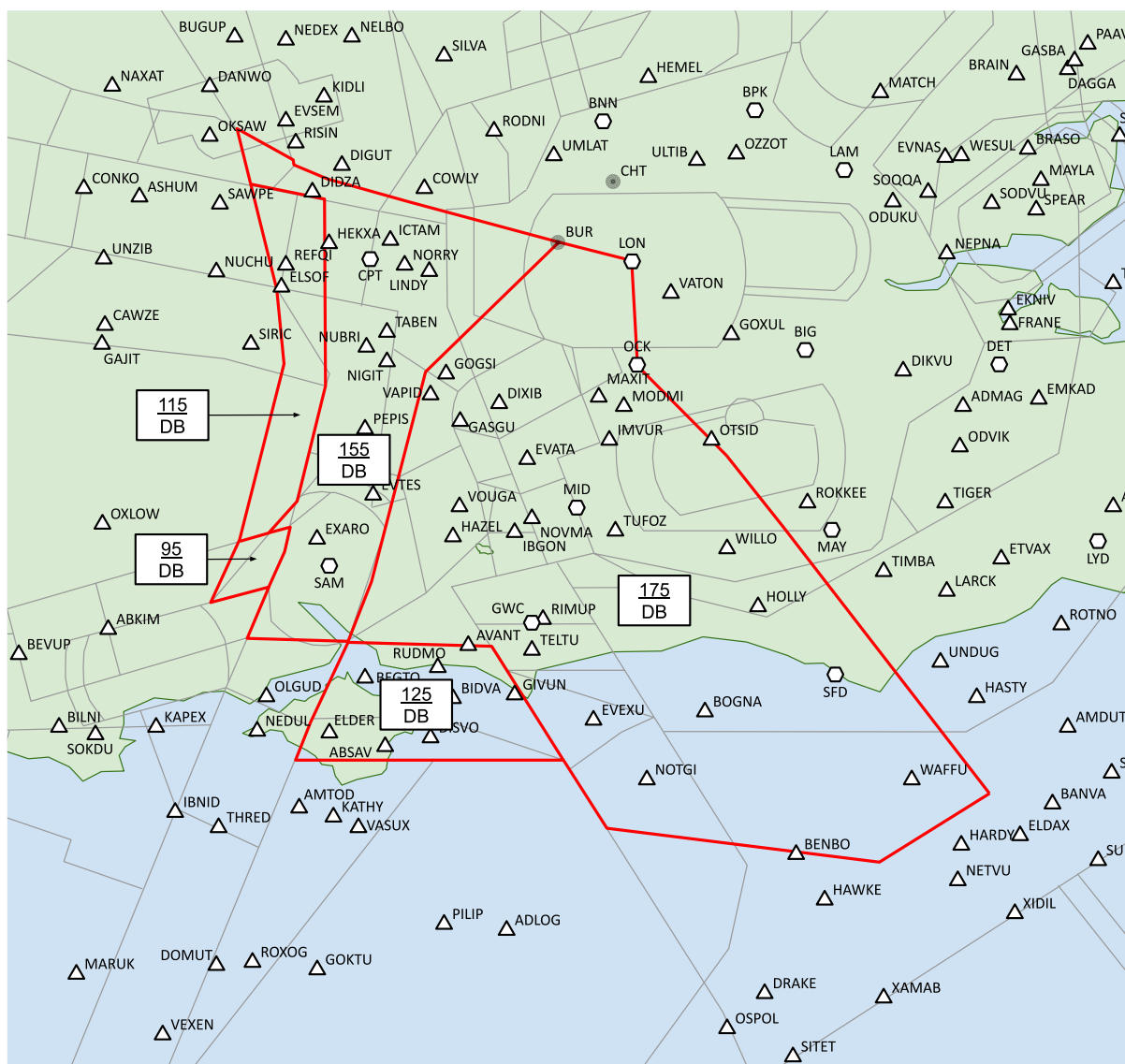
TC East will notify TC NE when holding at ABBOT at FL130 and above.

## 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

TC SW sector operates on frequency 133.180.

## 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,<br>Thames Group | -                  | MSL lvl 11 NM NE of CPT | (Notes 1, 2 & 3)  |
| -                           | Solent Group       | FL110 lvl RISIN         | (Note 4)  |
| -                           | EGLF, Wessex Group | FL110 lvl DIGUT         | (Note 5)  |
| -                           | EGLF, Wessex Group | FL110 lvl CPT           | Inbounds from the east.<br>Speed 250 knots or less.<br>(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 at 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<br>"standard north" departure out of Solent<br>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<br>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 lvl HAZEL                      | 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                     | FL160 lvl 5 NM before OCK                                  |            |
| EGTK                             | FL160 lvl 35 NM before CPT /<br>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 headings).

**5.2.3 External Standing Agreements**

None.

### 5.3 Holding Procedures

#### 5.3.1 Heathrow Holding

##### OCK Hold

|                       |                          |
|-----------------------|--------------------------|
| <b>OCK (Ockham)</b>   | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 328°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | MSL – FL150              |
| <b>Speed</b>          | 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 ORZEB) 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

|                       |                        |
|-----------------------|------------------------|
| <b>WILLO</b>          | RNAV Hold, 5.1 NM legs |
| <b>Axis</b>           | 283°                   |
| <b>Direction</b>      | LEFT hand              |
| <b>Holding Levels</b> | MSL – FL150            |
| <b>Speed</b>          | 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, ADLOG, 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, EGLF and Wessex Group Holding

##### PEPIS Hold

|                       |                          |
|-----------------------|--------------------------|
| <b>PEPIS</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 003°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL70 – FL100             |
| <b>Speed</b>          | Maximum 220 kts IAS      |

##### RUDMO Hold

For aircraft inbound to Southampton/Bournemouth via SAM from ELDAX.

|                       |                          |
|-----------------------|--------------------------|
| <b>RUDMO</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 276°                     |
| <b>Direction</b>      | LEFT hand                |
| <b>Holding Levels</b> | FL80 – FL110             |
| <b>Speed</b>          | 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 Procedures

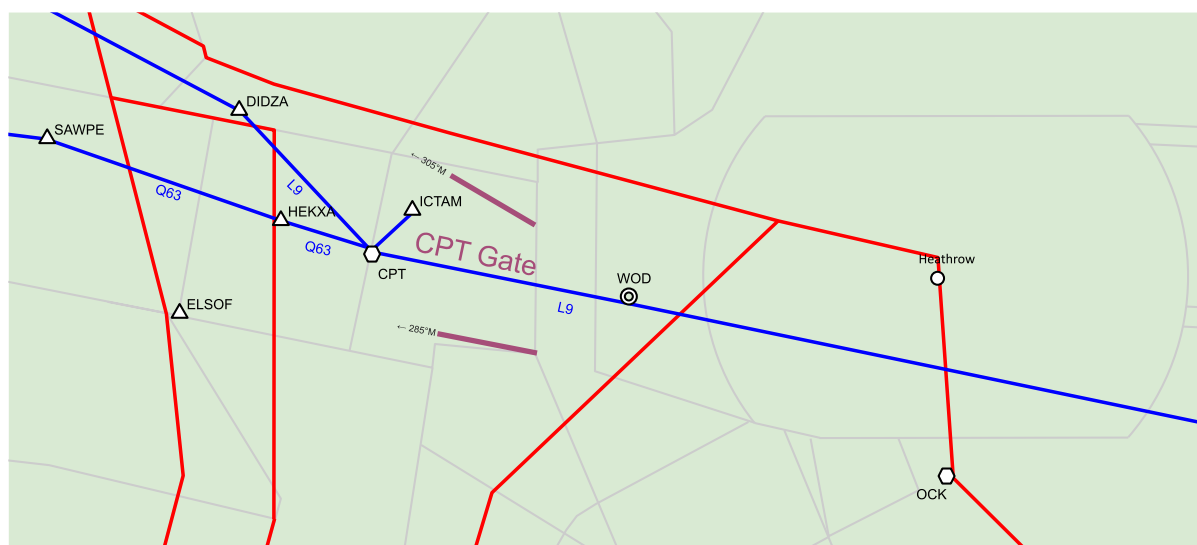
LL INT South is required to take control of aircraft departing easterly CPT Departures, which conflict with the intermediate or final approach pattern.

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 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

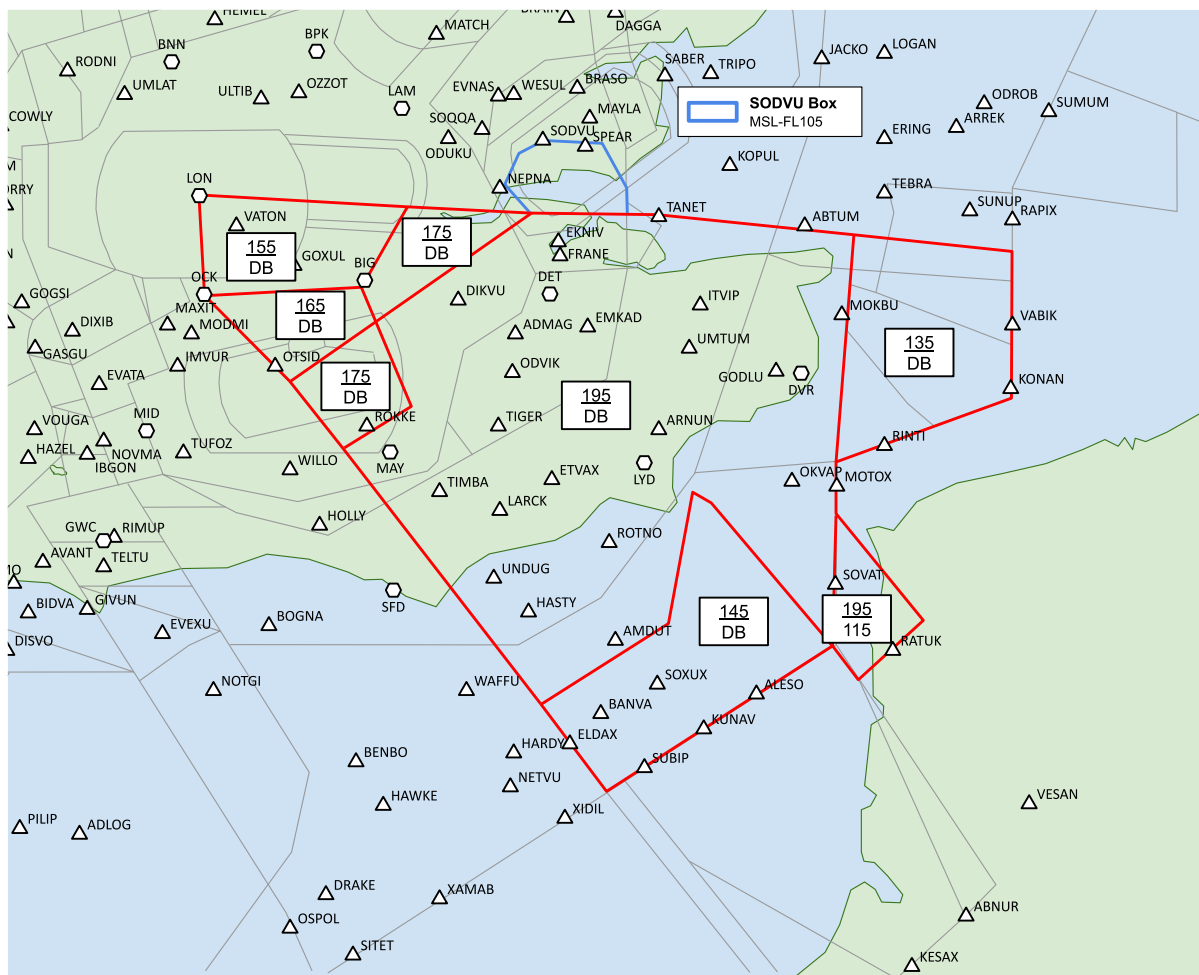
TC SW shall notify AC Worthing when TIMBA is holding at FL130 and above. TC SW and AC Worthing shall then suspend the Standing Agreement of FL130 lvl GWC/TELTU. Temporary routing and level shall be agreed upon.

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 operates on frequency 120.530.

**6.1.2 Delegated Airspace**

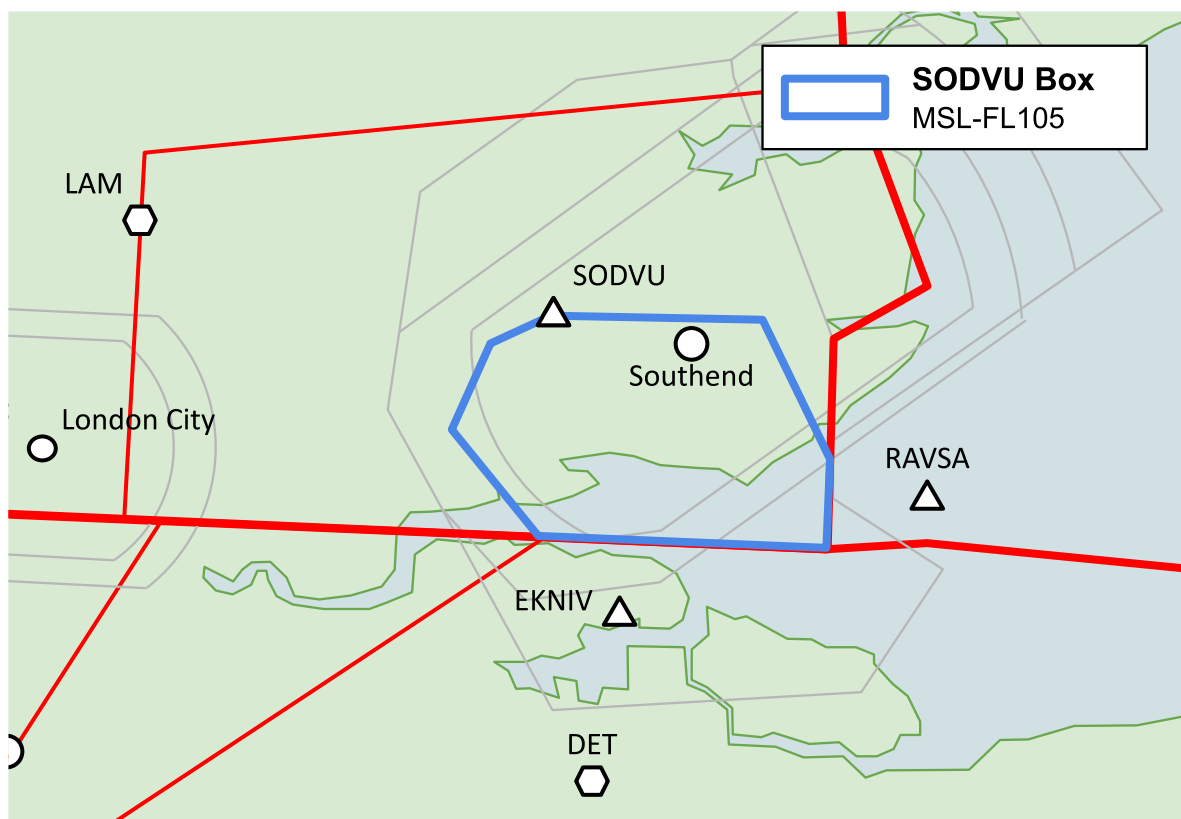
**6.1.2.1 SODVU Box**

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<br>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 &amp; 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 IMI 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 |            |
| EBOS, EBKT, EBFN | ↓ FL190         |            |

**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 | Via LAM. 'Skipped' by TC NE (Notes 1 & 2) |
| Heathrow Group, EGKK | ↑ FL180                   | Via DVR/WIZAD (Note 3)                    |
| Thames Group         | ↑ FL170                   | Via DVR                                   |
| EGSS                 | ↑ FL180                   | <b>Night Only</b> , Via DVR               |

**Note 1:** To be positioned on a 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 by TC SE with both TC NE and AC Dover.

**Note 2:** This traffic is RFC and RFT in TC NE airspace and must cross the northern edge of the London CTR at or above FL155 to leave TC NE airspace. AC Dover must coordinate with TC NE if this cannot be achieved.

**Note 3:** This traffic shall be step climbed if required to ensure 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. Not RFC with AC Dover.

### 6.2.3 External Standing Agreements

#### 6.2.3.1 Paris TB (FL265-)

##### From Paris TB to TC SE

| To           | Agreement               | Conditions                  |
|--------------|-------------------------|-----------------------------|
| Thames Group | FL190 lvl RATUK         | RFD to FL120 north of VESAN |
| Essex Group  | Maximum FL170 lvl RATUK | Low-level traffic only      |

#### 6.2.3.2 Brussels West (FL245-)

##### From TC SE to Brussels West

| To               | Agreement               | Conditions      |
|------------------|-------------------------|-----------------|
| EBOS, EBKT, EBFN | Maximum 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

|                       |  |
|-----------------------|--|
| <b>BIG (Biggin)</b>   | RNAV Hold, 1.5-minute legs   |
| <b>Axis</b>           | 301°   |
| <b>Direction</b>      | RIGHT hand   |
| <b>Holding Levels</b> | MSL+1 – FL150  |
| <b>Speed</b>          | Maximum 220 kts IAS up to FL140<br>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.

|                       |                              |
|-----------------------|------------------------------|
| <b>TIGER</b>          | RNAV Hold, 1.5-minute legs   |
| <b>Axis</b>           | 315°                         |
| <b>Direction</b>      | RIGHT hand                   |
| <b>Holding Levels</b> | FL150 – FL240                |
| <b>Speed</b>          | 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

|                       |                          |
|-----------------------|--------------------------|
| <b>TIMBA</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 308°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | MSL – FL150              |
| <b>Speed</b>          | 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**.

|                       |                          |
|-----------------------|--------------------------|
| <b>AMDUT</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 312°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL160 – FL190            |
| <b>Speed</b>          | 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.

|                       |                          |
|-----------------------|--------------------------|
| <b>ARNUN</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 216°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL100 – FL140            |
| <b>Speed</b>          | 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.

|                       |                          |
|-----------------------|--------------------------|
| <b>GEGMU</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 262°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | 4000 ft – 6000 ft        |
| <b>Speed</b>          | Maximum 195 kts IAS      |

**GODLU Hold**

|                       |                          |
|-----------------------|--------------------------|
| <b>GODLU</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 308°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL80 – FL120             |
| <b>Speed</b>          | Maximum 210 kts IAS      |

**OKVAP Hold**

|                       |                          |
|-----------------------|--------------------------|
| <b>OKVAP</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 001°                     |
| <b>Direction</b>      | LEFT hand                |
| <b>Holding Levels</b> | FL130 – FL150            |
| <b>Speed</b>          | 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 3.4.3 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 Paris ACC**

Sectorisation, separation and silent handover conditions are as described in LAC 3.4.5 Paris & Reims ACCs.

**6.4.2.1 Transfer of Control and Communication**

Transfer of communication shall occur at or before the relevant COP on the AoR boundary. The transfer of traffic on headings requires coordination prior to transfer of communication.

Transfer of control shall occur at the FIR/AoR boundary unless a more generous release is specified.

**6.4.3 Lydd (EGMD)**

**6.4.3.1 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.

**6.4.3.2 Outbound Procedures**

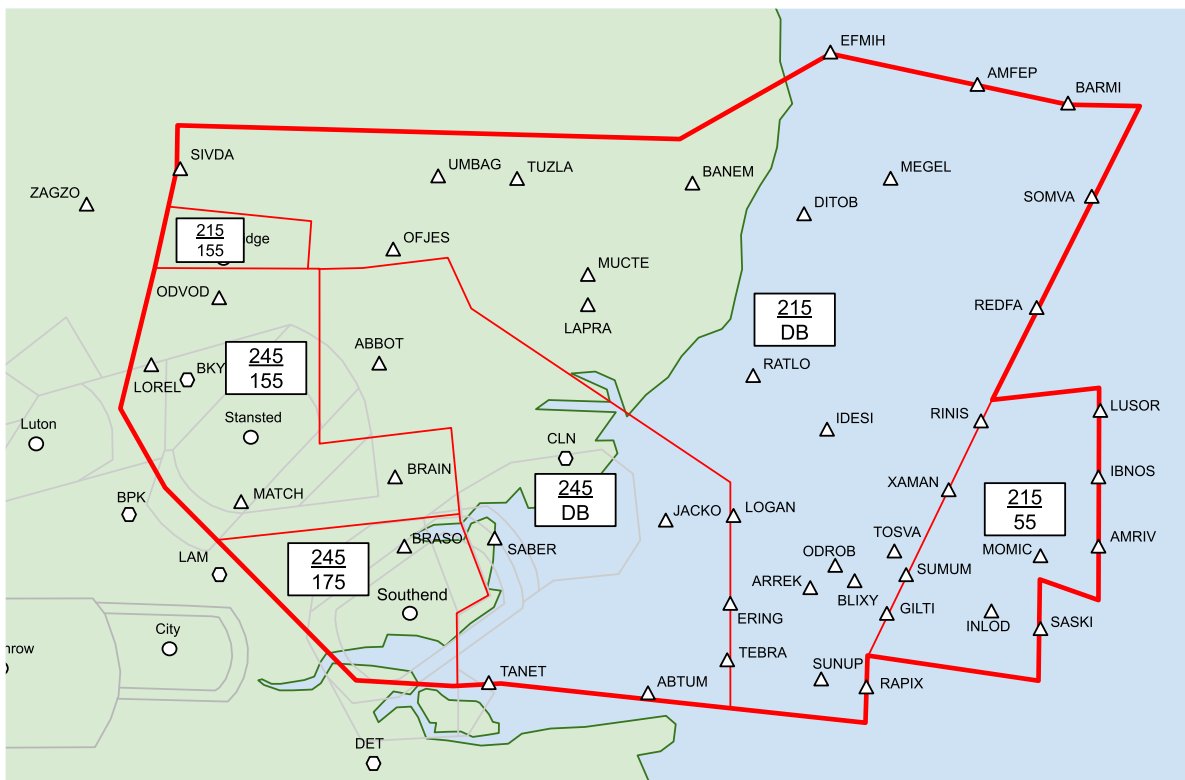
Lydd ADC is to request clearance to join controlled airspace from TC SE giving Callsign, Route and Destination.

## 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

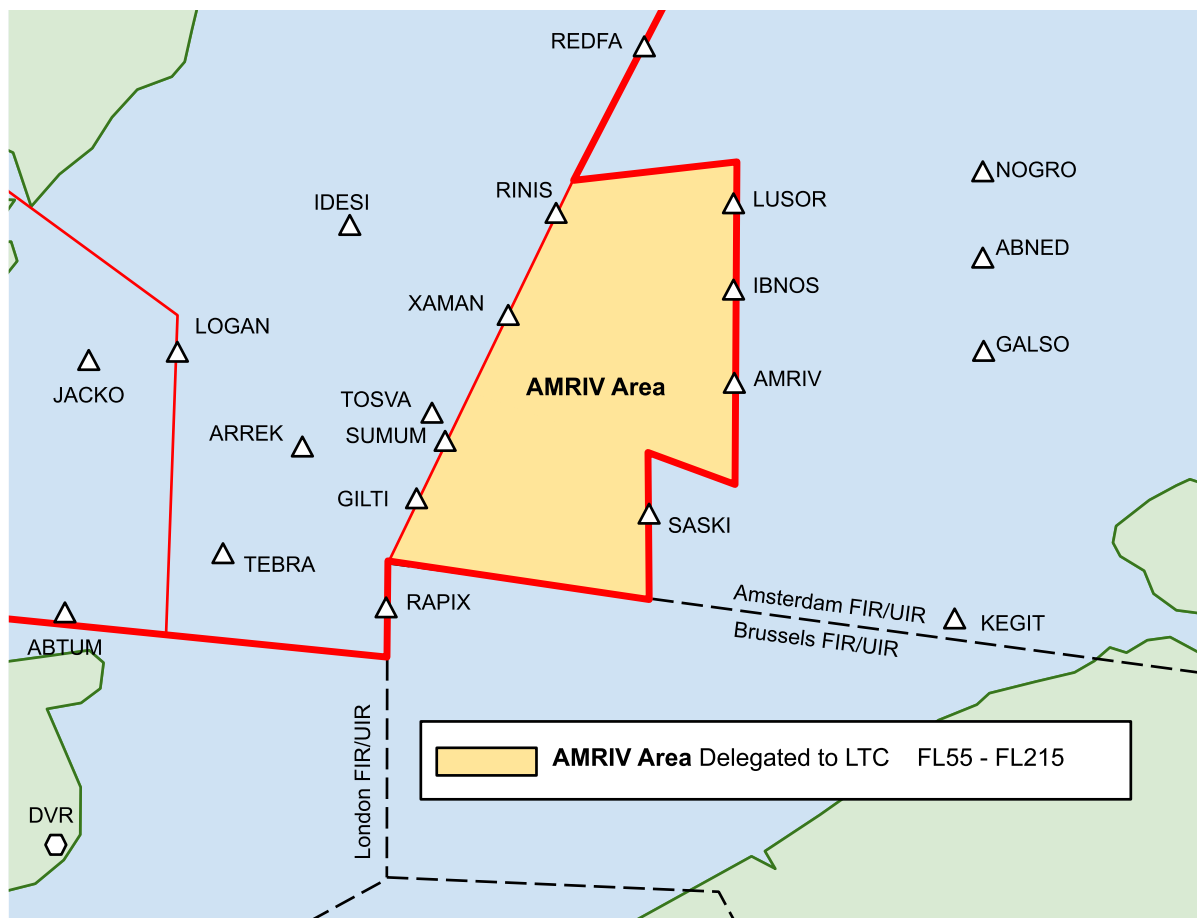


#### 7.1.1 Sector Frequency

TC East operates on frequency 121.230.

### 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 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 /<br>15 NM before IDESI |            |
| Thames Group | FL220 lvl MOMIC   |            |
| Thames Group | FL220 lvl INLOD   |            |

|  |                         |                   |
|--|-------------------------|-------------------|
| Heathrow Group, Brize Group, EGTK,<br>Solent Group, EGLF, Wessex Group | FL250 lvl LOGAN         |                   |
| Brize Group, EGTK, Solent Group,<br>EGLF, Wessex Group                 | FL250 lvl TEBRA         |                   |
| 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,<br>EGGW, EGLF, Wessex Group | ↑ FL230   |            |
| EGSS, EGSC, Thames Group<br>(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,<br>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 North Low (FL245-)**

**From Brussels North Low 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.

|                       |                            |
|-----------------------|----------------------------|
| <b>BRASO</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 263°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | FL180 – FL240              |
| <b>Speed</b>          | Maximum 240 kts IAS        |

### 7.3.2 Essex Group Holding Procedures

#### ABBOT Hold

For aircraft inbound to London Stansted and Cambridge.

|                       |                            |
|-----------------------|----------------------------|
| <b>ABBOT</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 265°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL80) – FL140 |
| <b>Speed</b>          | Maximum 220 kts IAS        |

#### LAPRA Hold

For aircraft inbound to London Stansted, and Cambridge via ABBOT.

|                       |                            |
|-----------------------|----------------------------|
| <b>LAPRA</b>          | RNAV Hold, 1.5-minute legs |
| <b>Axis</b>           | 244°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | FL150 – FL210              |
| <b>Speed</b>          | Maximum 240 kts IAS        |

#### MUCTE Hold

For aircraft inbound to London Luton via ZAGZO.

|                       |  |
|-----------------------|--|
| <b>MUCTE</b>          | RNAV Hold, 1.5-minute legs   |
| <b>Axis</b>           | 277°   |
| <b>Direction</b>      | RIGHT hand   |
| <b>Holding Levels</b> | FL150 – FL210  |
| <b>Speed</b>          | Standard ICAO Holding Speeds up to FL200<br>Maximum 250 kts IAS at FL210 |

### 7.3.3 Thames Holding Procedures

#### JACKO Hold

|                       |                          |
|-----------------------|--------------------------|
| <b>JACKO</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 263°                     |
| <b>Direction</b>      | LEFT hand                |
| <b>Holding Levels</b> | FL80 – FL140             |
| <b>Speed</b>          | Maximum 210 kts IAS      |

**ROPMU Hold**

For aircraft inbound to London City/Biggin Hill via JACKO from MCT, WAL or HON.

|                       |                          |
|-----------------------|--------------------------|
| <b>ROPMU</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 097°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL160 – FL210            |
| <b>Speed</b>          | 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 EFMIH**

All LTMA Group departures via EFMIH (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.

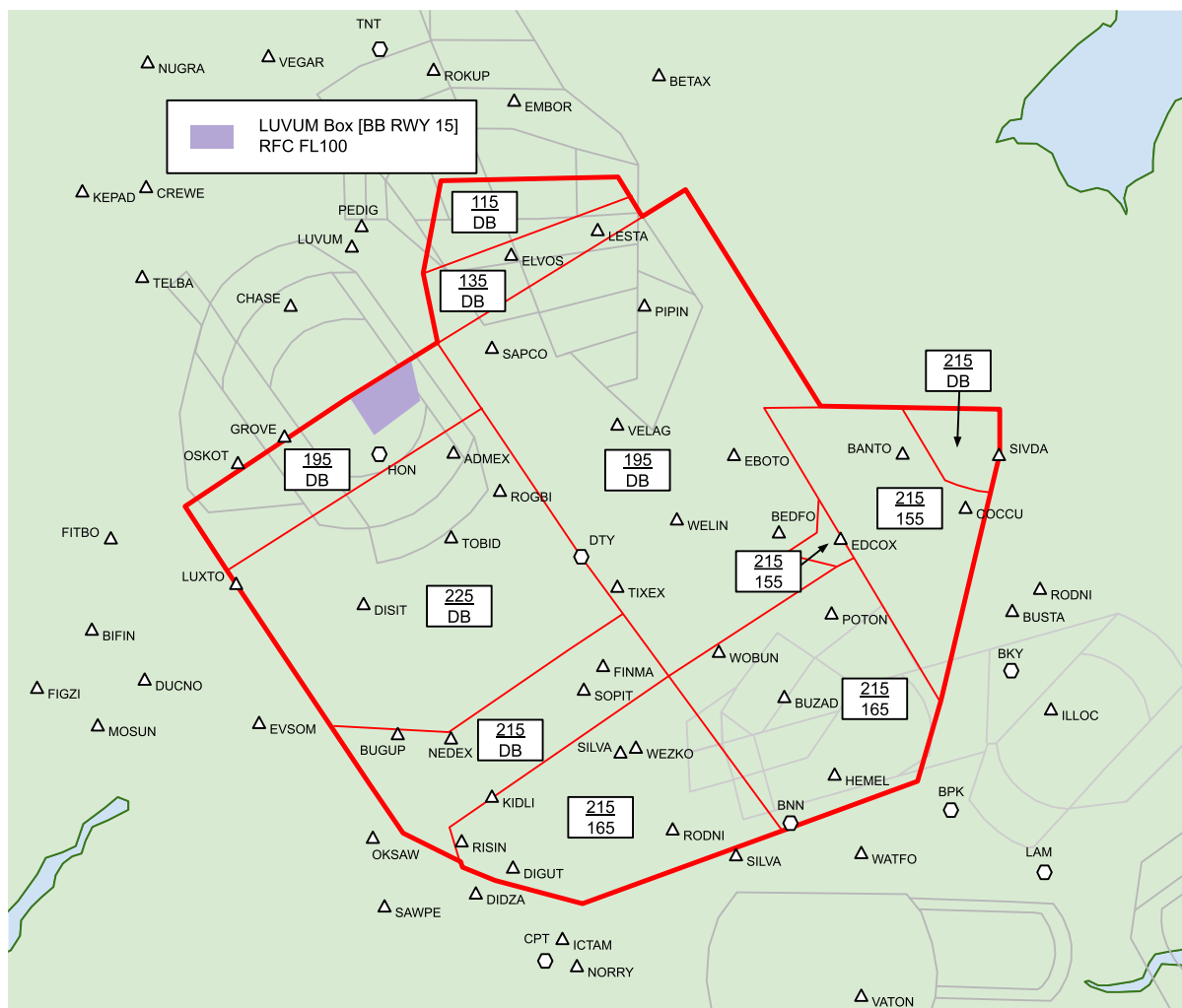
**Note 2:** Traffic transferred from Brussels ACC and London AC Clacton to London TC East is released for descent to FL110 west of BULAM.

## 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 operates on frequency 121.030.

#### 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 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 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 lvl SILVA                    |            |
| 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 Ivl 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.

#### From TC Midlands to AC West

| From | Agreement       | Via  |
|------|-----------------|--|
| EGNX | FL170 Ivl LUXTO | SAPCO DCT LUXTO, available 0025-0835 (2325-0735) |

## 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 WEZKO, 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.

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>HON</b>            | RNAV Hold, 1.5-minute legs        |
| <b>Axis</b>           | 144°                              |
| <b>Direction</b>      | LEFT/RIGHT hand ( <i>Note 1</i> ) |
| <b>Holding Levels</b> | FL150 – FL350                     |
| <b>Speed</b>          | 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.

#### WEZKO Hold

When the Bovingdon (BNN) hold is full, TC NW may instruct TC Midlands to hold aircraft inbound London Heathrow at WEZKO.

|                       |   |
|-----------------------|---|
| <b>WEZKO</b>          | RNAV Hold, 1.5-minute legs  |
| <b>Axis</b>           | 188°  |
| <b>Direction</b>      | RIGHT hand  |
| <b>Holding Levels</b> | FL90 – FL200  |
| <b>Speed</b>          | Maximum 220 kts IAS up to and including FL140<br>Standard ICAO Holding Speeds FL150 and above |

8.4 Coordination with Adjacent Units, Sectors and Airfields

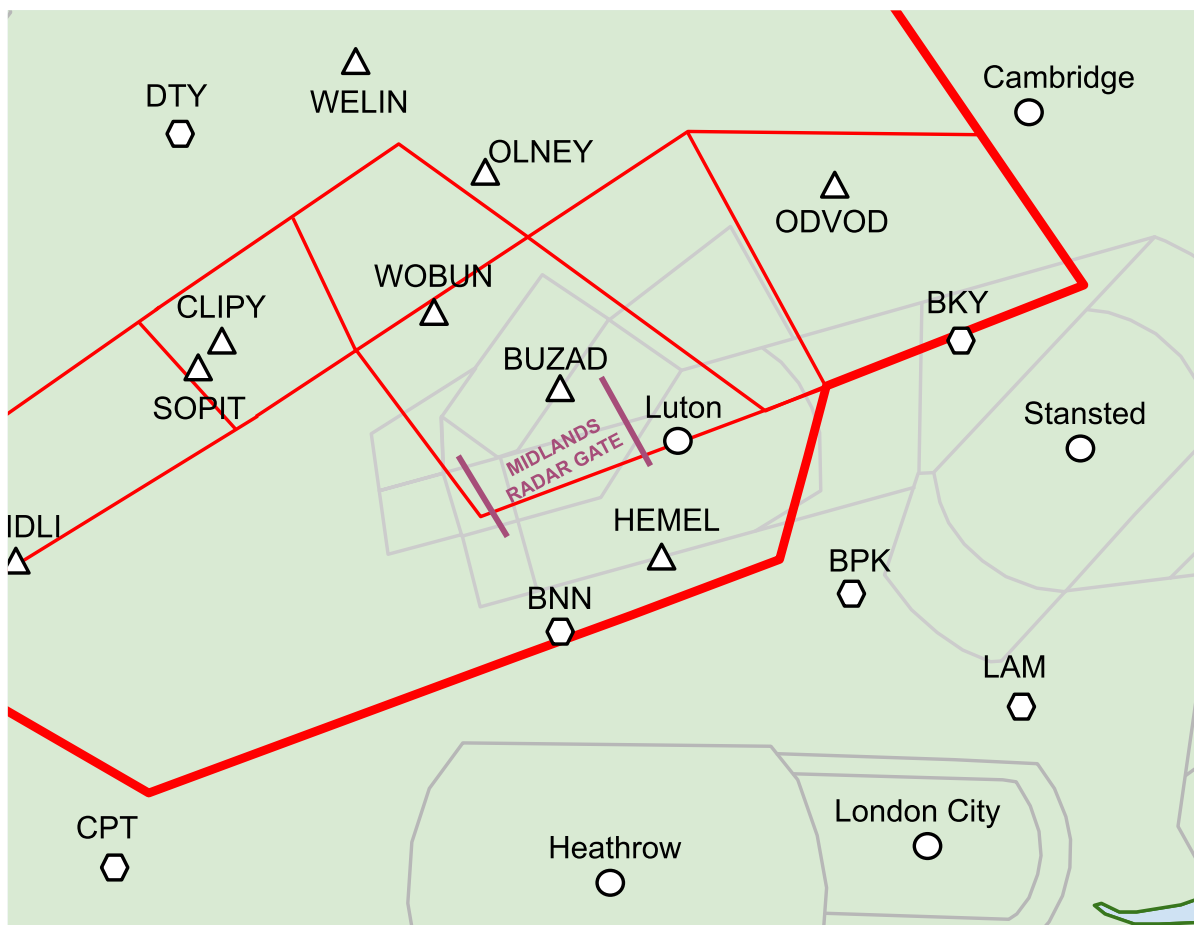
8.4.1 Midlands Radar Gate

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 on own navigation or on a heading (See Note). Traffic to EGNX should be positioned east of traffic to EGGB.

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

Figure LTC-14 – Midlands Radar Gate



8.4.2 LTMA Inbounds

PC Southeast will endeavour to position inbounds to the London TMA according to their destination.

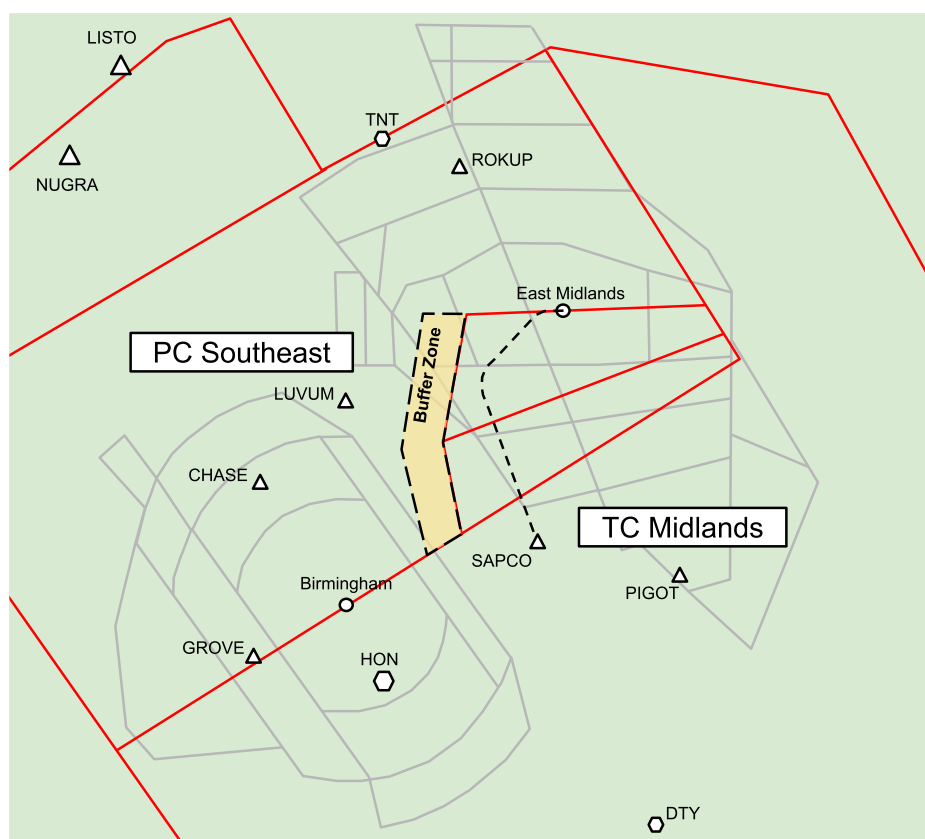
| Routing/Destination                 |                   |                 |      |                   |      |                   |
|-------------------------------------|-------------------|-----------------|------|-------------------|------|-------------------|
| ← West                              | HON (Honiley VOR) |                 |      |                   |      | East →            |
| Solent Group,<br>EGLF, Wessex Group | EGKK              | BNN<br>Arrivals | EGMC | LOREL<br>Arrivals | EGGW | JACKO<br>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 departures from Birmingham (via LUVUM) being controlled by PC Southeast, and southbound departures from East Midlands (via SAPCO-DTY) 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 LTC-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 in use at East Midlands, PC Southeast have full use of the Buffer Zone, 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 | 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.



### 1.2.1 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

|   |  |  |
|---|--|--|
| <b>MAN_CTR</b><br>PC Bandbox<br>133.200 | <b>MAN_E_CTR</b><br>PC East<br>133.800 | <b>MAN_NE_CTR</b><br>PC Northeast<br>135.715 |
|   |  | <b>MAN_SE_CTR</b><br>PC Southeast<br>134.430 |
| <b>MAN_W_CTR</b><br>PC West<br>128.055  |  |  |

### 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 Agreements

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 **Error! Reference source not found.** 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 at and above FL120, transferring them to the relevant approach control unit as they descend to FL110 or below, in the hold.

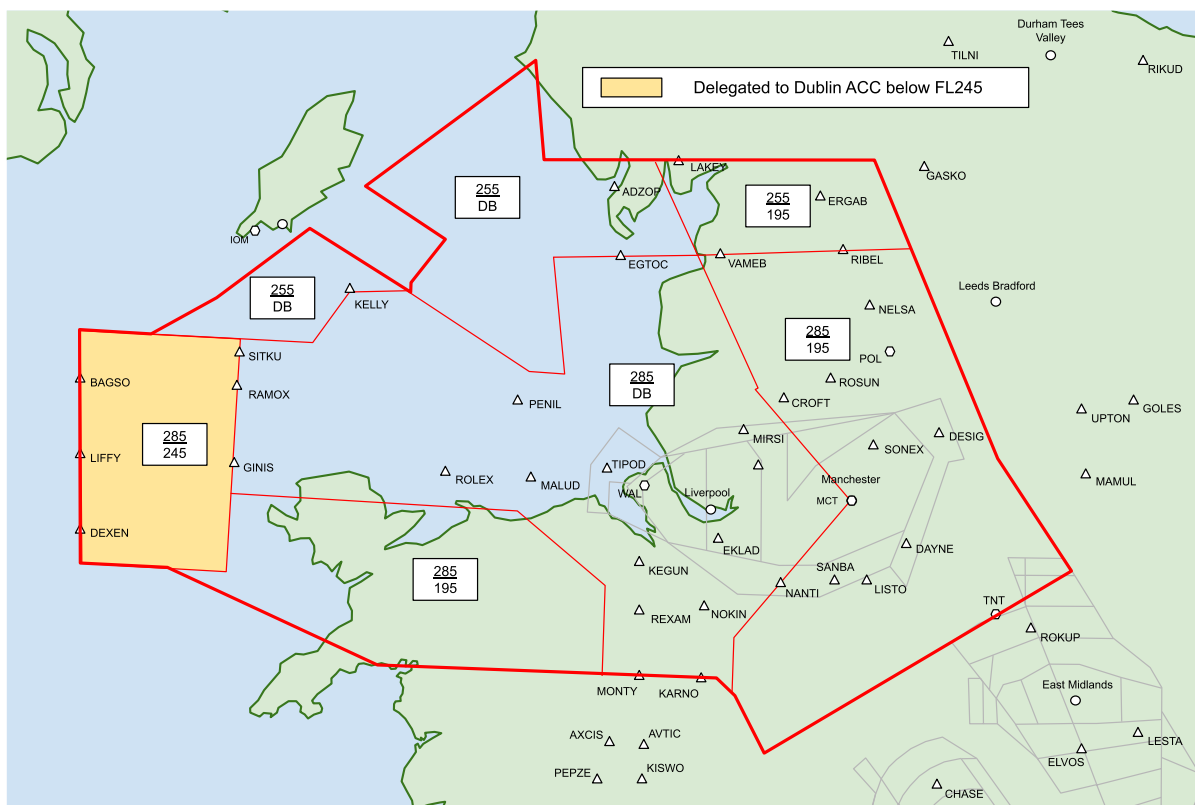
Holding should not be allowed to extend beyond the upper limit of the PC sector. It may be necessary to keep some levels vacant, to enable overflights to transit through the stack area. Additional holding should take place at the designated en-route hold.

## 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

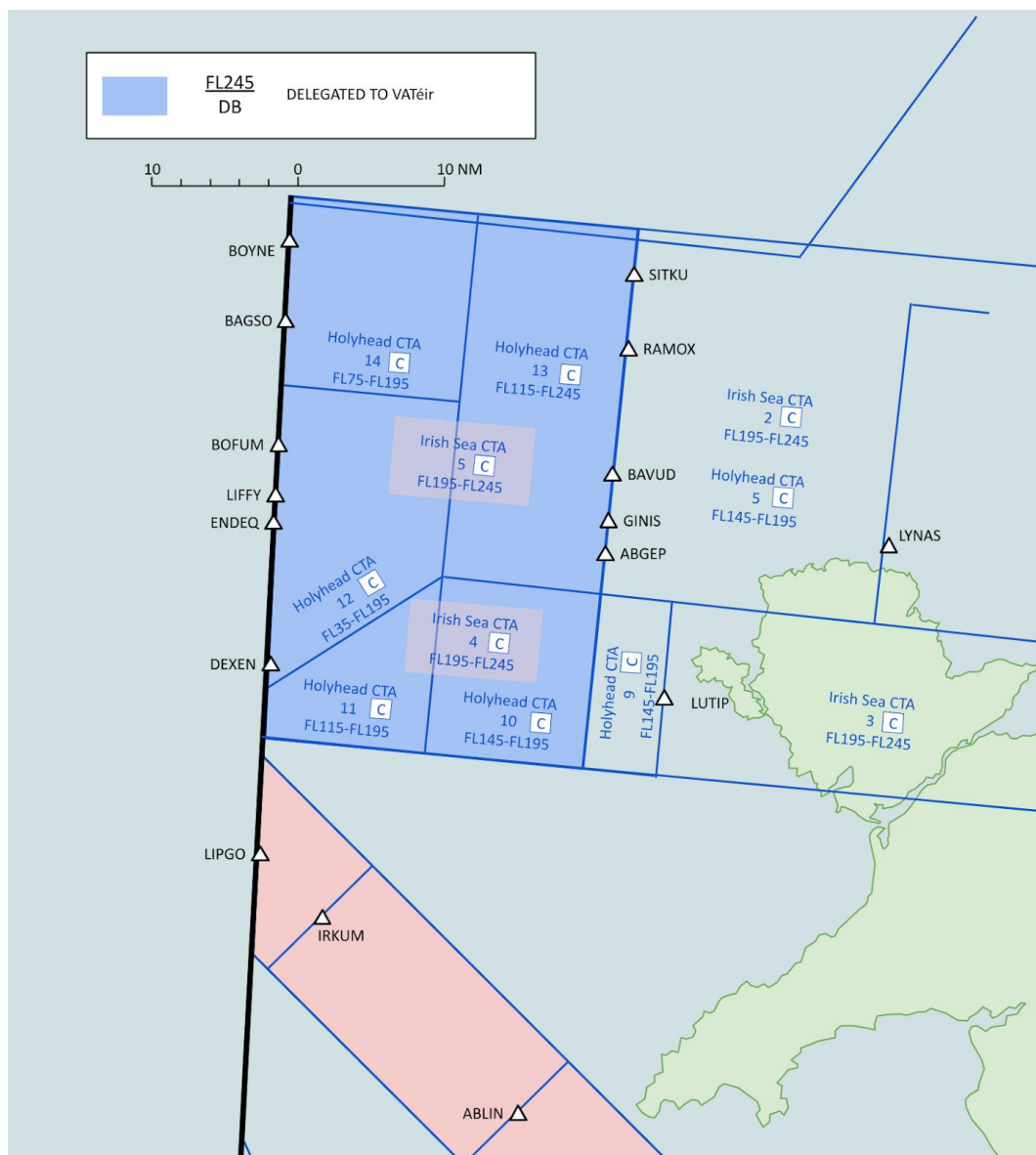
PC West operates on frequency 128.055.

### 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     | Via OMENU-POL |

##### 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 headings).

### 3.2.2.4 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.

### 3.2.2.5 ScAC Borders

#### From ScAC Borders to PC West

| To  | Agreement       | Conditions |
|---|-----------------|------------|
| Midlands Group, EGNJ, EGXC, EGXW and EGYD | FL270 lvl VAMEB |            |

#### From PC West to ScAC Borders

| From                            | Agreement       | Conditions |
|---------------------------------|-----------------|------------|
| MTMA Group, EGXC, EGXW and EGYD | FL250 lvl ERGAB | (See Note) |
| Midlands Group and EGNJ         | ↑ FL280         |            |

**Note:** PC West shall notify SctMA Tallá (FL255-) of traffic unable to achieve FL250 lvl ERGAB and determine whether they wish to work the traffic.

**3.2.2.6 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.

**3.2.2.7 Shannon LIFFY (FL245+)****From Shannon LIFFY to PC West**

| To                                 | Agreement             | Conditions |
|------------------------------------|-----------------------|------------|
| EGGP, EGNR, EGNE, EGNH, EGNM, EGNO | FL270 lvi 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 lvi RAMOX | (See Note) |

**Note:** This traffic is RFC with Lakes to any level and RFT after passing (abeam) RAMOX, subject to known traffic. This includes traffic transferred on a heading.

### 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 (RNAV5 via KELLY) should be positioned by PC West on a heading towards or north of KELLY prior to transfer to Rathlin.

Eastbound traffic on the L10 ATS route will be positioned by Rathlin on a heading towards or south of INKOB prior to transfer to PC West.

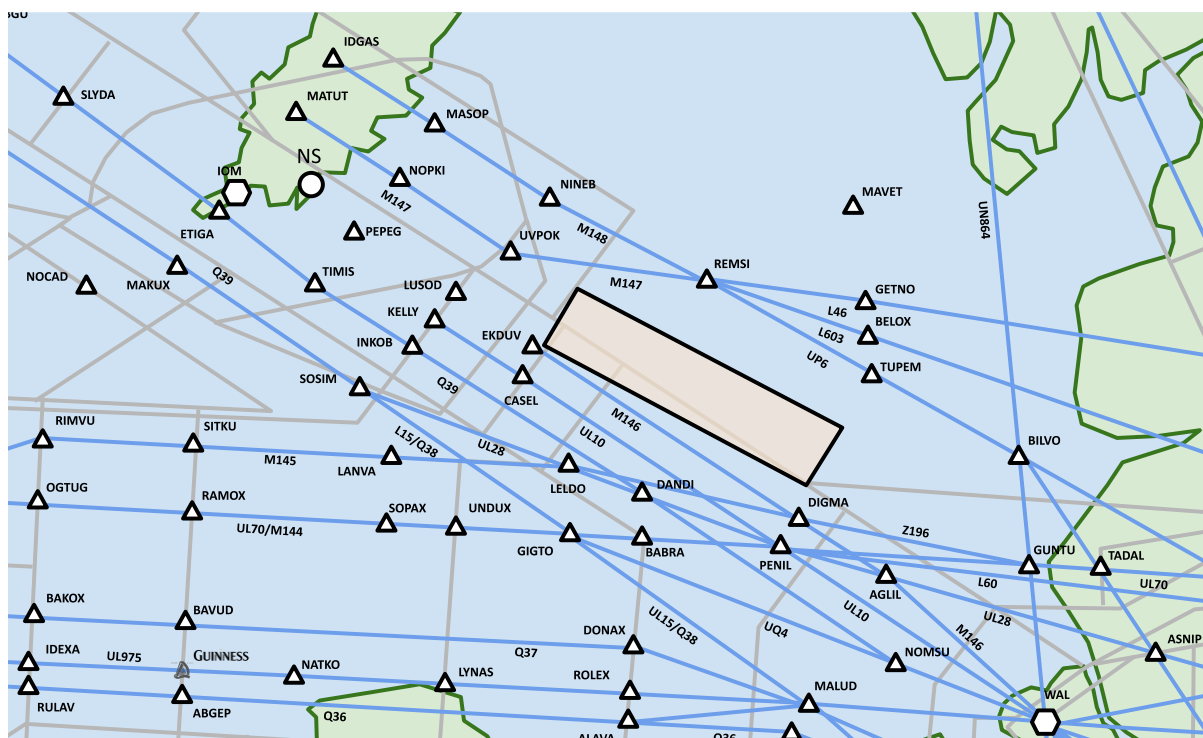
#### 3.3.3.2 The REMSI Buffer Zone

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 Coordination with ScTMA Galloway

#### 3.3.4.1 Traffic Positioning

Galloway will endeavour to position traffic from the ScTMA that is inbound to EGKK, EGHI, EGHH, EGLF or the Wessex Group, or if it is overflying the LTMA, to the west of other traffic.

Galloway will also endeavour to position traffic inbound to EGBB and EGBE to the west of traffic inbound to EGNX.

#### 3.3.4.2 Traffic Routing Between DCS and WAL – FL190- Southbound

Traffic routing between DCS and WAL at FL190 and below (i.e. beneath N864) will be coordinated by Galloway with PC West and/or Warton Radar, as appropriate. Galloway will transfer the aircraft once south of DCS and outside of CAS to Warton Radar in accordance with any agreed conditions.

Traffic should then be descended by Warton Radar to remain outside of PC West airspace, who will then contact PC West for a joining clearance via WAL.

### 3.3.6 Dublin & Shannon ACCs

#### 3.3.6.1 Sectorisation

##### 3.3.6.1.1 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)

|                               |                           |
|-------------------------------|---------------------------|
| <b>EIDW_LN_CTR</b><br>132.580 | <b>Dublin Upper North</b> |
|-------------------------------|---------------------------|

##### Dublin Upper North (FL125-FL245)

|                               |                              |
|-------------------------------|------------------------------|
| <b>EIDW_UN_CTR</b><br>129.180 | <b>Shannon LIFFY – Upper</b> |
|-------------------------------|------------------------------|

##### Dublin Lower South (DB-FL125)

|                               |                           |
|-------------------------------|---------------------------|
| <b>EIDW_LS_CTR</b><br>120.755 | <b>Dublin Lower North</b> |
|-------------------------------|---------------------------|

##### Dublin Upper South (FL125-FL245)

|                               |                           |
|-------------------------------|---------------------------|
| <b>EIDW_US_CTR</b><br>135.655 | <b>Dublin Upper North</b> |
|-------------------------------|---------------------------|

##### 3.3.6.1.2 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)

|                                |
|--------------------------------|
| <b>EISN_(E_)CTR</b><br>134.260 |
|--------------------------------|

#### 3.3.6.2 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.

### 3.3.6.3 Transfer of Control and Communication

#### 3.3.6.3.1 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<br>(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.

#### 3.3.6.3.2 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<br>(Note 1)         | N/A                            | Abeam DUB                      |
| (U)L975       | LIFY               | LIFY<br>(Note 1)          | N/A                            | Abeam DUB                      |
| Q36           | ENDEQ              | ENDEQ<br>(Note 1)         | N/A                            | Abeam DUB                      |
| (U)Y124       | DEXEN              | DEXEN<br>(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.

#### 3.3.6.4 Level Planning

For Standing Agreements, see [MPC 3.2.2.7](#) & [3.2.2.8](#).

### 3.3.6.5 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.

### 3.3.6.6 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.

#### 3.3.6.6.1 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.

### 3.3.6.7 RAMOX Buffer Zone

The RAMOX Buffer Zone (see Figure MPC-5, [next page](#)) 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.

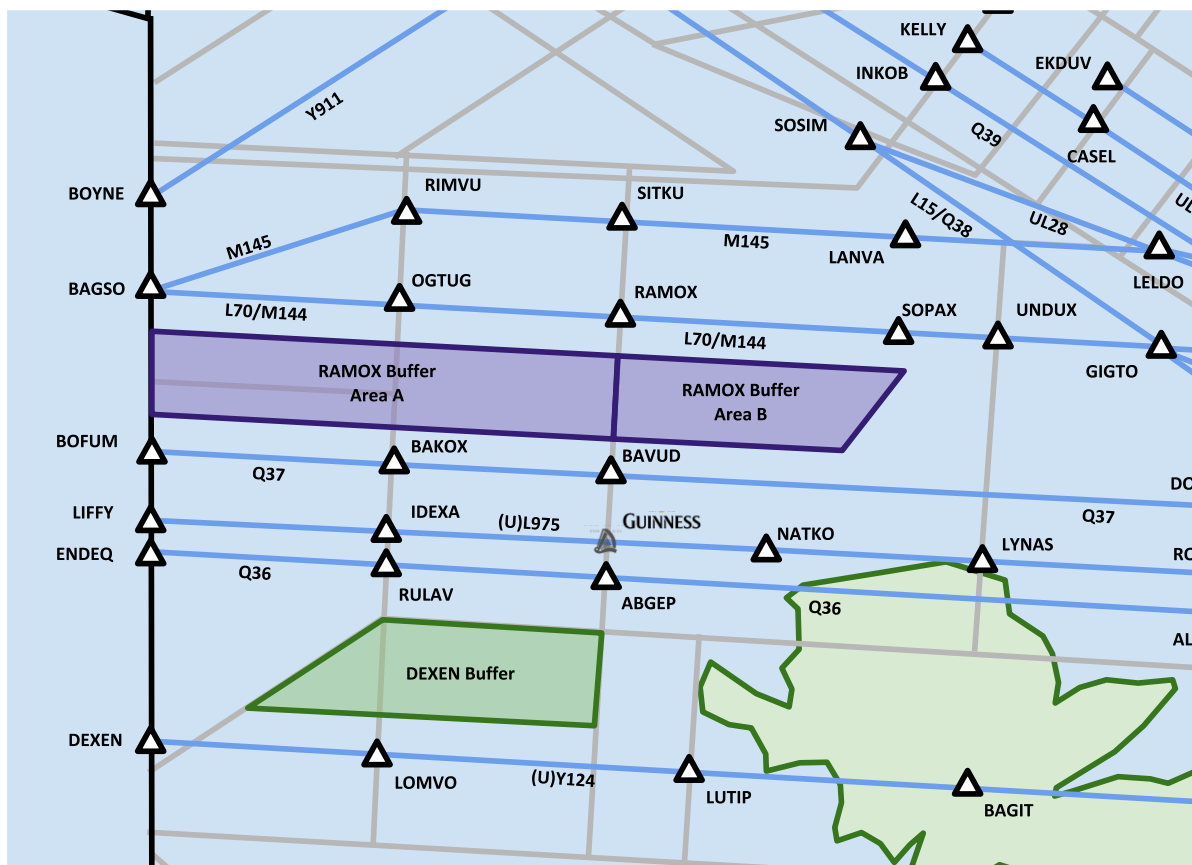
PC West must ensure both Area A and Area B are displayed at all times: **Display Settings → Stars → RAMOX Buffer Area A & RAMOX Buffer Area B.**

### 3.3.6.8 DEXEN Buffer Zone

The DEXEN Buffer Zone (see Figure MPC-5, [next page](#)) 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



### 3.3.7 Blackpool (EGNH)

#### 3.3.7.1 Inbound Procedures

Blackpool inbounds will be routed in accordance with the table below:

|                  |  |
|------------------|--|
| <b>Via WAL</b>   | Inbound routing will be <b>WAL – ESTRY – EGNH</b> .<br><i>Note: ESTRY is not a published hold, and therefore traffic will not be held at this point.</i>   |
| <b>Via POL</b>   | PC West will request an inbound level from Blackpool APC.  |
| <b>Via DCS</b>   | PC West will not control this traffic.   |
| <b>From West</b> | If planned at FL55 and above, PC West will be responsible for the flights <ul style="list-style-type: none"> <li>- PC West will pass an estimate (including the SSR code) to Blackpool APC.</li> <li>- PC West will request an inbound level from Blackpool APC. When clear of conflicts, the traffic will be transferred to Blackpool APC.</li> </ul> |

#### 3.3.7.2 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

### 3.3.8 Hawarden (EGNR)

#### 3.3.8.1 Inbound Procedures

All inbounds will route to KEGUN.

| Via                      | Route   |
|--------------------------|---|
| (U)N601/P6               | <b>LESTA – TNT – NANTI – KEGUN (KEGUN 2A)</b> |
| N57/T420/Q4              | <b>TNT – NANTI – KEGUN (KEGUN 2B)</b>         |
| N57(Y53)/M605            | <b>PEDIG – NANTI – KEGUN (KEGUN 2C)</b>       |
| (U)N864                  | <b>MONTY – KEGUN</b>                          |
| (U)L975 <i>Eastbound</i> | <b>LYNAS – WAL – TORGO – KEGUN</b>            |
| (U)L10 <i>Eastbound</i>  | <b>IOM – WAL – TORGO – KEGUN</b>              |
| (U)L612                  | <b>CROFT – WAL – TORGO – KEGUN</b>            |
| (U)L975 <i>Westbound</i> | <b>DESIG – WAL – TORGO – KEGUN</b>            |

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.

#### 3.3.8.2 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

|                       |                            |
|-----------------------|----------------------------|
| <b>MIRSI</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 061°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL60) – FL140 |
| <b>Speed</b>          | 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.

|                       |                            |
|-----------------------|----------------------------|
| <b>TIPOD</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 117°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL70) – FL100 |
| <b>Speed</b>          | Maximum 210 kts IAS        |

#### KEGUN Hold

|                       |                            |
|-----------------------|----------------------------|
| <b>KEGUN</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 003°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | MSL (Minimum FL70) – FL100 |
| <b>Speed</b>          | 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.

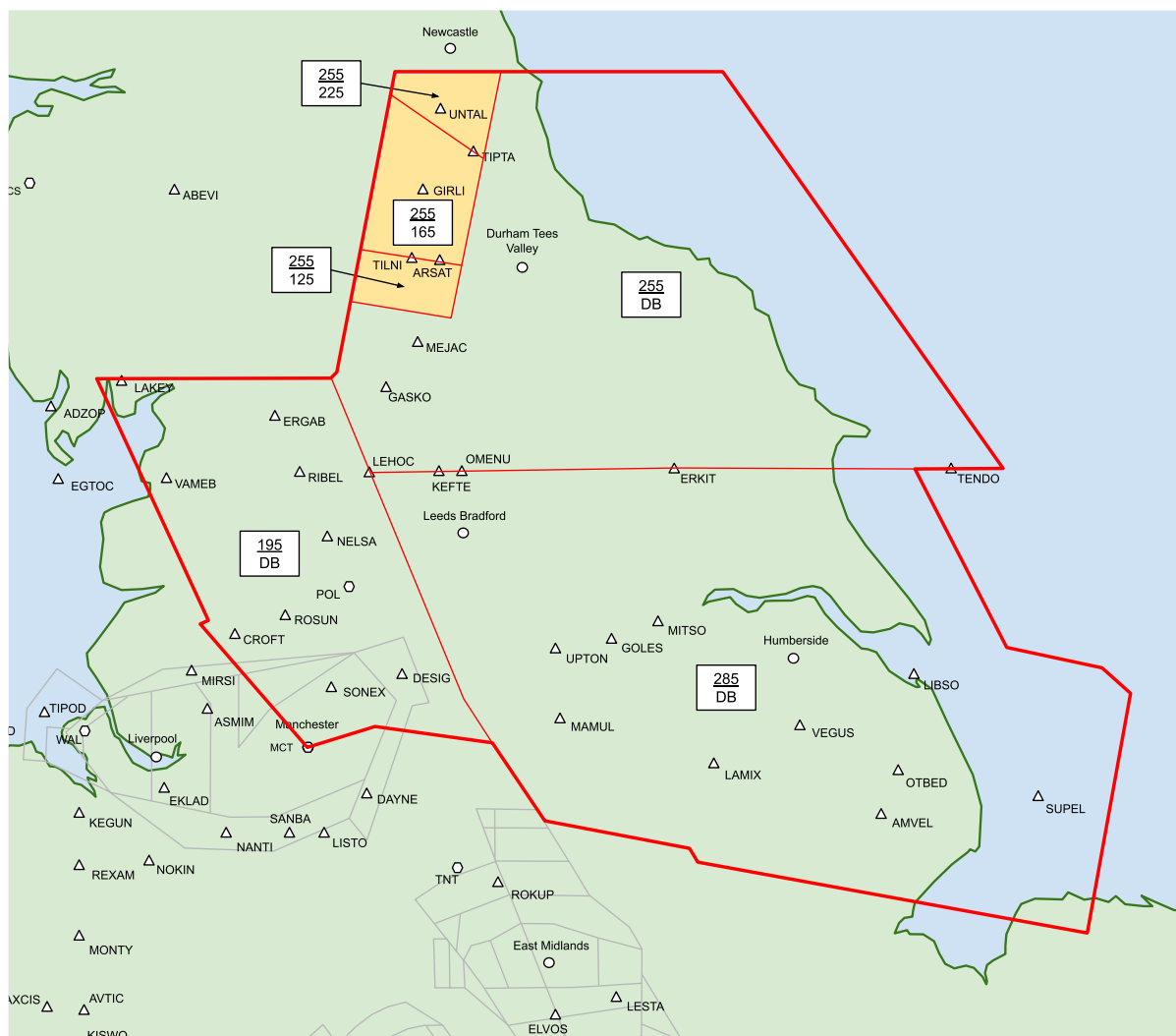
**Note 2:** When holding takes place at KEGUN outside of 2000-0700 local (the hours of NITON CTA-2), Liverpool must radar monitor holding aircraft as a high priority task, else arrange to hold at TIPOD.

## 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 135.715.

**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     | Via OMENU-POL |

## 4.2.2 External Standing Agreements

### 4.2.2.1 AC Daventry

#### From AC Daventry to PC Northeast

| To            | Agreement                               | Conditions   |
|---------------|---|--|
| EGNT and EGNV | FL280 lvl BETAX /<br>25 NM before MAMUL | During quieter periods, this traffic may be worked offered to Lakes. |

### 4.2.2.2 AC Lakes

#### From AC Lakes to PC Northeast

| To            | Agreement | Conditions   |
|---------------|-----------|--|
| EGNT and EGNV | ↓ FL290   | Via BETAX/MAMUL when worked by Lakes during quieter periods. |

**Note:** When Lakes and North Sea are split, PC NE is responsible for deconflicting this traffic against any simultaneous arrivals from North Sea (see below).

### 4.2.2.3 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              | Via ERKIT. (Note 3)  |
| EGNT and EGNV                 | FL290 lvl 15 NM before MITSO | Via RIMTO. (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)<br>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.

#### 4.2.2.4 ScAC Borders

##### From ScAC Borders to PC Northeast

| To                                    | Agreement       | Conditions |
|---------------------------------------|-----------------|------------|
| EGSH, EGUL, EGUN and EGYM             | FL270 lvi ERKIT |            |
| MTMA and EGNJ                         | FL260 lvi TILNI |            |
| EGNH, EGNO, EGNL, EGXC, EGXW and EGYD | FL260 lvi GIRLI |            |
| Midlands Group                        | FL270 lvi OMENU |            |

##### From PC Northeast to ScAC Borders

| From  | Agreement       | Conditions |
|---|-----------------|------------|
| EGNM and EGCM                               | FL250 lvi TIPTA |            |
| EGNH, EGNO and EGNL                         | FL250 lvi ARSAT |            |
| Manchester Group, EGNJ, EGXC, EGXW and EGYD | FL250 lvi MEJAC |            |
| Midlands Group                              | FL280 lvi KEFTE |            |

#### 4.2.2.5 ScAC South

##### From ScAC South to PC Northeast

| To   | Agreement       | Conditions |
|------|-----------------|------------|
| EGNM | FL250 lvi TILNI |            |

#### 4.2.2.6 ScTMA – Talla

##### From PC Northeast to ScTMA Talla

| From | Agreement | Conditions |
|------|-----------|------------|
| EGNM | ↑ FL180   |            |

#### 4.2.2.7 ScTMA – Galloway

##### From ScTMA Galloway to PC Northeast

| To            | Agreement       | Conditions       |
|---------------|-----------------|------------------|
| MTMA and EGNM | FL200 lvi 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.<br>Transferred from Teesside APC passing FL110 (See Note). |

**Note:** Traffic will be transferred from Teesside APC to PC Northeast clear 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

|                       |                            |
|-----------------------|----------------------------|
| <b>ROSUN</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 172°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (minimum FL70) – FL140 |
| <b>Speed</b>          | Maximum 230 kts IAS        |

**Note 1:** ROSUN is separated from MIRSI up to and including FL140.

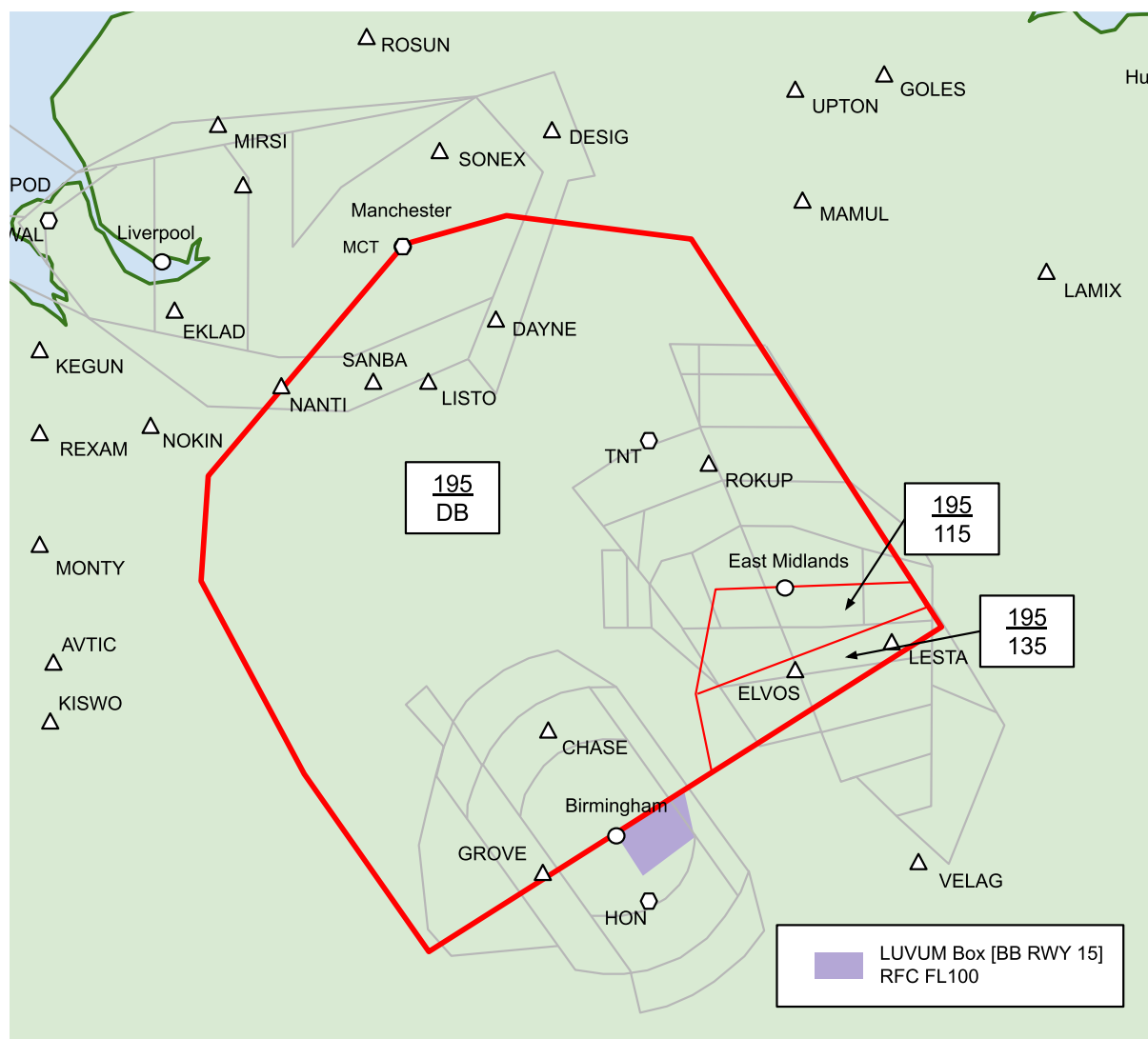
**Note 2:** Aircraft entering the ROSUN hold from POL route POL - BURNI - ROSUN. (BURNI is the initial entry fix for aircraft entering the ROSUN hold from the POL direction.)

## 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 134.430.

#### 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 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,<br>EGLF, Wessex Group | EGKK              | BNN<br>Arrivals | EGMC | LOREL Arrivals | EGGW | JACKO<br>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/JJ, 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 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/JJ, 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.

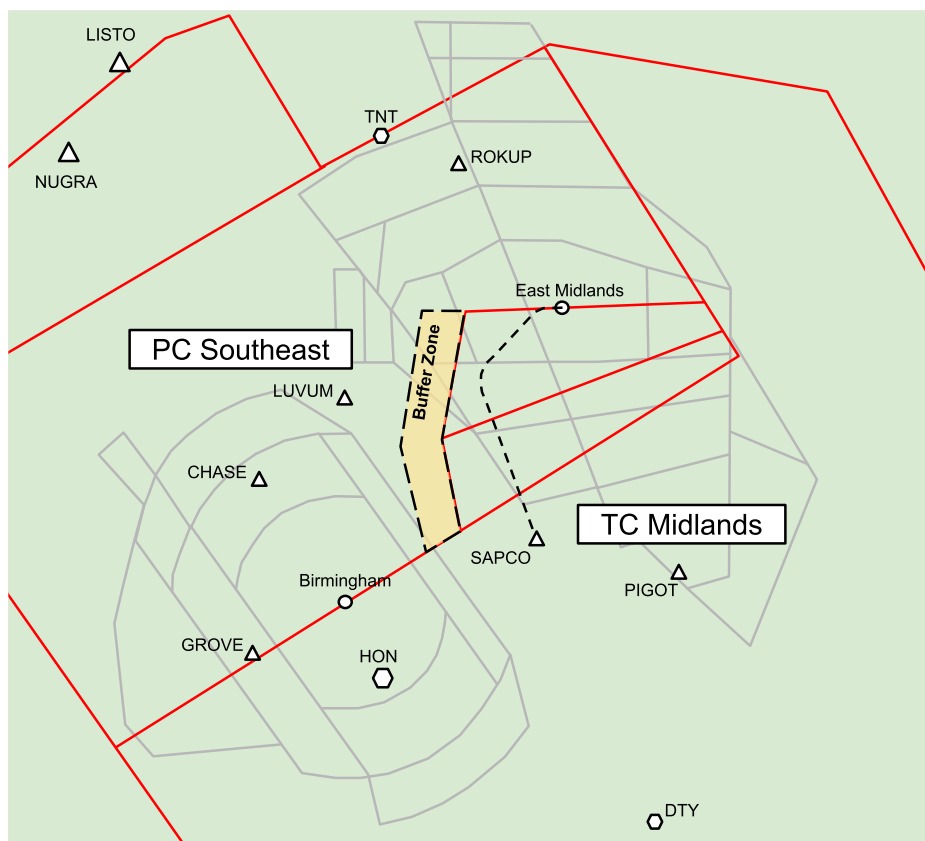
*Note: Traffic with intention codes Dx should be positioned west of traffic with intention codes Cx.*

**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 departures from Birmingham (via LUVUM) being controlled by PC Southeast, and southbound departures from East Midlands (via SAPCO-DTY) 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 in use at East Midlands, PC Southeast have full use of the Buffer Zone, 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

|                       |                            |
|-----------------------|----------------------------|
| <b>DAYNE</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 311°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL70) – FL140 |
| <b>Speed</b>          | 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.

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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 PLAN             | LLP                  | 124.480   | Heathrow Planner  | Heathrow Planner   |
| 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).



### 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

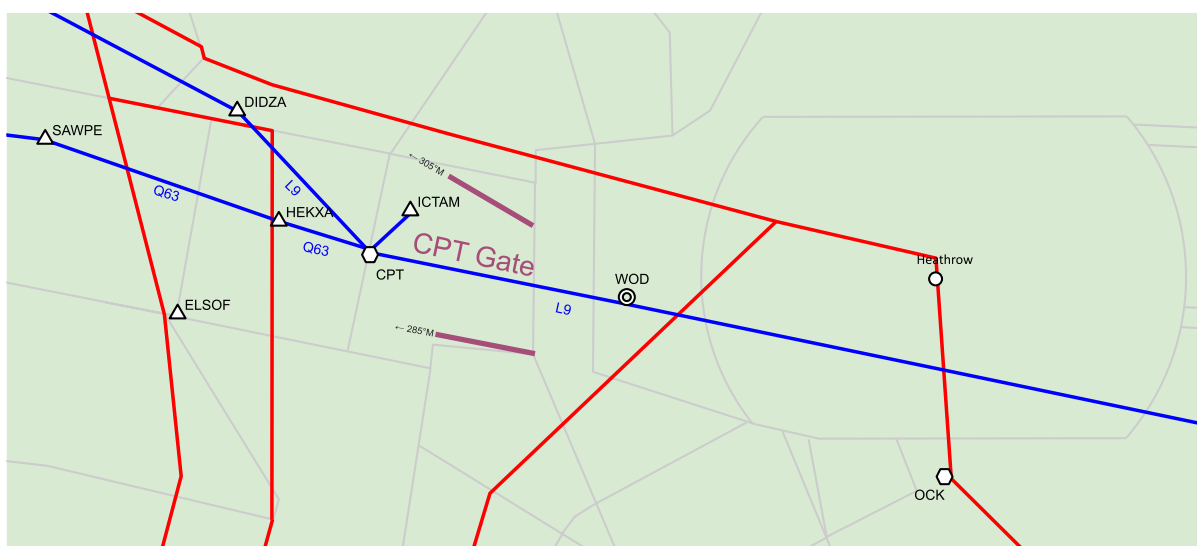
LL INT South is required to take control of aircraft departing easterly CPT Departures, which conflict with the intermediate or final approach pattern.

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 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 N            | KKG                  | 121.540   | Gatwick Ground   | Gatwick GMC (North) |
| KK GMC S            | KKGS                 | 121.805   | Gatwick Ground   | Gatwick GMC South   |
| 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.

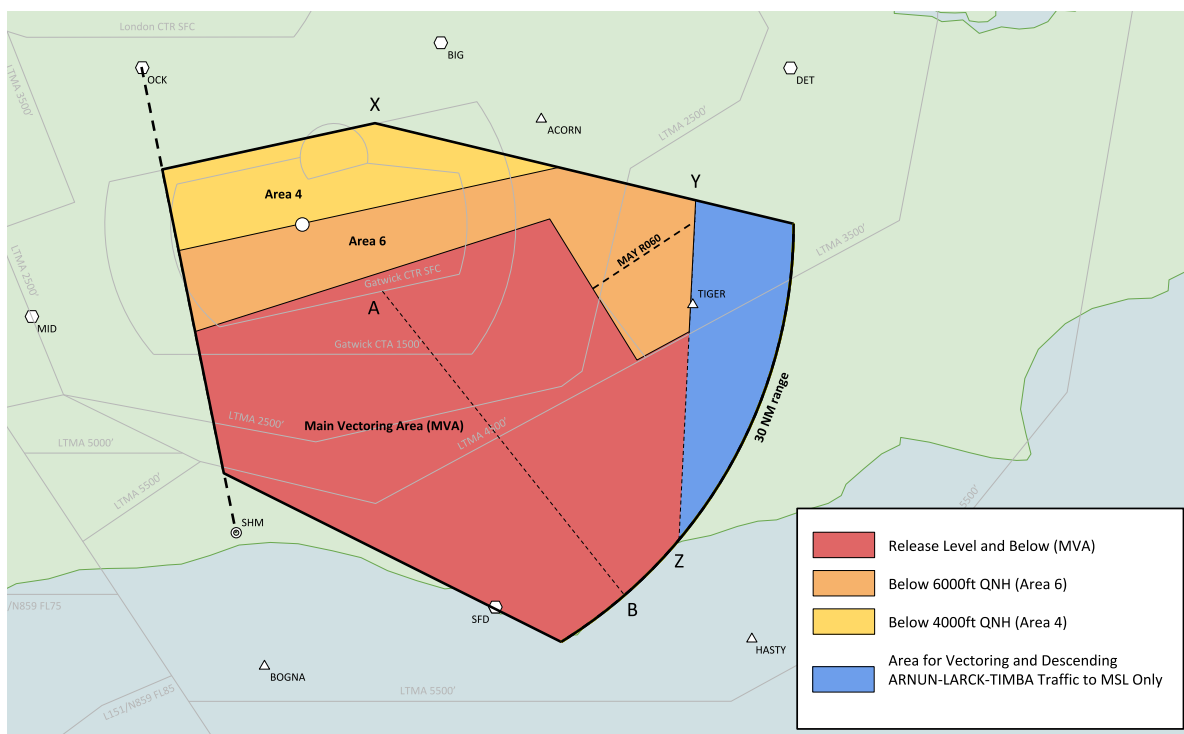
The X-Y-Z line bounds both RMAs at the eastern border. The RMA is comprised of:

- Main Vectoring Area (MVA) – delegated at the release level 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 and descent to MSL for specified arrivals (see below).

#### Westerly RMA

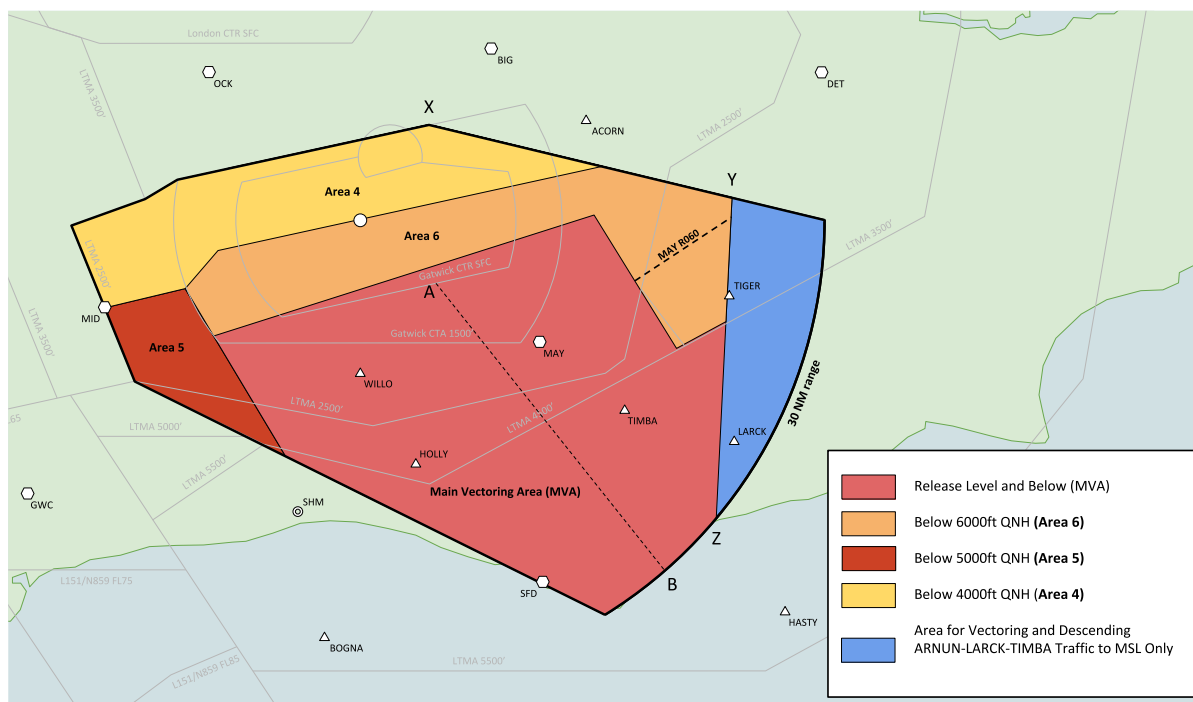
Figure APT-4 – Gatwick Westerly RMA



The RMA for westerly operations (26L/26R active) is bounded at the western edge by the SHM-OCK line.

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<br><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.

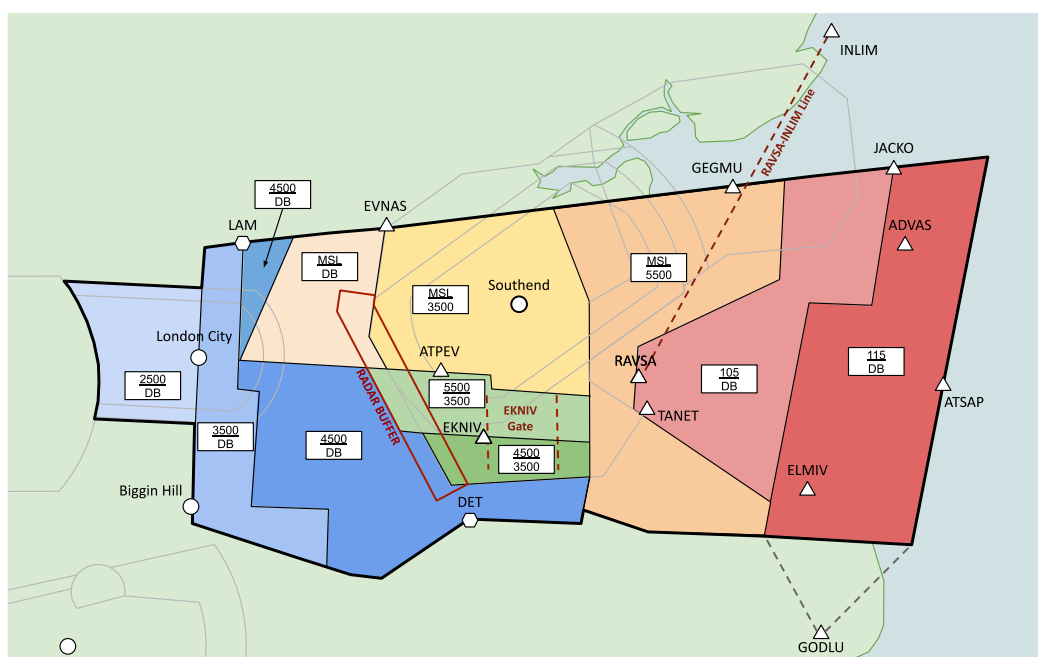
When split from Thames, LC DIR is responsible for:

- 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

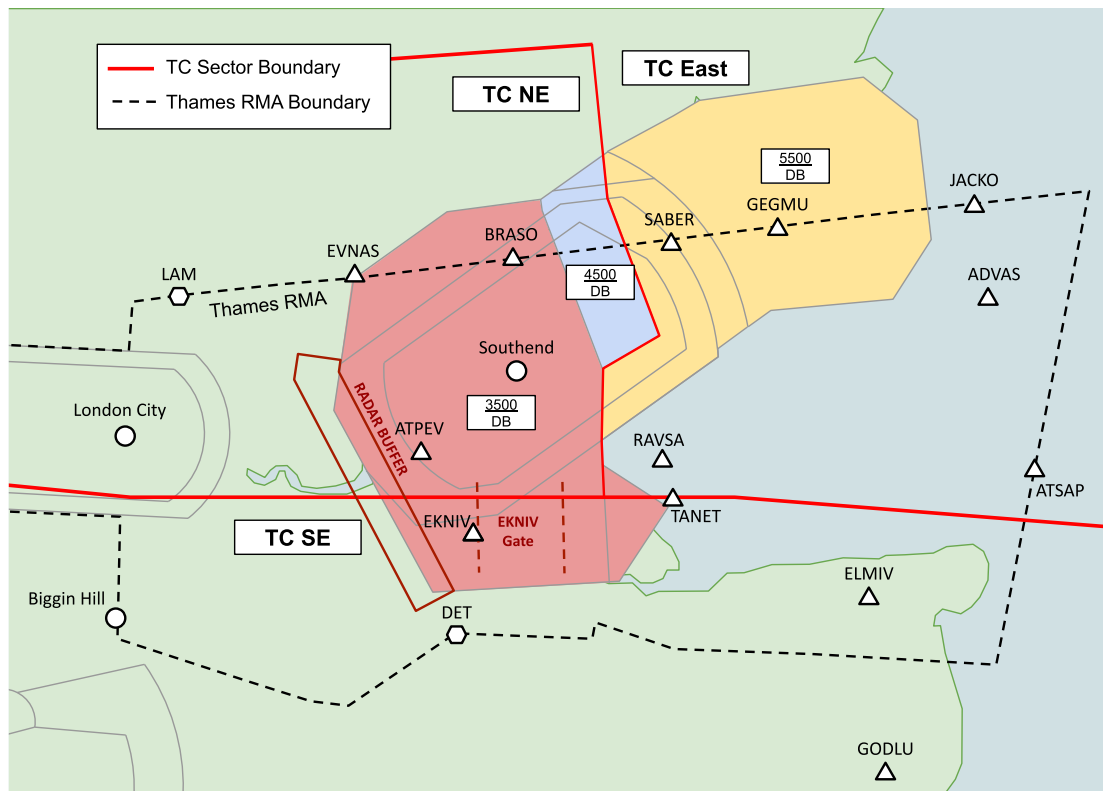
Figure APT-6 – Thames RMA



### 3.2.2 Southend RMA

Southend Radar is the **controlling** 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<br>(Via JACKO) | ↓FL80  |   |
| TC SE   | Thames | GEGMU<br>(Via OKVAP) | FL80 lvl abeam GODLU, or<br>FL80 lvl 19 NM before<br>ATSAP   | Presented underneath any<br>EGLC/EGKB traffic. EGMC arrivals<br>shall be clear of any conflicts<br>with the GODLU hold. |
| TC NE   | MC APC | SPEAR                | All individually coordinated to avoid the Thames RMA.<br>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 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 <b>RIGHT turns</b> below FL120, east of the RAVSA – INLIM line. | When inside the Thames RMA.  |
| JACKO (from E)   | Released for <b>LEFT turns</b> 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<br>(09) | ↑ 3000 ft                 | Require departure release TC NE.   |
| LC DIR        | TC NE | BPK/SAXBI<br>(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 lvl SODVU             | Routing via EKNIV or positioned on a heading through the <b>EKNIV Gate</b> . |

**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 heading towards DET (See <i>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<br>LAM | ↑ 4000 ft |   |
| MC APC | TC East | CLN          | ↑ 6000 ft | Positioned on a heading, or own navigation direct CLN.  |
| Thames | TC SE   | DET          | ↑ 5000 ft | Positioned on a heading through the <b>EKNIV Gate</b> . |

##### 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                   |

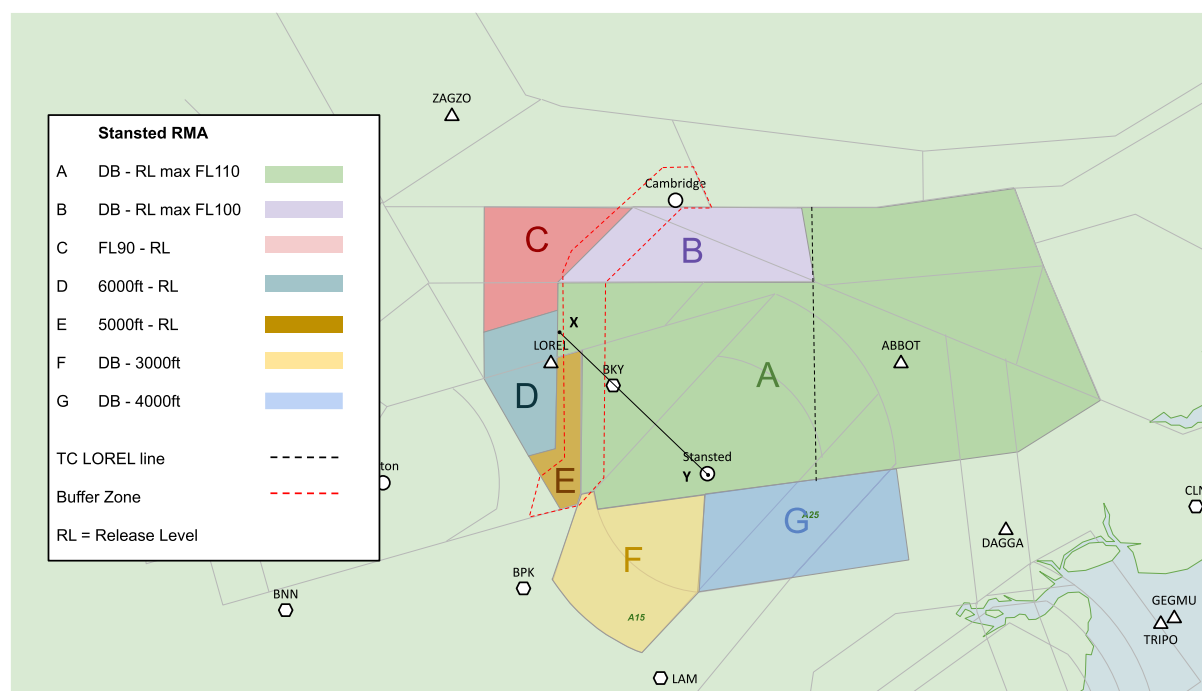
### 4.2 Area of Responsibility

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.

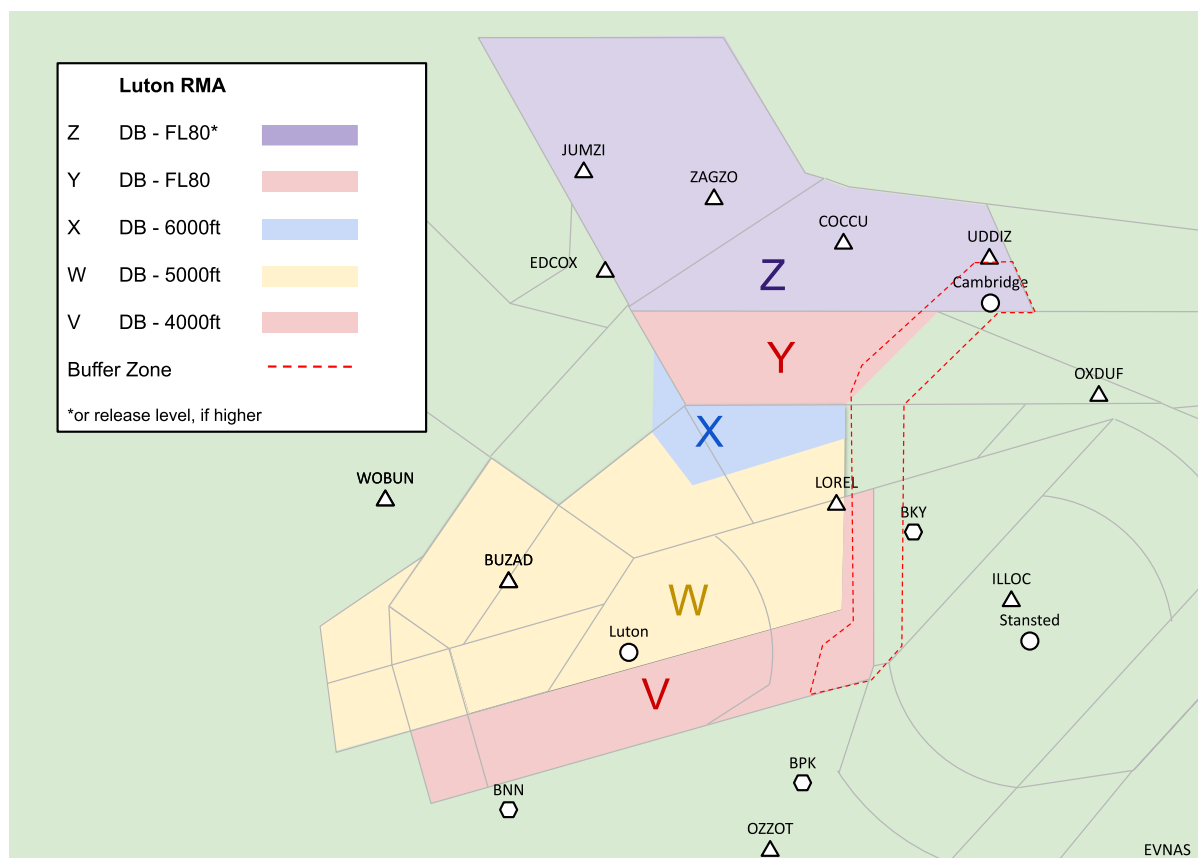
A line depicted within Area A denotes the boundary between TC NE and TC East. Arrivals via LOREL shall not cross this line until MSL or below. Arrivals via ABBOT may only cross this line above MSL if there is higher traffic at LOREL and the ABBOT traffic is descending to MSL or below.

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.<br>To FL90.                                   |
| LOREL via BOMBO (west)         | Further within the RMA if issued a heading and therefore not holding.<br>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)<br>or via LYD | Pre-note AIR to Thames<br>Release TC NE (Notes 2 & 4) | TC NE (Note 3)  |

**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 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 CLN DCT 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                   |
|------|---------|-------------------------|
| EGSS | EGLL/WU | CLN DCT LAM             |
| EGGW | EGLL/WU | BNN                     |
| EGSS | EGKK    | DET DCT TIMBA           |
| EGGW | EGKK    | DET DCT TIMBA           |
| EGSS | EGLC/KB | CLN DCT LOGAN           |
| EGGW | EGLC/KB | MATCH DCT CLN DCT LOGAN |

## Chapter 5 Solent (EGHI & EGHH)

### 5.1 Controller Positions and Coordination Indicator

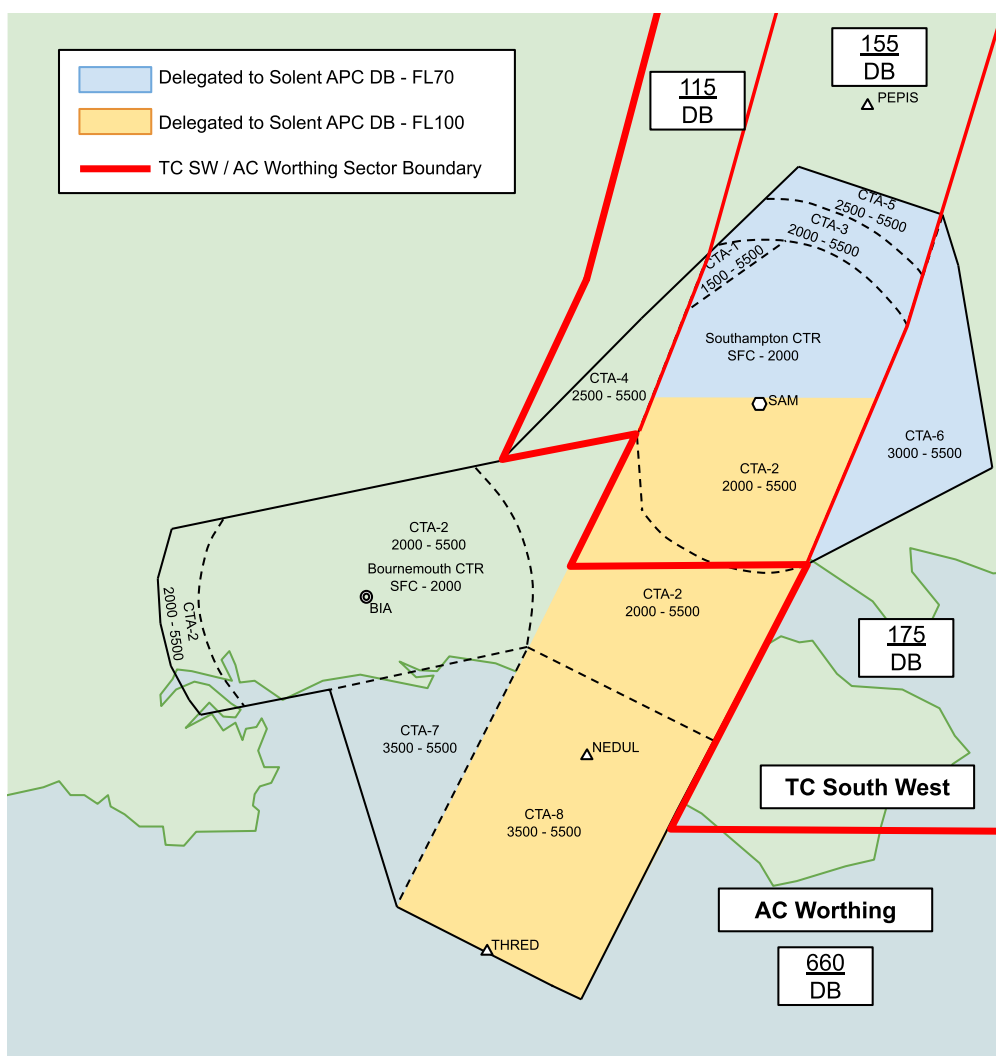
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign       | Coordination Name |
|---------------------|----------------------|-----------|--------------------|-------------------|
| SOLENT              | SOR                  | 120.230   | Solent Radar       | Solent Radar      |
| 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<br>(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 Q41  | ↑ FL70                 | ↑ FL100  | TC SW       |
| Northwest         | PEPIS                 | RNAV1: PEPIS Y321 NUBRI<br>N14 HEKXA<br>RNAV5: PEPIS Y321 NUBRI<br>DCT KENET | ↑ FL70                 | ↑ FL100  | TC SW       |
| Northeast         | GWC-OCK               | GWC-OCK  | ↑ FL80                 | ↑ FL100  | TC SW       |
| East or southeast | GWC                   | GWC-SFD/BENBO/DRAKE/<br>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)

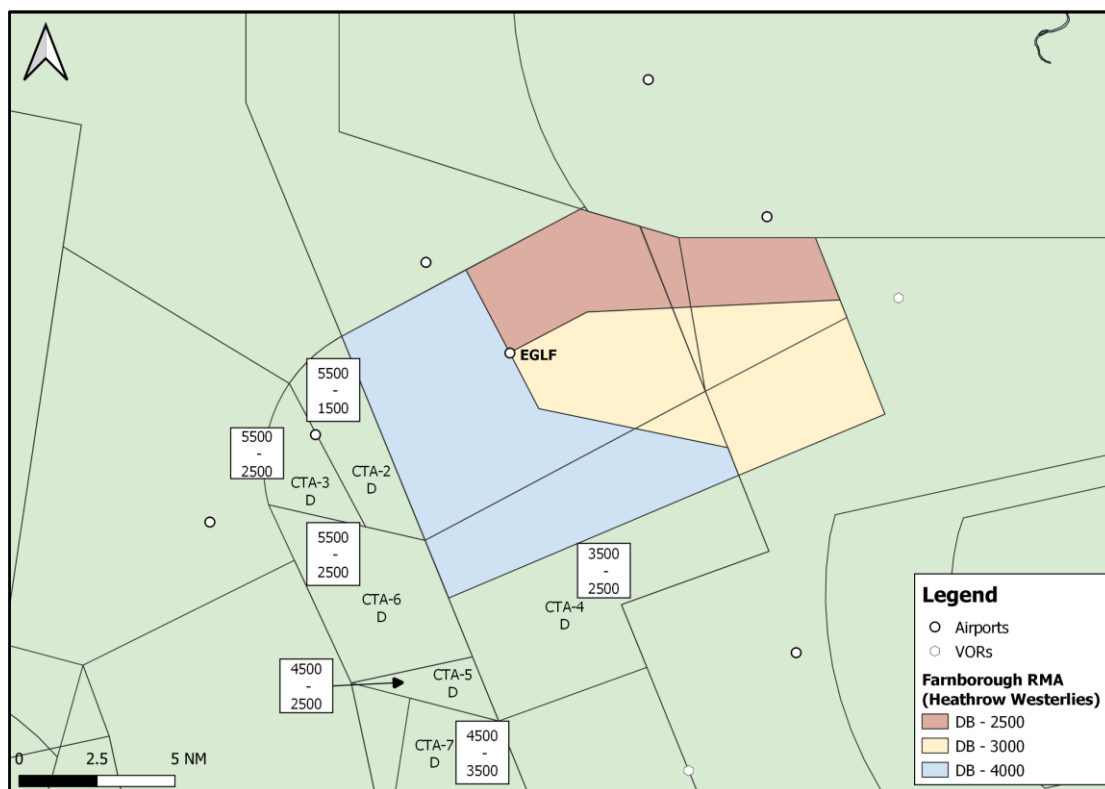
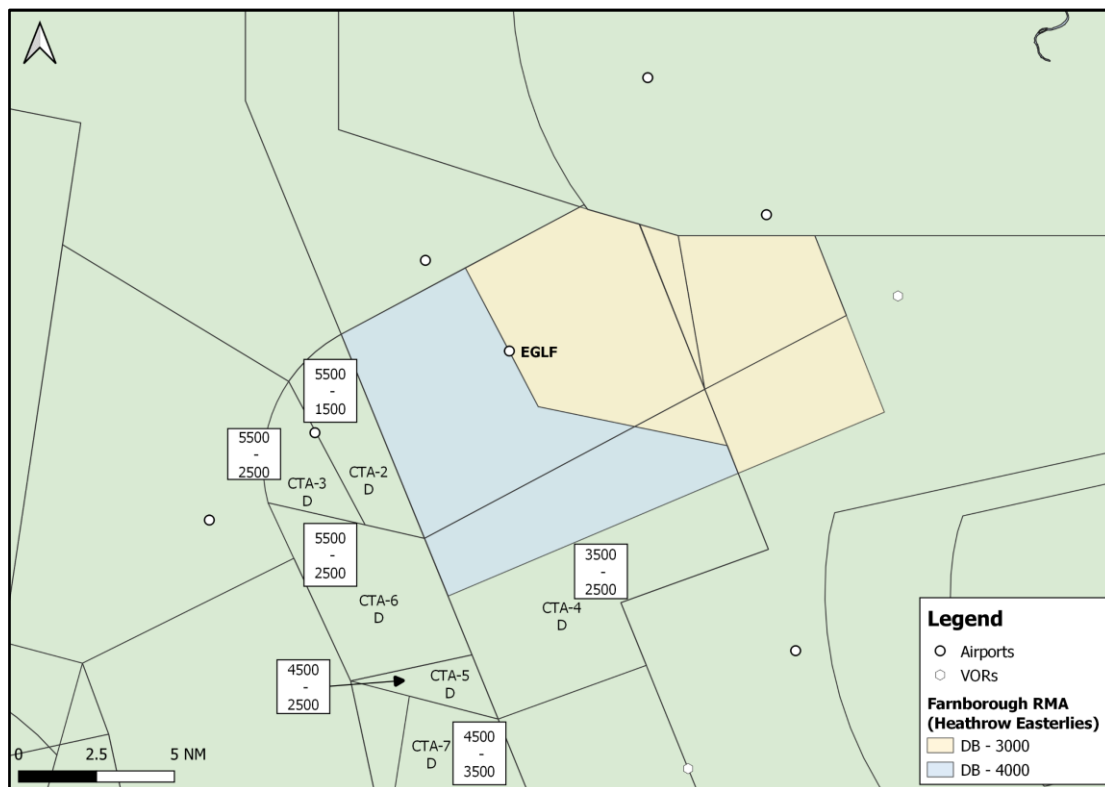


Figure APT-12 - Farnborough RMA (Heathrow Easterlies)



### 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 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 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-) →<br>GWC N859 SITET →<br>GWC BOGNA L612 →<br>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<br>(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<br>(Solent release)    | LF APC | Solent | ↑5000 ft | On a westerly heading tracking south of HANKY while remaining 5 NM north of the L620 (HAZEL – SAM) centreline   |
|   | Solent | TC SW  | FL70     | Own navigation or 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<br>(No Solent release) | LF APC | Solent | ↑5000 ft |   |
|   | Solent | TC SW  | ↑FL100   | Max 6000 ft until within CTA-8.<br>Max FL70 until Solent delegated airspace   |
| HAZEL Southbound<br>(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.

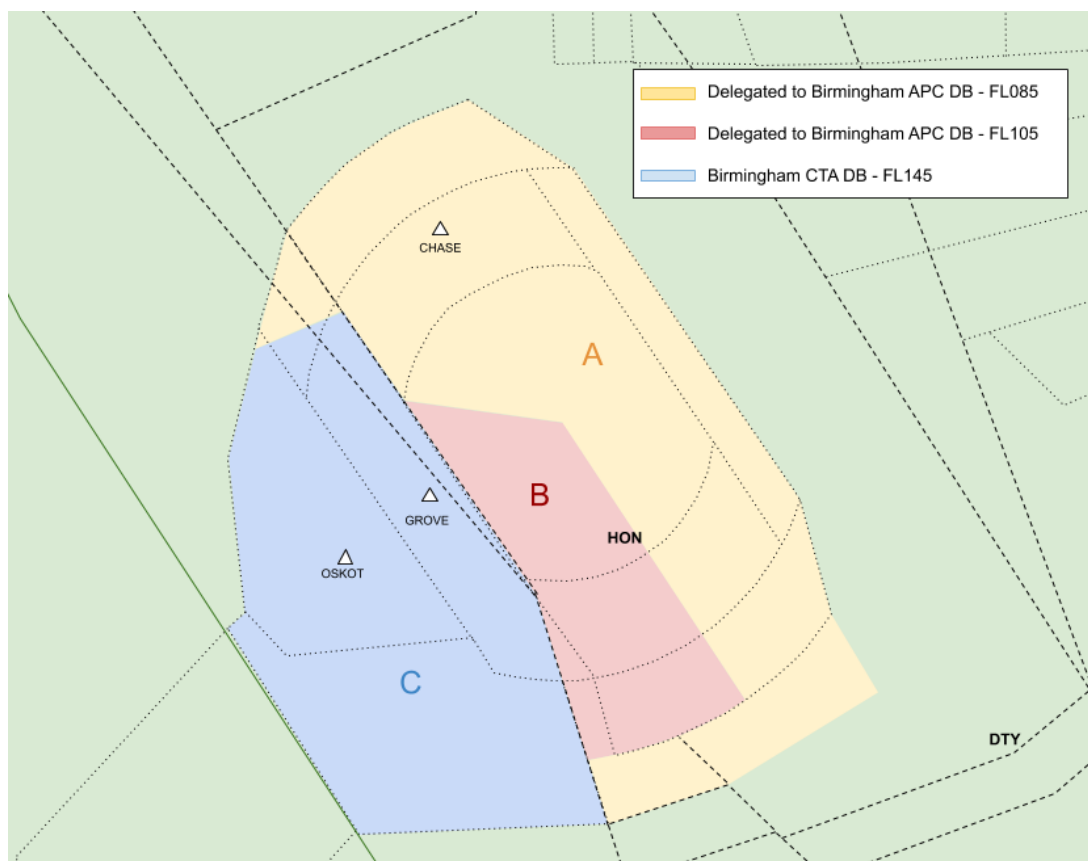
- Area A – DB to FL85
- Area B – DB to FL105
- Area C – DB to FL145

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**

|                       |                          |
|-----------------------|--------------------------|
| <b>CHASE</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 149°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | 5000 ft – FL140          |
| <b>Speed</b>          | Maximum 210 kts IAS      |

**GROVE Hold**

|                       |                          |
|-----------------------|--------------------------|
| <b>GROVE</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 103°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL70 – FL140             |
| <b>Speed</b>          | 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

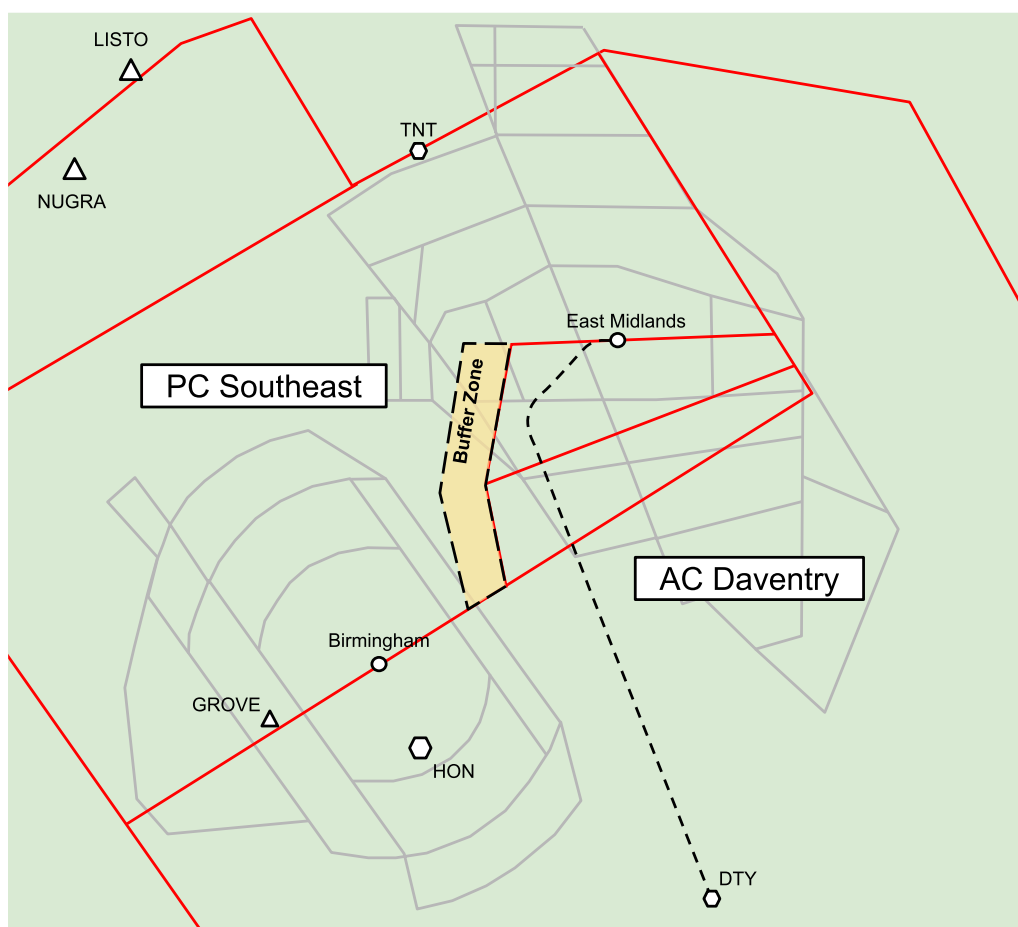
All departures from Birmingham shall be transferred to Birmingham APC who will identify and verify the Mode C readout before transfer to London Control.

#### 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

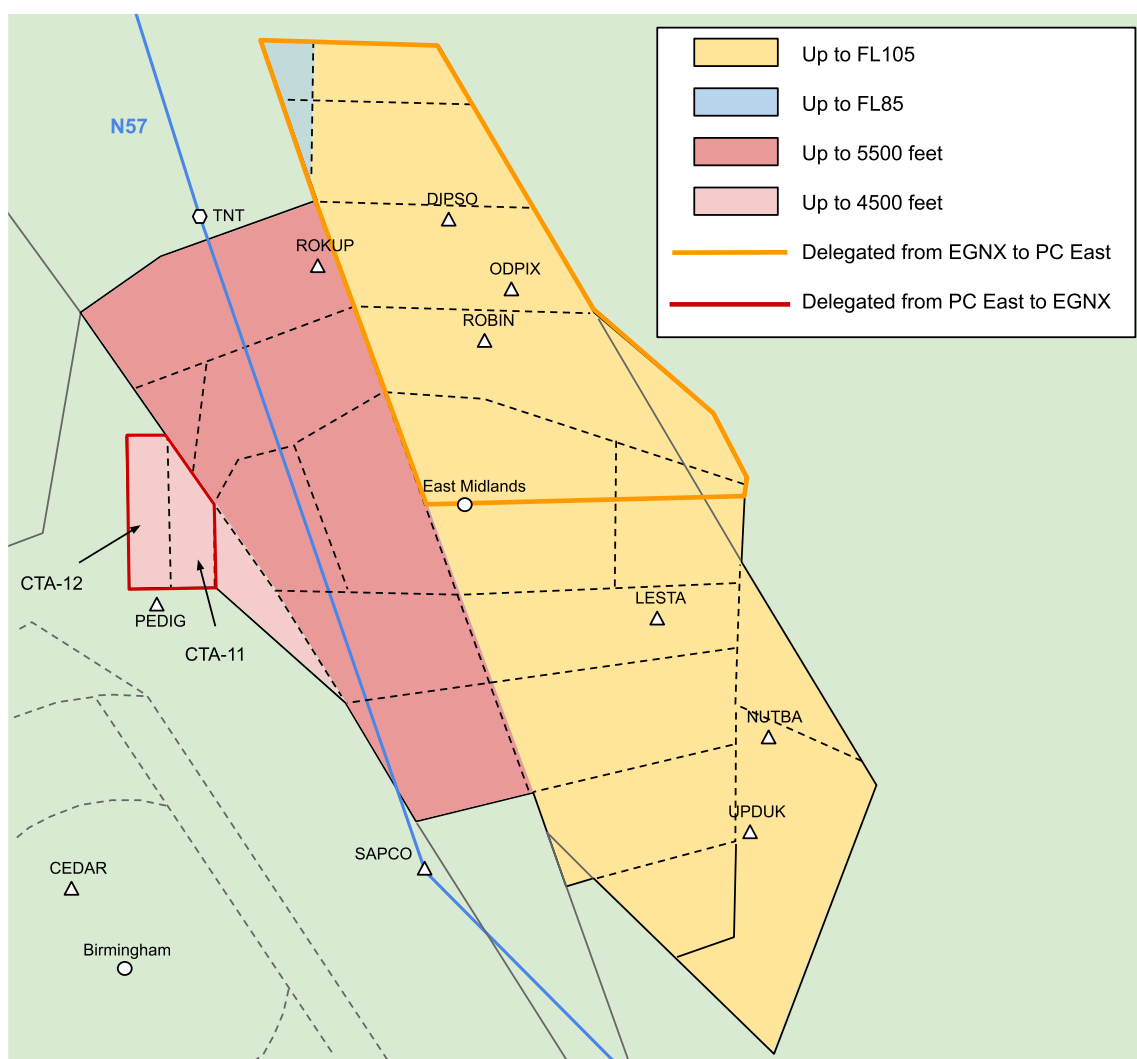
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign         | Coordination Name   |
|---------------------|----------------------|-----------|----------------------|---------------------|
| NX APC              | NXR                  | 126.180   | East Midlands Radar  | East Midlands 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



### 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. (Notes 1 & 2) |
| ROKUP | ↓MSL, minimum FL80 | Max 250 kts | (Note 3)                                  |

**Note 1:** Traffic below FL100 must be individually coordinated.

**Note 2:** On first contact with TC Midlands, the runway in use shall be provided to all East Midlands arrivals.

**Note 3:** PC Southeast shall typically transfer traffic on a 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 presented 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 to be individually 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 (holding may not therefore occur at PIGOT below FL80).

Traffic is released for RIGHT turns only 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 eastern edge of the N57 at any time (i.e. the boundary between the red and yellow shaded areas in the figure above).

When Runway 09 is in use, traffic may not cross the eastern edge of the 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 the MSL and RIGHT turns only 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., it 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

|                       |                            |
|-----------------------|----------------------------|
| <b>PIGOT</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 185°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | MSL (Minimum FL80) – FL120 |
| <b>Speed</b>          | 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

|                       |                          |
|-----------------------|--------------------------|
| <b>ROKUP</b>          | RNAV Hold, 1-minute legs |
| <b>Axis</b>           | 292°                     |
| <b>Direction</b>      | RIGHT hand               |
| <b>Holding Levels</b> | FL80 – FL140             |
| <b>Speed</b>          | 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 on a 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 and FL140. East Midlands APC will control traffic holding FL120 and below.

ROKUP is separated from DAYNE and PIGOT holds up to and including FL140. Note that 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 be transferred to Area sectors on own navigation at or cleared to the final SID level and clear of inbound traffic.

The **POL** SID from Runway 09 (POL 2P) is only available between 0700 and 2200 local daily. At all other times, aircraft shall be cleared via 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 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 SAPCO SIDs until at or above 6000 ft.

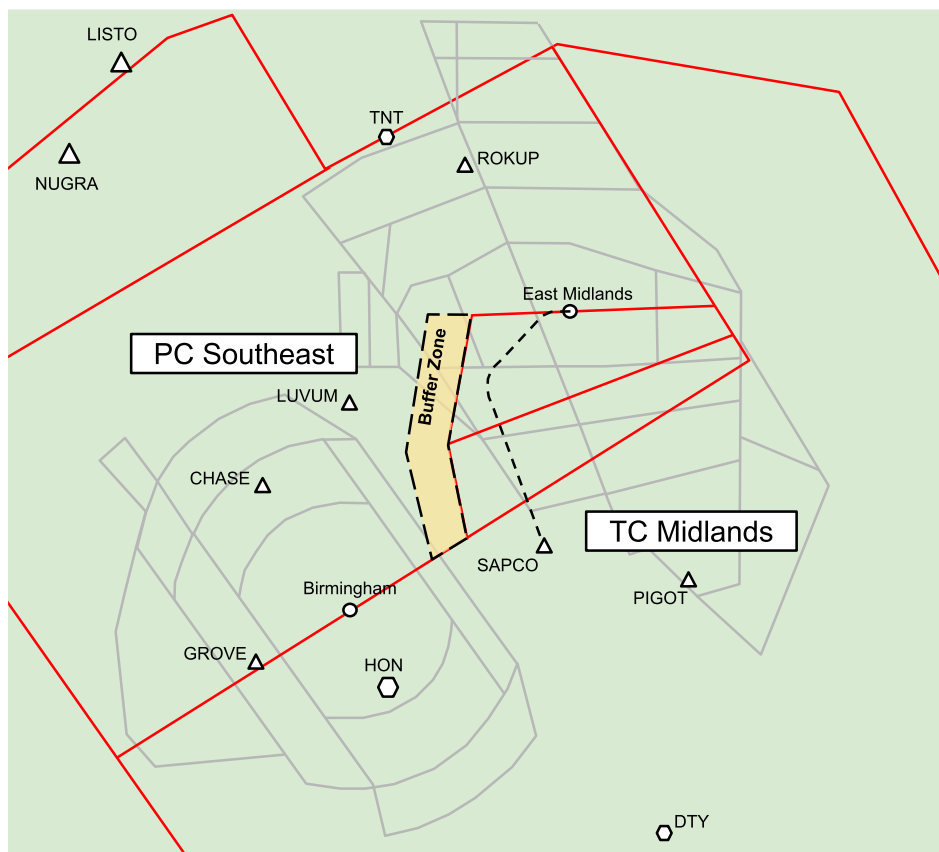
Departures must remain within the lateral constraints of the East Midlands CTR/CTA at all times.

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 SAPCO departures must be on their own navigation to the end of the SID by the time they are abeam Birmingham Airport.

A Buffer Zone is established (depicted below) for the purpose of ensuring separation between Birmingham LUVUM and East Midlands SAPCO 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

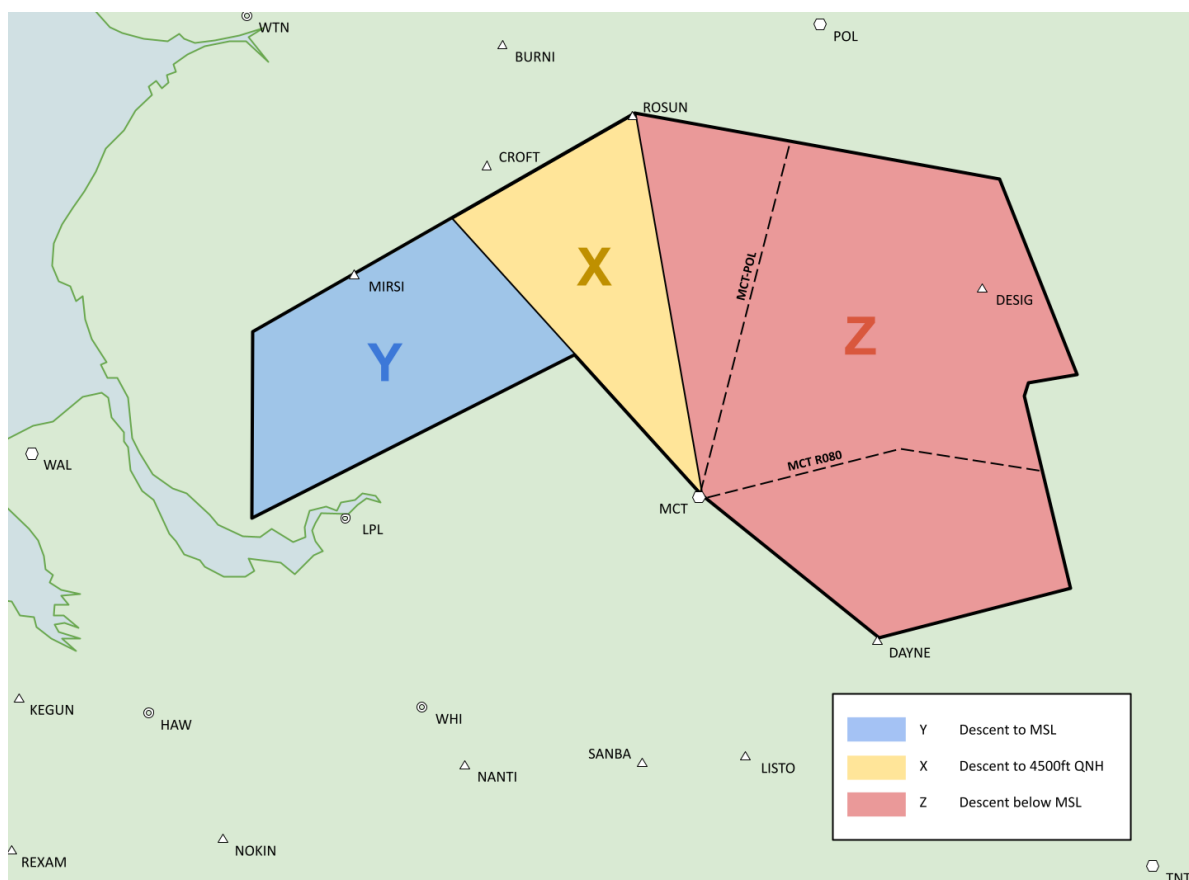
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign        | Coordination Name                  |
|---------------------|----------------------|-----------|---------------------|------------------------------------|
| CC INT S            | CCS                  | 118.580   | Manchester 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.

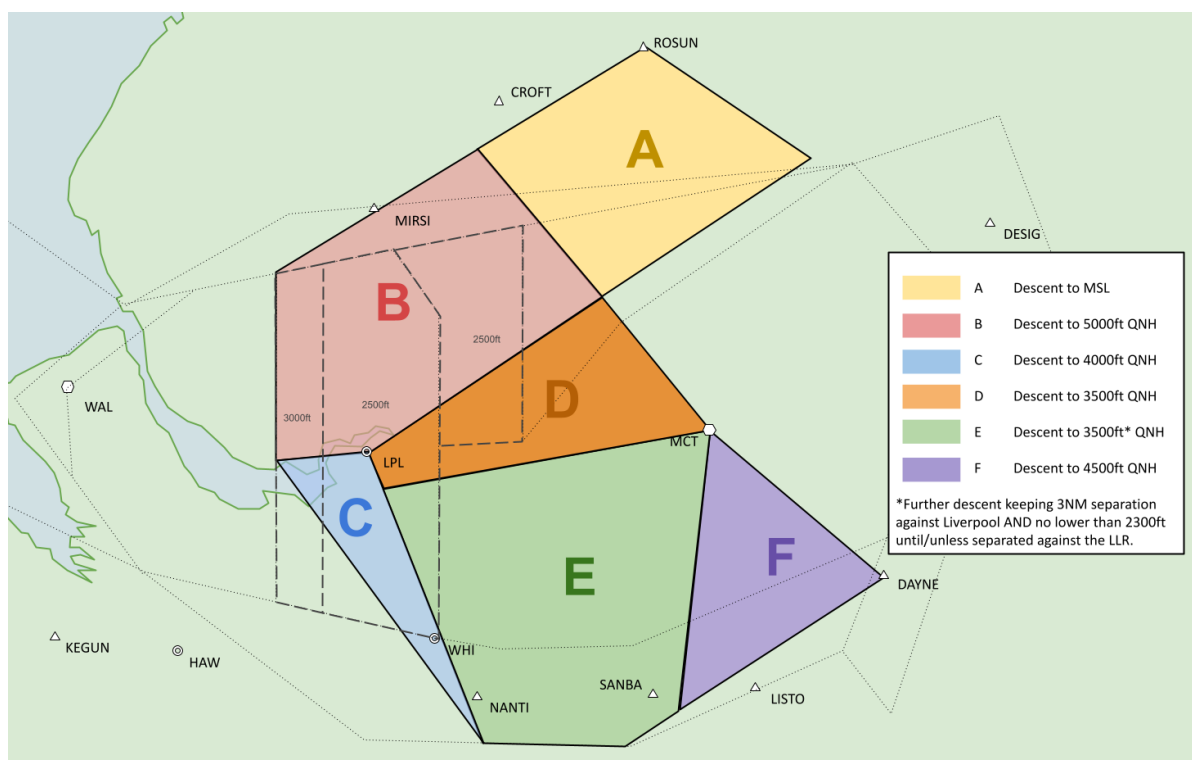
#### Westerly RMA

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 below.

| 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 table below sets out the lowest release levels available to MPC for each hold. MPC may transfer traffic in level order via an abbreviated release (electronic or verbal). Release conditions are set out in section 9.3.3 below.

| 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         |
|       | 23 L/R | MSL+1 (Minimum FL80)  | MSL+1                | ROSUN         |

| Via                | Runway | Minimum Release Level | Lowest Holding Level | Release Point    |
|--------------------|--------|-----------------------|----------------------|------------------|
| ROSUN (from North) | 05 L/R | MSL (Minimum FL70)    | MSL (Minimum FL70)   |                  |
| ROSUN (via POL)    | 23 L/R | MSL+1 (Minimum FL80)  | MSL+1                | FL110 (See Note) |
|                    | 05 L/R | MSL (Minimum FL70)    | MSL (Minimum FL70)   |                  |

### 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.<br>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 <b>via POL</b> 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 North West Transit Corridor (NWTC).  |

### 9.3.4 Holding Procedures

#### MIRSI Hold

|                       |                            |
|-----------------------|----------------------------|
| <b>MIRSI</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 061°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL60) – FL140 |
| <b>Speed</b>          | Maximum 230 kts IAS        |

**Note:** The MIRSI hold is separated from ROSUN hold up to and including FL140.

#### DAYNE Hold

|                       |                            |
|-----------------------|----------------------------|
| <b>DAYNE</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 311°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL70) – FL140 |
| <b>Speed</b>          | 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

|                       |                            |
|-----------------------|----------------------------|
| <b>ROSUN</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 172°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (minimum FL70) – FL140 |
| <b>Speed</b>          | 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      |  |
| KUXEM | 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

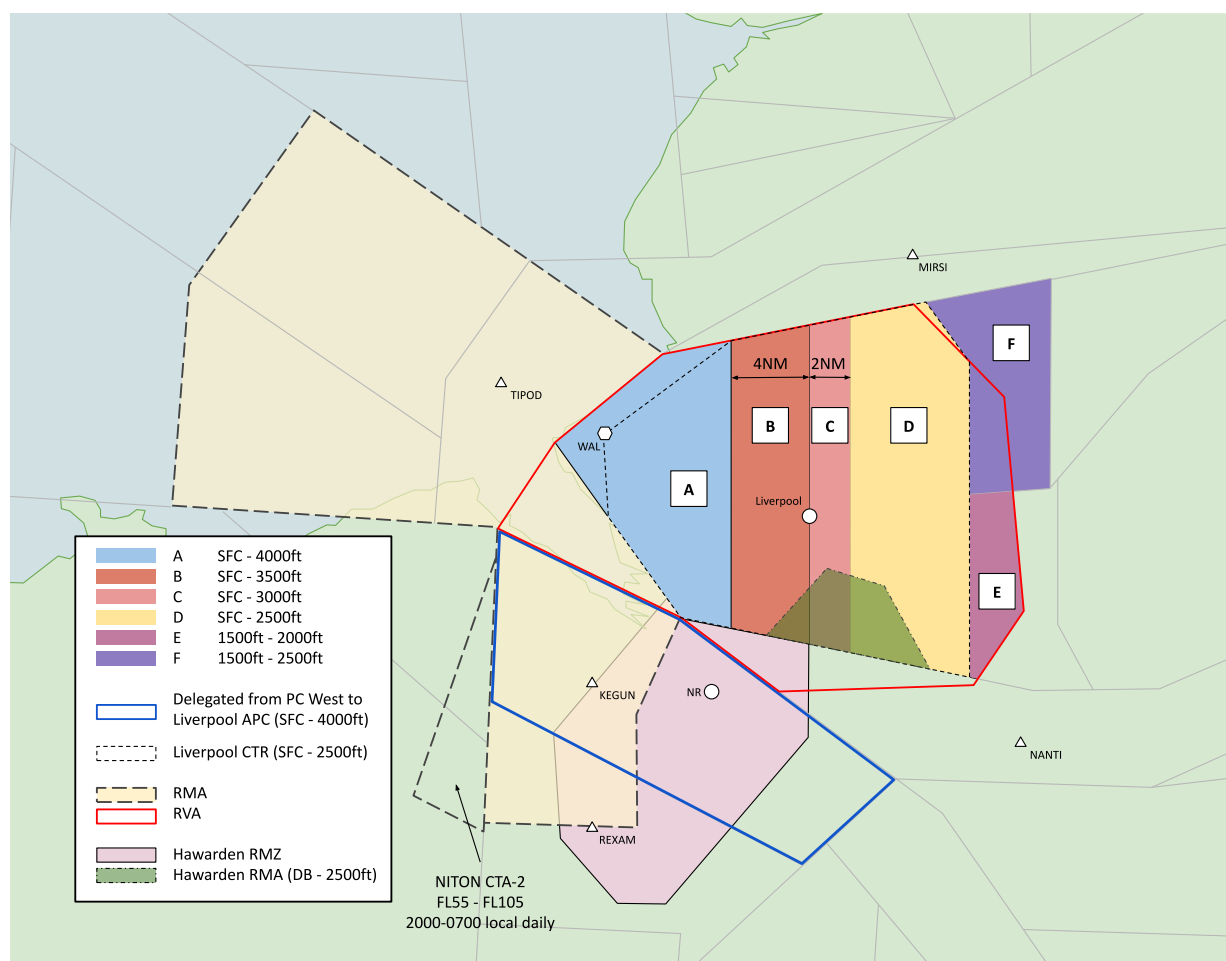
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign     | Coordination Name |
|---------------------|----------------------|-----------|------------------|-------------------|
| GP RAD 1            | GPR                  | 119.855   | Liverpool Radar  | Liverpool RAD 1   |
| GP RAD 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<br>PENIL 1L | (West)       | <b>Silent release.</b><br>Released at the RMA boundary.  |
| LAKEY 1L<br>GASKO 1L |              | <b>Silent release.</b>   |
| POL 1L               | (North/east) | - <u>EGCC Westerly Ops</u> : RFT towards the RMA and descent passing the western edge of the Low-Level Route.<br>- <u>EGCC Easterly Ops</u> : Liverpool RMA boundary ( <b>Note 1</b> ) |
| LIBSO 1L<br>VEGUS 1L |              | <b>Silent release.</b>   |
| ELVOS 1L<br>LESTA 1L | (Southeast)  | - <u>EGCC Westerly Ops</u> : RFT towards the RMA and descent at NANTI.<br>- <u>EGCC Easterly Ops</u> : RFT towards the RMA and descent 5 NM west of NANTI.                             |
| PEPZE 1L             | (South)      | <b>Silent release.</b><br>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) | <b>Silent release.</b><br>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<br>2500 ft by the western edge of the LLR |
|             | Left              | Full descent profile  |
| TIPOD       | Right             | 4000 ft abeam Liverpool<br>2500 ft by the western edge of the LLR |
|             | Left              | 3000 ft abeam Liverpool<br>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

|                       |                            |
|-----------------------|----------------------------|
| <b>TIPOD</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 116°                       |
| <b>Direction</b>      | RIGHT hand                 |
| <b>Holding Levels</b> | MSL (Minimum FL70) – FL100 |
| <b>Speed</b>          | Maximum 210 kts IAS        |

#### KEGUN Hold

|                       |                            |
|-----------------------|----------------------------|
| <b>KEGUN</b>          | RNAV Hold, 1-minute legs   |
| <b>Axis</b>           | 003°                       |
| <b>Direction</b>      | LEFT hand                  |
| <b>Holding Levels</b> | MSL (Minimum FL70) – FL100 |
| <b>Speed</b>          | 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**

|                       |                     |
|-----------------------|---------------------|
| <b>HAW</b>            | 1-minute legs       |
| <b>Axis</b>           | 042°                |
| <b>Direction</b>      | RIGHT hand          |
| <b>Holding Levels</b> | 2500 ft – 5000 ft   |
| <b>Speed</b>          | 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

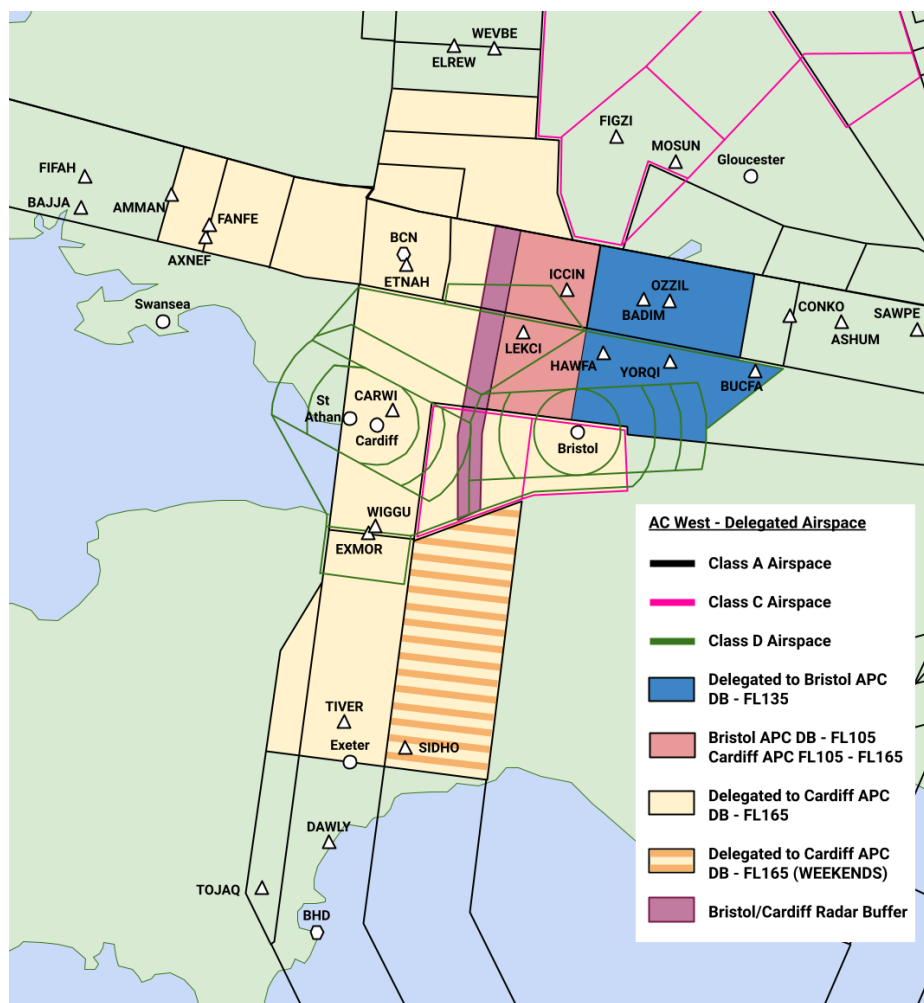
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign     | Coordination Name |
|---------------------|----------------------|-----------|------------------|-------------------|
| GD RAD              | GDR                  | 125.650   | Bristol Radar    | Bristol Radar     |
| GD DIR              | 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 heading without the need for individual coordination.

| STAR                                   | Standing Agreement                   | Transfer to Sector |
|--|--------------------------------------|--------------------|
| BAJJA 1B<br>BAJJA 1C                   | FL180 lml FANFE                      | Cardiff APC        |
| DAWLY 1B (Note 3)<br>DAWLY 1C (Note 3) | Individually coordinated             | Cardiff APC        |
| FIFAH 1B (Note 1)<br>FIFAH 1C (Note 1) | FL170 lml FIFAH                      | Cardiff APC        |
| ICTAM 1B<br>ICTAM 1C                   | ↓ FL100 (Note 2)<br>↓ FL120 (Note 2) | Bristol APC        |
| TOJAC 1B<br>TOJAC 1C                   | ↓ FL170 (Note 4)                     | Cardiff APC        |
| WEVBE 1B (Note 5)<br>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 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.

|                       |  |
|-----------------------|--|
| <b>BRI (Bristol)</b>  | 512253.19N 0024303.14W                               |
| <b>Axis</b>           | 090°   |
| <b>Direction</b>      | LEFT hand  |
| <b>Holding Levels</b> | 3000 ft - FL100                                      |
| <b>Speed</b>          | Max 185 kts below FL70<br>Max 220 kts FL70 and above |

#### CDF Hold

RNAV Hold. 1-minute legs.

|                       |  |
|-----------------------|--|
| <b>BRI (Bristol)</b>  | 512336.16N 0032016.47W                               |
| <b>Axis</b>           | 297°   |
| <b>Direction</b>      | RIGHT hand   |
| <b>Holding Levels</b> | 3000 ft - FL100                                      |
| <b>Speed</b>          | Max 200 kts below FL70<br>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 ( <i>Note 1</i> ) | Bristol APC   |
| LEKCI (Runway 12 only) | East via L607  | EGFF      | ↑ FL150 ( <i>Note 2</i> ) | Bristol APC   |
| BCN (Runway 30 only)   | East via L607  | EGFF      | ↑ FL150 ( <i>Note 2</i> ) |               |
| BCN                    | West via P4/L9 | EGGD/EGFF | ↑ FL160                   |               |
| BCN                    | North via P69  | EGGD/EGFF | ↑ FL150                   | Cardiff APC   |
| EXMOR                  | South via N92  | EGGD/EGFF | ↑ FL160 ( <i>Note 3</i> ) |               |
| EXMOR                  | South via N42  | EGGD/EGFF | ↑ FL160 ( <i>Note 4</i> ) |               |

**Note 1:** On L607, or own navigation to BUCFA.

**Note 2:** On L607 or own navigation to HAWFA.

**Note 3:** Must reach FL120 by 10 NM 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

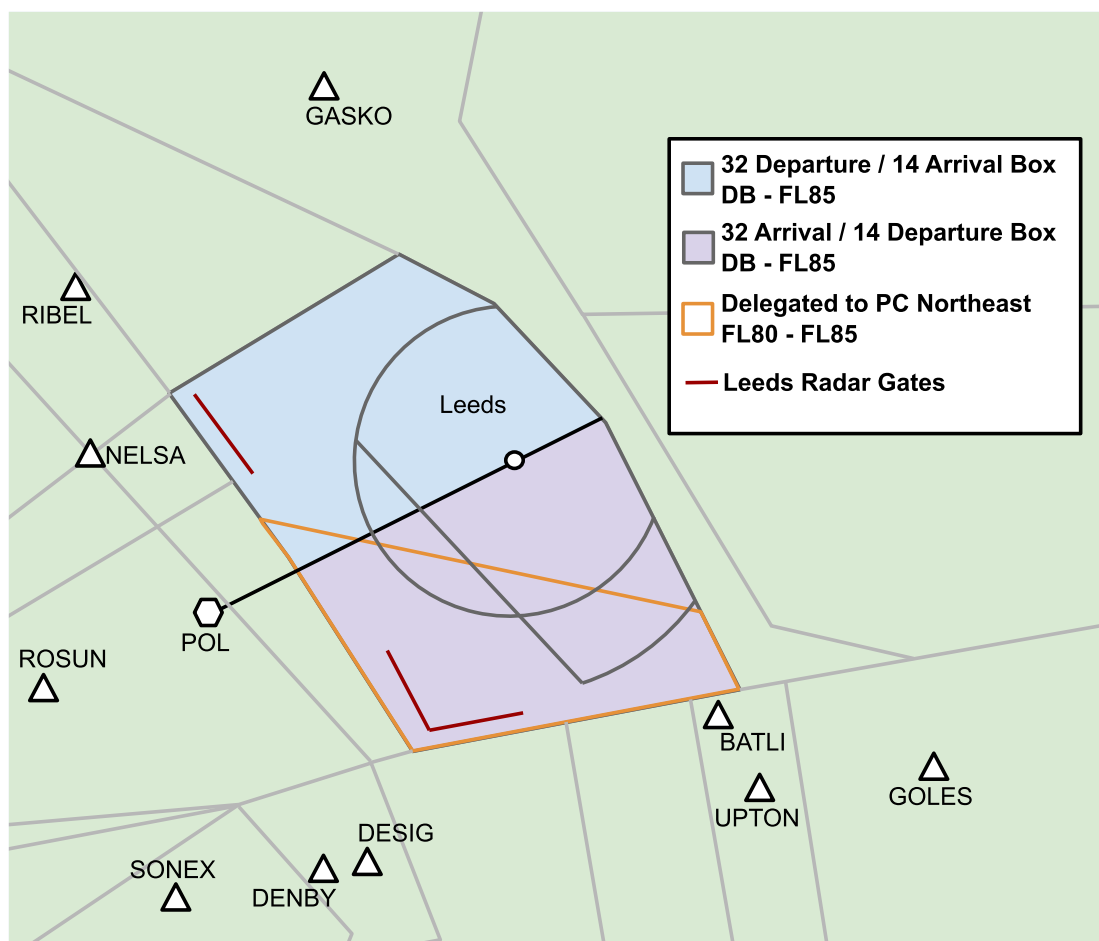
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign   | Coordination Name |
|---------------------|----------------------|-----------|----------------|-------------------|
| NM RAD              | NMR                  | 134.580   | Leeds Radar    | Leeds Radar       |
| NM DIR              | 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 chooses 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 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<br>(RFL < FL195)        | KENET | BUGUP – KENET                          | TC South West | Yes     |
| South<br>(RFL > FL195)        | CPT   | IXURA – NANUM – BUGUP –<br>EVSEM – CPT | TC Midlands   | No      |
| West<br>(RFL < FL105)         | BADIM | BADIM                                  | Bristol APC   | No      |
| West<br>(RFL > FL105)         | CONKO | CONKO                                  | AC West       | No      |
| Thames Group &<br>Essex Group | SILVA | SILVA                                  | TC North West | Yes     |
| EGLL & EGWU                   | WEZKO | WEZKO                                  | 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 WEZKO** 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.

## Chapter 15 Northolt (EGWU)

### 15.1 Controller Positions and Coordination Indicator

Northolt is a military aerodrome and therefore requires a military endorsement to control on VATSIM. Top-down for Northolt is by London Military. In the absence of Northolt and London Military, the Northolt airspace and limited responsibilities are shared between Heathrow INT North and TC Thames as described later.

| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign      | Coordination Name |
|---------------------|----------------------|-----------|-------------------|-------------------|
| WU APC              | WUR                  | 126.450   | Northolt Approach | Northolt Approach |
| WU DIR              | WUD                  | 130.350   | Northolt Director | Northolt Director |
| WU TD               | WUP                  | 125.875   | Northolt Talkdown | Northolt Talkdown |
| WU ADC              | WUT                  | 120.675   | Northolt Tower    | Northolt Tower    |
| WU GND              | WUG                  | 121.575   | Northolt Ground   | Northolt Ground   |

VATSIM does not simulate the Northolt Departure frequency. Northolt Approach is the primary radar facility to be opened before all others and will handle all external coordination with London/Heathrow.

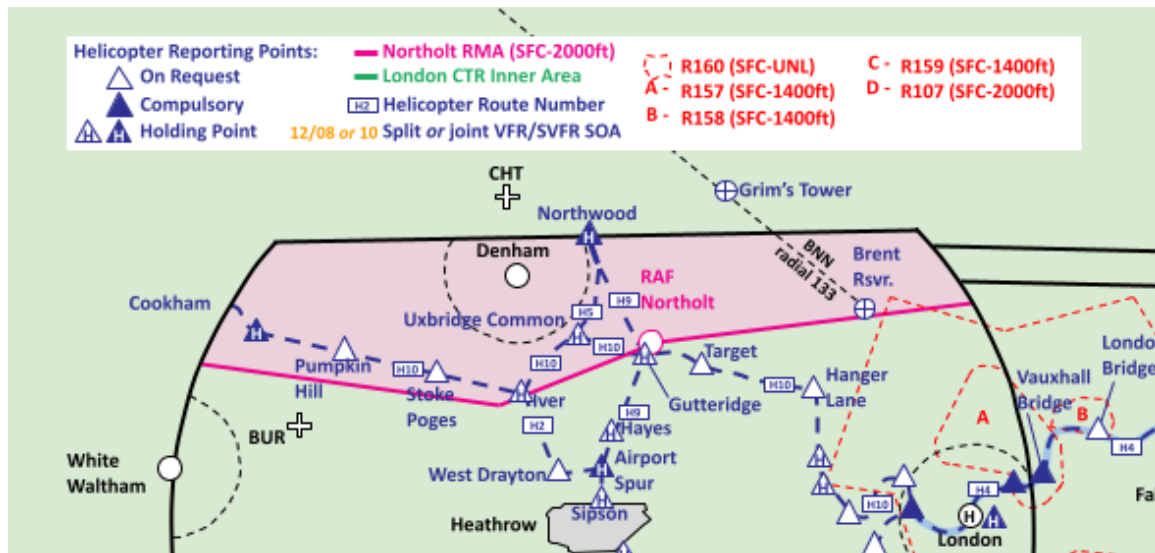
### 15.2 Area of Responsibility

Northolt is delegated a portion of the London CTR (Class D) from SFC to 2000 ft, defined as the Northolt RMA.

In the absence of Northolt or London Military, the responsibility for the Northolt RMA falls to the “TC SVFR” controller, which is controlled by the following top-down order:

1. Thames Director (LC DIR)
2. Thames Director (TMS DIR)
3. Heathrow INT North (LL INT N)
4. Top-down control for Heathrow

Figure APT-22 – Northolt Airspace



Northolt APC can delegate the Northolt RMA (which includes the ATZ) to TC SVFR. It should reclaim the RMA when Northolt inbounds/outbounds are due to enter the airspace. When Northolt owns the RMA, helicopter traffic crossing the RMA boundary should be coordinated between Northolt and TC SVFR. Northolt may opt for TC SVFR to retain traffic on helicopter routes, while in its airspace on a case-by-case basis. In this circumstance, Northolt must separate against all traffic not known to TC SVFR.

**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

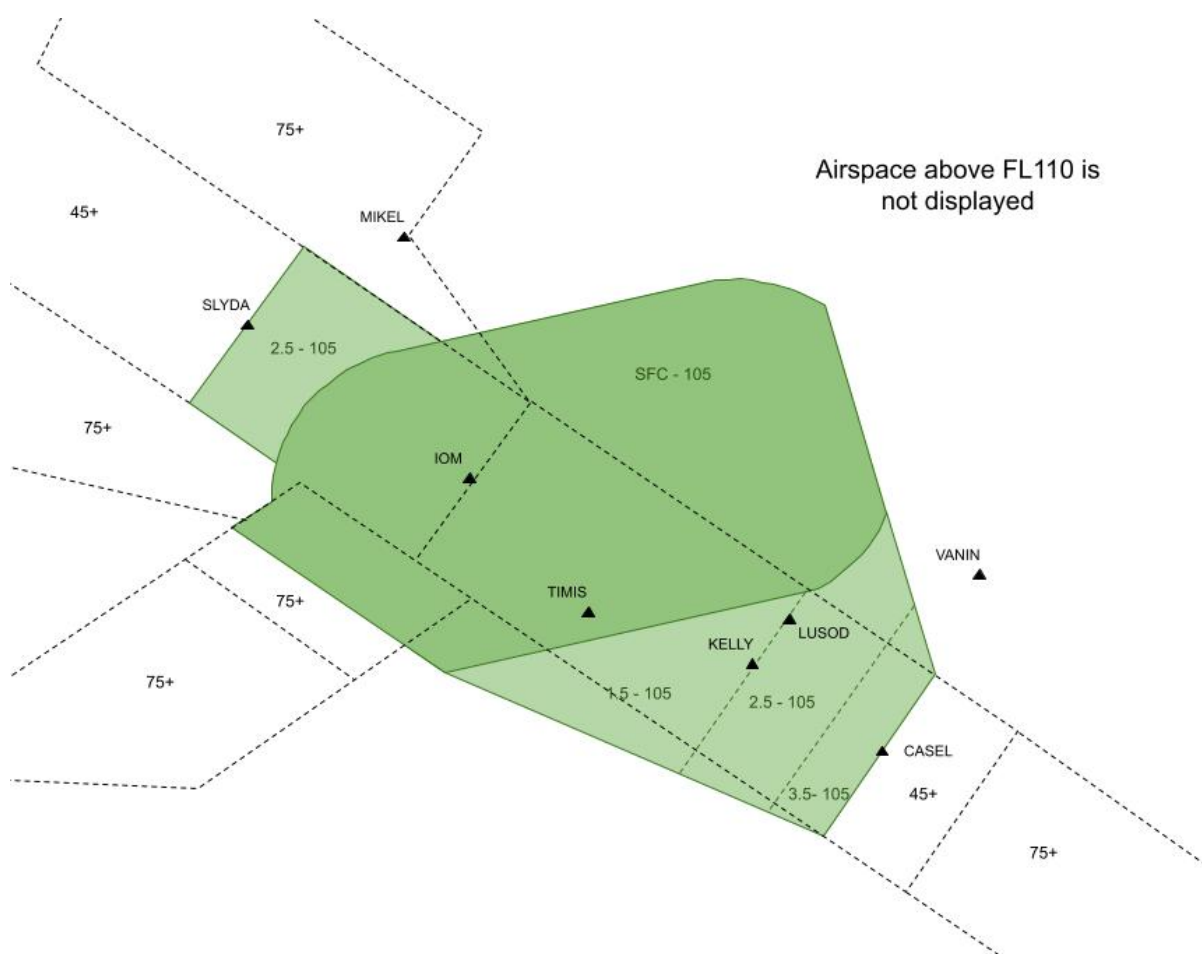
| Position Identifier | EuroScope Identifier | Frequency | RTF Callsign        | Coordination Name   |
|---------------------|----------------------|-----------|---------------------|---------------------|
| NS RAD 1            | NSR                  | 135.905   | Ronaldsway Radar    | Ronaldsway Radar 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 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 heading to position south of L10.*

**Note 2:** *On a 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)

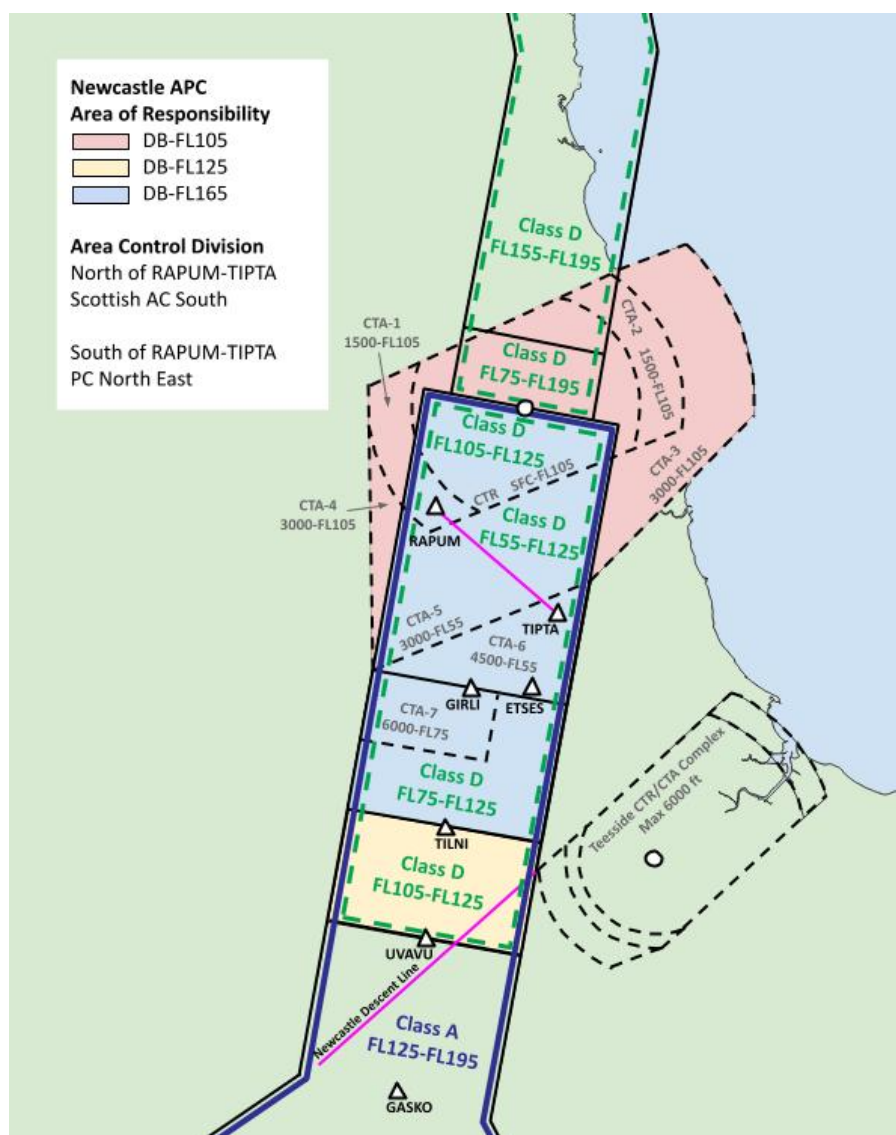
### 17.1 Controller Positions and Coordination Indicator

| 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<br>(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.

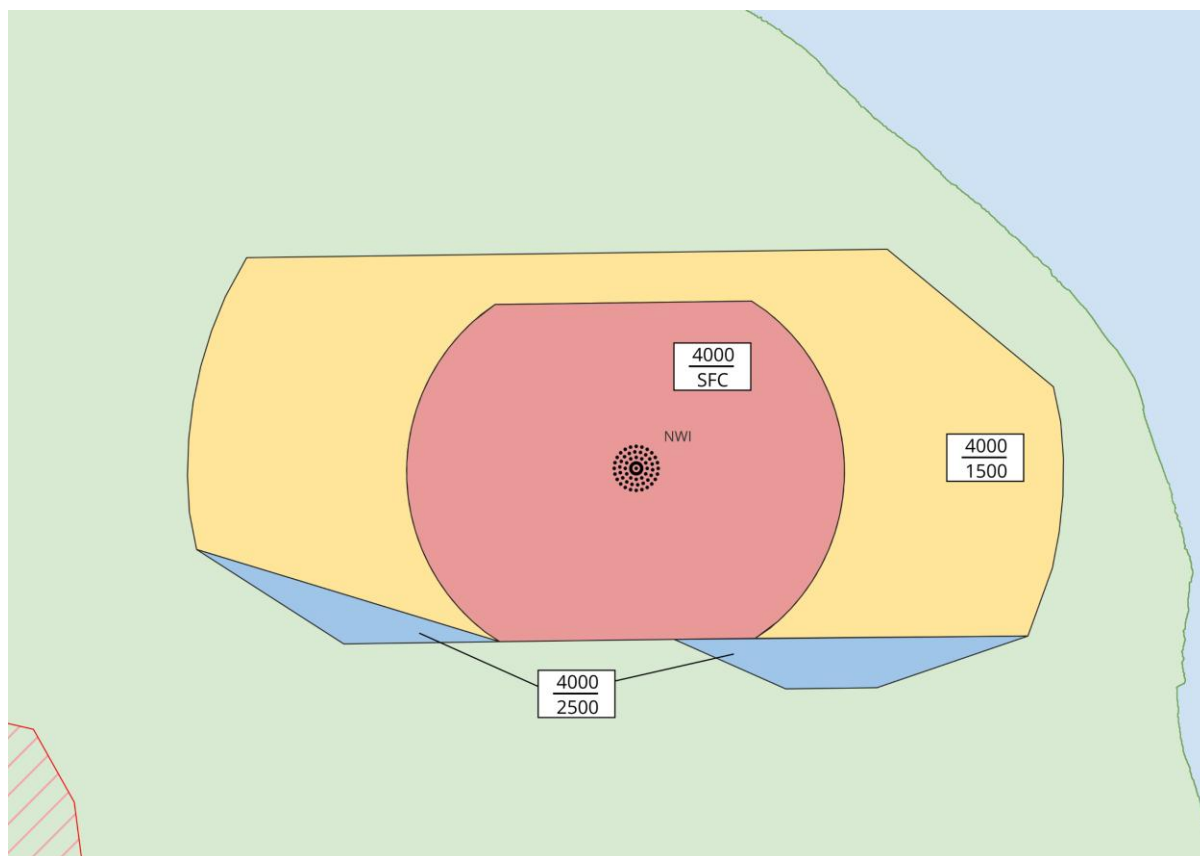
## Chapter 18 Norwich (EGSH)

### 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**

**ANNEXES**

## Annex A | Standard Instrument Arrivals (STARs)

## A.1 Birmingham (EGBB)

| Designator | Arrival Via          | Route   |
|------------|----------------------|---|
| AMPIT 1B   | L15                  | AMPIT – NOKIN – CREWE – 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                         |
| OMENU 1B   | FRA                  | OMENU – POL – MCT – VEGAR – ELEZE – CHASE                     |
| POL 1B     | N57, P18             | POL – MCT – VEGAR – ELEZE – CHASE                             |
| SILVA 1B   | Q41, M183, M605      | SILVA – YOHDA – 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 |
| BAXUN 1A (27) | N864                  | EXMOR – ROTLU – BAXUN               | APC when online   |
| BAJJA 1B      | Q63                   | BAJJA – FANFE – BCN – PEGZA – BRI   |                   |
| DAWLY 1B      | N864                  | DAWLY – EXMOR – BRI                 | RNAV5             |
| ELREW 1B      | -                     | ELREW – DIZIM – BCN – PEGZA – BRI   | Not used (VATSIM) |
| FIFAH 1B      | Q63                   | FIFAH – AMMAN – BCN – PEGZA – BRI   |                   |
| ICTAM 1B      | L179, L722, Q63, T421 | ICTAM – SAWPE – ASHUM – POMAX – BRI |                   |
| TOJAQ 2B      | P16, FRA              | TOJAQ – FARJO – 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 used (VATSIM) |
| FIFAH 1C   | Q63                   | FIFAH – AMMAN – BCN – CDF                 |                   |
| ICTAM 2C   | L179, L722, Q63, T421 | ICTAM – SAWPE – CONKO – ORZEB – BRI – CDF |                   |
| TOJAQ 2C   | P16, FRA              | TOJAQ – FARJO – IZLAW – EXMOR – CDF       |                   |
| WEVBE 1B   | N862                  | WEVBE – UBCAM – ACBAZ – KUKIS – CDF       |                   |

**Note:** These routes also apply to aircraft inbound to St Athan (EGSY).

**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                         |
| OMENU 1E   | FRA              | OMENU – POL – MCT – 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).

Effective 29 April 2026

**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         |
| <b>Runway 27</b> |                             |                     |
| LELNA 1B         | (U)N621 (FL200+), Z171, N63 | LELNA – BRILL – GUR |
| ORTAC 1B         | Q41                         | ORTAC – BRILL – GUR |
| <b>Runway 09</b> |                             |                     |
| LELNA 1V         | (U)N621 (FL200+), Z171, N63 | LELNA – EVKEX – GUR |
| ORTAC 1V         | Q41                         | ORTAC – EVKEX – GUR |

**A.7 Jersey (EGJJ)**

| Designator       | Arrival Via                 | Route                               |
|------------------|-----------------------------|-------------------------------------|
| <b>Runway 26</b> |                             |                                     |
| 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         |
| <b>Runway 08</b> |                             |                                     |
| 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 2L   | 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 2H   | Y125             | FITBO – SOPIT – WEZKO – BNN                         | <b>Not</b> for flight planning |
| HAZEL 1H   | L620             | HAZEL – LLS01 – OCK                                 |                                |
| HON 2H     | L15, L10, L612   | HON – TOBID – SOPIT – WEZKO – 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 2H   | (U)Y53, Q36, Q38 | NUGRA – TOBID – SOPIT – WEZKO – 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           |
|------------|------------------------------|---|-------------------|
| 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         |                   |
| MEGEL 1N   | Z150                         | MEGEL – DITOB – WIQID – MUCTE – OFJES – UDDIZ – COCCU – 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     |                   |
| 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 |                   |
| MEGEL 1A   | Z150                         | MEGEL – DITOB – LAPRA – ABBOT                               |                   |
| 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 2M   | FRA         | TILNI – GASKO – BEGAM – SETEL – ROSUN       |

#### A.15 Newcastle (EGNT)

| Designator | Arrival Via                | Route   |
|------------|----------------------------|---|
| POL 1N     | (U)N601, (U)P17,<br>(U)N57 | POL – GOKOV – IRKOR – XODRU – ETSES           |
| RIMTO 2N   | FRA                        | RIMTO – KEFTE – GOKOV – IRKOR – XODRU – ETSES |

#### 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                                       |

## 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  |
|---------------|--|
| <b>MSL</b>    | Minimum Stack Level  |
| <b>MTMA</b>   | Manchester TMA   |
| <b>MUAC</b>   | Maastricht Upper Area Control  |
| <b>MVA</b>    | Main Vectoring Area  |
| <b>NM</b>     | Nautical Mile  |
| <b>NPR</b>    | Noise Preferential Route   |
| <b>OCAS</b>   | Outside of Controlled Airspace   |
| <b>PC</b>     | Prestwick (MTMA) Centre ('MAN' Callsigns on VATSIM)  |
| <b>PS</b>     | Procedural Services  |
| <b>RFC</b>    | Released for Climb   |
| <b>RFD</b>    | Released for Descent   |
| <b>RFL</b>    | Requested Flight Level   |
| <b>RFT</b>    | Released for Turn  |
| <b>RMA</b>    | Radar Manoeuvring Area   |
| <b>RNAV</b>   | Area navigation  |
| <b>RNP</b>    | Required navigation performance  |
| <b>ScAC</b>   | Scottish Area Control  |
| <b>ScTMA</b>  | Scottish TMA   |
| <b>SID</b>    | Standard Instrument Departure  |
| <b>SIGMET</b> | Significant Meteorological Information AIM 7-1-6 - information concerning en-route weather phenomena which may affect safety of aircraft operation |
| <b>SPT</b>    | Support  |
| <b>SSR</b>    | Secondary Surveillance Radar   |
| <b>STAR</b>   | Standard Terminal Arrival Route  |
| <b>TC</b>     | Terminal Control   |
| <b>TI</b>     | Traffic Information  |
| <b>TL</b>     | Transition Level   |
| <b>TMA</b>    | Terminal Manoeuvring Area  |
| <b>TS</b>     | Traffic Service  |
| <b>UIR</b>    | Upper Information Region   |
| <b>UK FIS</b> | UK Flight Information Service  |
| <b>vACC</b>   | virtual Area Control Centre  |
| <b>VFR</b>    | Visual Flight Rules  |
| <b>vMATS</b>  | virtual Manual of Air Traffic Services   |
| <b>VOR</b>    | VHF omnidirectional range  |
| <b>vRAF</b>   | virtual Royal Air Force  |
| <b>XFL</b>    | Exit Flight Level  |

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END OF DOCUMENT

