vatsim uk
OPERATIONS DEPARTMENT

BIRMINGHAM VMATS PART 2

EGBB

REVISION 2023/13 - EFFECTIVE 28 DECEMBER 2023

DISTRIBUTION AND SCOPE

This manual is for controllers of Birmingham Aerodrome and Approach positions, containing specific and local procedures relevant to these positions. Controllers must be familiar with controlling procedures in the UK; this manual should be read in conjunction with CAP 493 (MATS Part 1) and guidance on standard UK Radiotelephony phraseology, detailed in CAP 413.

EXCLUSION OF LIABILITY

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ACKNOWLEDGEMENTS

This document has been written and proofread by a huge wealth of people, without which the development of this document would not have been possible. On behalf of all VATSIM UK's members, this acts as an acknowledgement and thanks for their work.

DEFINITIONS

The key words "SHALL", "IS TO", "ARE TO", "MUST", "SHOULD", "MAY" are to be interpreted as described in MATS Part 1 (CAP 493).

MARKED CHANGES

Changes made since the last release are marked with a black bar, as indicated, in the left-hand margin. They are also described briefly in the table below.

AMENDMENT HISTORY

The amendment history for revisions over two years old is not shown.

Revision	Effective Date	Notes
2023/13	28 Dec 2023	Updated MPC Southeast top-down order (ADC 1.8.3); Updated all references to 25MHz frequencies to 8.33 MHz spacing; Updated to include TC Midlands introduction (ADC 1.8.3, ADC 3.9.2)
2022/12	01 Dec 2022	LUVUM 1L redesignated LUVUM 1Y (ADC 1.2, ADC 1.3); UMLUX 1M renamed BRUMI 1M (ADC 1.3, ADC 1.6, ADC 3.8, APC 5.4, APC 5.7); TNT SIDs removed, DTY 4F conventional SID removed and WCO 2Y SID removed (ADC 1.3); Removed redundant SIDs from handoff priority (ADC 3.9.2); Added flight level capping (ADC 1.5); Added requirement for AIR to coordinate any speed reduction for aircraft on approach (ADC 3.10); Updated spacing and separation requirements for FIN (APC 4.3.1, 4.3.2, 4.3.3).
2022/05	19 May 2022	Restrictions on opening FIN documented (GEN 4.2); Auto-PDC restrictions added (ADC 1.5.2); New speed table introduced (ADC 3.7.1); Updated STARs (APC 3.2); Updated CHASE hold inbound course (APC 3.3); Updated Midlands Buffer Zone to 3 NM width (APC 4.1.3)
2021/12	2 Dec 2021	Preferential Runway procedures corrected (GEN 5.1); PDC restrictions update (ADC 1.5); Wording clarified for Departures Subject to Radar Release (ADC 3.8 and APC 5.4); Change to MSL Procedure updated (APC 2.7); MAKUX 1B STAR redesignated MAKUX 2B and via FRA replaces airway designators (APC 3.2).
2021/07	25 Jul 2021	Complete re-write to new format, MSL system implemented, noise abatement procedures updated, VFR procedures updated, LTMA/MTMA/East Midlands flight procedures updated, APC inbound releases updated, flexible use airspace implemented, helicopter procedures updated, APC delegated airspace updated, FIN delegated airspace updated, RAD/FIN handover procedures updated.

INTRODUCTION AND STRUCTURE

The Birmingham 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 Birmingham Aerodrome and Approach ATS staff within VATSIM UK.

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

This document is divided into sections as follows:

Page Abbreviation	Section
PRE	Preface
GEN	Unit General Operating Procedures
ADC	Aerodrome Control
APC	Approach Control
LOW	Low Level Operations (VFR/SVFR/Helicopter Procedures)

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.

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Chapter 1 Altimeter Setting Procedures and Meteorology

1.1 Altimeter Setting Procedures

1.1.1 Departing Aircraft

Departing aircraft should state the QNH on first contact with GMP, otherwise it should be issued by the GMP controller. Aircraft should be informed of any subsequent change to the QNH at the earliest opportunity.

1.1.2 Arriving / Transiting Aircraft

At or below the Transition Altitude (TA), an aircraft's vertical position will be controlled by reference to the Birmingham QNH. Aircraft will be issued the QNH once cleared to descend to an altitude by APC, or with clearance to enter the Birmingham Control Zone. Aircraft should be informed of any subsequent change to the QNH at the earliest opportunity.

1.1.3 QFE Threshold

The QFE for all runway thresholds is 11 hPa less than the Birmingham QNH.

1.1.4 Transition Altitude

The Transition Altitude is 6000 feet AMSL.

> ***Note:*** *From here on, unless otherwise specified, vertical references measured in feet (ft) are to be assumed as altitudes AMSL.*

1.1.5 Transition Level and Minimum Stack Level

The Transition Level (TL) and Minimum Stack Level (MSL) for the Birmingham CTR/CTA and Birmingham APC delegated airspace are determined by reference to the following table:

Birmingham QNH (hPa)	Transition Level (TL)	Minimum Stack Level (MSL)
1050 - 1060	FL60	FL70 (*see note*)
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:*** *To avoid inadvertent confusion between flight levels and altitudes, the lowest MSL shall be FL70 regardless of the Birmingham QNH.*

1.1.6 Altimeter Setting Region (ASR)

Birmingham is situated within the Barnsley ASR. The Cotswold ASR is situated south of Daventry (DTY) VOR.

Chapter 2 Noise Abatement Procedures

2.1 Procedures for Departing Aircraft

The following noise preferential routings (NPR) are mandatory for all jet aircraft and for all other aircraft with a maximum certified weight exceeding 5700 kg. Birmingham ATC shall only provide instructions to deviate from the NPR when required for safety. The NPR terminate when an aircraft is at or above:

- 6000 ft for Runway 33 northbound departures
- 3000 ft for Runway 33 southbound/westbound departures
- 3000 ft for Runway 15 northbound/westbound departures
- 4000 ft for Runway 15 southbound departures

For traffic departing on a standard instrument departure (SID) or the LUXTO/MOSUN 15 procedure, the SID/procedure incorporates the relevant NPR. For non-standard traffic (including traffic unable to accept a SID) controllers should pass the following noise preferential routing as part of the clearance:

Runway	Noise Preferential Routing
15	Climb straight ahead, at 2 DME I-BIR (or 500 ft QFT) turn right track 165° to 4 DME I-BIR, then turn as directed by ATC
33	Climb straight ahead, at 2 DME I-BM turn as directed by ATC

Example: *For traffic unable to accept a SID routing via DTY - "GTEST, cleared to Amsterdam via DTY then flight planned route, after departure Runway 15 climb straight ahead, at 2 DME I-BIR turn right track 165° to 4 DME I-BIR, then turn left direct DTY, climb to altitude 6000 ft, squawk 5624."*

Note: *Non-standard traffic following the above NPRs may be vectored once they have reached the end of the NPR (i.e. 4 DME I-BIR for Runway 15 or 2 DME I-BM for Runway 33) regardless of whether they have achieved the NPR termination altitude.*

Except when the requested level is below 3000 ft, no departing IFR traffic is to be restricted to a level below 3000 ft.

2.2 Procedures for Arriving Aircraft

Propeller driven aircraft of 5700 kg or less conducting visual approaches shall not join the final approach track below 1000 ft AAL (QFE).

Jet aircraft and all aircraft greater than 5700 kg conducting visual approaches shall not:

- Descend below 2500 ft AMSL (QNH) on the downwind leg until passing abeam the aerodrome.
- Join the final approach track below 1500 ft AAL (QFE).

Recommend positions for base turns when conducting visual approaches are depicted for pilots in AIP AD 2.EGBB-4-1.

Chapter 3 All Weather Operations

3.1 Low Visibility Procedures (LVP)

3.1.1 Enforcement

Pilots shall be informed when these procedures are in operation by ATIS or by RT. ATC Low Visibility Procedures shall be applied when one of the following weather conditions are present:

- The Runway Visual Range (IRVR) or Met Visibility is less than 600 m
- The cloud ceiling is 200 ft or lower ('ceiling' defined as broken or more).

3.1.2 Safeguarding Procedures

Safeguarding procedures are to be initiated when either of the following conditions are met:

- The Runway Visual Range is 1000 m or less and forecast to drop into LVP
- The cloud ceiling is 300 ft or below and forecast to drop into LVP.

When Safeguarding Procedures are enforced, departing aircraft are required to hold at CAT III holding points, and a reduced landing rate is to be enforced.

3.1.3 Instrumented Runway Visual Range (IRVR)

The IRVR is measured at three points along each runway: at the touchdown zone, the mid-point and the stop-end. The minimum IRVR that can be measured is 50 m and the maximum is 1500 m.

Only the touchdown zone IRVR value is published in the METAR, thus the remaining two IRVR values are unknown to VATSIM network controllers. When LVP are in force, pilots should be informed of the reported IRVR and any subsequent updates.

3.1.4 CAT II/III Holding Points

When the ILS signal is to be protected to safely permit CAT II/III approaches (in LVP), the use of Category III holding points is required.

The holding points to be used during Category II/III operations are as follows:

Runway	Holding Points
15	A2 / AL1 / A5 (for aircraft departing via B)
33	E1 / S2
Mid-length holds	C1 / F1 / L1 / T1

3.1.5 Runway Exits

Aircraft expecting the Elmdon apron must be informed on approach that they must not vacate onto Taxiway G due to LVP.

An aircraft is not considered to have vacated the runway in LVP until it is seen to be established on the taxiway beyond **A2/A5/E1/C2/S2** or on the western/cargo apron (Taxiway **F**).

3.1.6 Arrival Spacing

In order to allow for the increased time aircraft will take to vacate the runway, the **minimum** spacing on final approach during LVP shall be 10 NM. Landing clearance should be provided no later than 3 NM from touchdown or the pilot should be warned to *"expect late landing clearance"*. By 2 NM the aircraft should be cleared to land or instructed to go around.

3.1.7 Departures

Departing aircraft **must** commence their take off roll by the time an inbound aircraft reaches 4 NM from touchdown. This is to ensure that the inbound aircraft receives landing clearance by not less than 2 NM from touchdown and to assist in establishing/maintaining separation in the event of a go-around immediately behind a departure.

3.2 Windshear Warnings

Once turbulence or windshear has been reported to Birmingham ATC, AIR (or FIN where appropriate) should inform all subsequent landing aircraft that windshear conditions have been reported until confirmation has been received that the conditions no longer exist.

3.3 Meteorological Information

An ATIS will be available on frequency 136.030 MHz. The ATIS shall be maintained by the AIR controller, though this can be delegated to another controller. Aircraft are expected to confirm the current ATIS information on first contact with a Birmingham station. When LVP are in force then this should be included in the ATIS broadcast.

Chapter 4 Description of Airfield

4.1 Aerodrome Geographical Data

ICAO Code	EGBB
Aerodrome Reference Point (ARP)	Lat: 522714N Long: 0014453W
Elevation	339 ft
Transition Altitude	6000 ft
Safety Altitude	2500 ft

4.2 ATC Communication Facilities

Callsign	Logon Callsign	Abbreviation	Frequency (MHz)
Birmingham Information	EGBB_ATIS	ATIS	136.030
Birmingham Delivery	EGBB_DEL	GMP	121.930
Birmingham Ground	EGBB_GND	GMC	121.805
Birmingham Tower	EGBB_TWR	AIR	118.305
Birmingham Radar	EGBB_APP	RAD	123.980
Birmingham Director	EGBB_F_APP	FIN	131.005

***Note:** Birmingham APC shall only be split into RAD and FIN positions when AIR is already open **and** when the traffic loading warrants such a split.*

4.3 Radio Navigation and Landing Aids

Type	Identifier	Frequency	Remarks
ILS 15	I-BIR	110.10 MHz	LLZ/DME 3° GP
ILS 33	I-BM	110.10 MHz	LLZ/DME 3° GP
NDB	BHX	406.0 KHz	25 NM range

Chapter 5 Use of Runways

5.1 Preferential Runway

The preferred runway at Birmingham is Runway 33 when the surface is dry and the reported surface wind is 5 knots or less. Aircraft may request Runway 15 if it is necessary for operational reasons.

Aircraft using the duty runway have priority over aircraft requesting use of the non-duty runway. ATC should inform such aircraft of any estimated delay.

5.2 Runway Change Procedures

In case of a change to the active runway, AIR shall initiate coordination with RAD to agree a last arrival and time for the runway change. RAD will coordinate with FIN and inform Area Control of the change.

Based on this time, AIR should then coordinate with GMP and GMC as to the last departure from the current runway. GMP will re-clear any previously cleared aircraft that will now depart on the new runway.

AIR must then inform RAD of the intended last 3 (if appropriate) departures before, and the first departure after, the runway change (callsign and routing). RAD will inform AIR of the first arrival after the runway change at this time.

AIR must obtain a release from RAD before the first aircraft departs off the new runway.

5.3 Opposite Direction Departures/Approaches

AIR will contact FIN to request a release for an aircraft intending to depart from the non-duty runway in the opposite direction to the runway in use. Ideally coordination should commence prior to the aircraft being ready for departure.

FIN and AIR will agree a course of action that will ensure that standard vertical separation will be maintained between any departures and any conflicting, or potentially conflicting aircraft.

If the aircraft is an IFR airways departure, FIN will then notify RAD and the relevant Area Control sector, stating the runway to be used together with the aircraft's callsign and clarifying whether a release will be required.

The FIN controller must ensure that standard vertical separation will be maintained until the departure is airborne, under positive radar control, and lateral separation has been established between the departure and all other aircraft.

Due to environmental restrictions, except for reasons of safety, no departing aircraft will be restricted to less than 3000 ft QNH.

FIN will contact AIR to request permission before positioning an aircraft to land on a runway other than the designated runway in use.

FIN must ensure that in the event of a go-around of an opposite direction inbound aircraft standard vertical separation is maintained until positive radar control and lateral separation has been established between the go-around aircraft and any other aircraft.

Additionally, FIN must ensure that in the event of a go-around of an inbound aircraft on the promulgated runway that standard vertical separation is maintained until positive radar control and lateral separation has been established between the go-around aircraft and an aircraft being vectored to land on the opposite direction runway.

5.4 Minimum Runway Occupancy Time

Pilots may be reminded that rapid exit from the landing runway enables ATC to apply the minimum spacing on final approach achieving maximum runway utilization and keeping the frequency of missed approaches to a minimum.

ADC | AERODROME CONTROL

Chapter 1 Ground Movement Planner (GMP)

1.1 Area of Responsibility

Ground Movement Planner (GMP) (*"Birmingham Delivery"*) provides full departure clearance to aircraft departing Birmingham and is responsible for passing the QNH and verifying the aircraft type of departing aircraft. The flight strip will be amended to ensure the correct flight rules, temporary altitude, squawk, and voice tag are shown. GMP transfers aircraft to GMC once ready for pushback/start and, on specified departure routes, shall pre-note RAD. Transfer of aircraft to GMC will take place to allow sensible movement and departure sequencing and therefore GMP should retain aircraft on their frequency where necessary to absorb delay.

1.2 Issuing Clearances

It is the responsibility of GMP to issue clearances. Pilots should report the following information when requesting clearance:

1. Stand number
2. Aircraft type
3. The ATIS information letter they are in receipt of
4. The current Birmingham QNH.

GMP should ensure that both the stand number and aircraft type are confirmed by the pilot before issuing a clearance. Routes cleared should be valid according to the UK Standard Route Document with a flight level appropriate for direction of flight.

An IFR clearance should follow the format:

1. Callsign
2. Destination
3. Standard Instrument Departure
4. Squawk Code

> ***Example:*** *"ABC123, cleared to Glasgow, LUVUM 1 Yankee departure, squawk 0356."*

GMP must obtain a full read back of the given clearance. If the QNH and/or ATIS Letter were not correctly reported by the pilot, the GMP controller will pass this to the pilot.

> ***Example:*** *"ABC123, correct. Information Alpha, Birmingham QNH 1020."*

On transfer to GMC, it is assumed that the aircraft has been informed of any changes to their clearance and has been issued the latest QNH.

1.3 Standard Instrument Departures

All Standard Instrument Departures (SIDs) at Birmingham are RNAV1. Non-RNAV1 capable aircraft require coordination with RAD.

Route	33 SID	15 SID	Remarks
ADMEX	1M	-	*(Note 1)*
BRUMI	1M	-	See ADC 1.4
COWLY	-	2Y	*(Note 1)*
CPT	-	2Y	*(Note 1)*
DTY	-	2Y	*(Notes 2 & 3)*
LUVUM	1M	1Y	
UNGAP	1M	-	(*Note 2*)

Note 1: *Traffic filing ADMEX when Runway 15 is in use may be cleared (without needing to re-file) for COWLY if filing L612 after EMKUK or CPT if filing Y321 otherwise.*

Note 2: *DTY is intended for eastbound traffic joining P155 (alternative to UNGAP). DTY is not available for traffic routing south via M605, which should be re-routed to COWLY.*

Note 3: *L10 is only available for cruise below FL155. L608 is only permitted below FL230 eastbound. Traffic routing to REDFA via L608 that are able to accept a cruise above FL200 should be offered an alternate route via P155.*

1.4 Departures to the West

1.4.1 Flexible Use Airspace

The airspace to the west of Birmingham (Birmingham CTA 10 and Cotswold CTAs 15-18) is designated as Flexible Use Airspace (FUA). These portions of airspace are active between 1700-0900 local Monday-Thursday and 1700 local Friday-0900 local Monday (extended to include public holidays). Outside of these hours the airspace reverts to Class G.

During the hours of FUA activation, traffic shall join airway N92 at either BRUMI or LUXTO. Outside the hours of FUA activation traffic shall route to MOSUN to re-join controlled airspace in vicinity of BCN to the south-west. In reality, traffic via MOSUN is restricted to turbo-prop aircraft at/below FL160 however this restriction is not implemented on VATSIM.

1.4.1.1 Runway 33 Departures – BRUMI SID

Departures to the west when Runway 33 is in use shall be cleared via the BRUMI SID.

During the hours of FUA Operation

Traffic shall route BRUMI N92.

Outside the hours of FUA Operation

Traffic shall route BRUMI DCT MOSUN.

> ***Example:*** *"ABC123, cleared BRUMI 1M departure leaving controlled airspace on track MOSUN, squawk 0356."*
>
> ***Note:*** *Traffic is not cleared to destination because it will leave controlled airspace and subsequently require clearance from Area Control to re-enter controlled airspace at MOSUN.*

1.4.1.2 Runway 15 Departures – LUXTO/MOSUN Procedures

Departures to the west when Runway 15 is in use shall be cleared via either the *"LUXTO 15"* or the *"MOSUN 15"* procedure.

During the hours of FUA Operation (LUXTO 15 Procedure)

Traffic shall route LUXTO N92.

LUXTO 15 procedure: At 2 DME, turn right to track 165° to 4 DME, then turn right direct LUXTO, climb to altitude 6000 ft.

> ***Example:*** *"ABC123, cleared to Lisbon, LUXTO 15 procedure, squawk 0356."*

Outside the hours of FUA Operation (MOSUN 15 Procedure)

Traffic shall route DCT MOSUN.

MOSUN 15 procedure: At 2 DME, turn right to track 165° to 4 DME, then turn right, cleared to leave controlled airspace on track MOSUN, climb to altitude 6000 ft.

> ***Example:*** *"ABC123, MOSUN 15 procedure, squawk 0356."*
>
> ***Note:*** *Traffic is not cleared to destination on the MOSUN 15 procedure because it will leave controlled airspace and subsequently require clearance from Area Control to re-enter controlled airspace at MOSUN.*

1.5 Flight Level Capping

Flights to certain destinations are capped, generally due to operational reasons. Controllers shall ensure adherence with this table, informing the pilot of necessary changes while being careful to prevent the pilot from misinterpreting the change as an initial climb. Controllers may inform pilots that, in some cases, it will be possible to obtain a higher climb from area controllers – but this shall not be coordinated on the ground.

Destination	Maximum FL
Basel Group	FL330
Brussels Group, Paris Group, EH**	FL290 *via VABIK*
Dublin Group, EICM	FL280
Duesseldorf Group, EDFQ	FL330 *via LAMSO/REDFA*
EB**, EH**, Paris Group	FL290 *via KOK*
EGNS	FL180
EHBK, Haamstede Group	FL210
Farnborough Group, London Group, EGHH/HI/KA	FL190

Destination	Maximum FL
Jersey Group	FL290 *via LELNA*
LFLB/LI/LP/LS, LSGG/GL/GS	FL350
LFSD	FL350
Paris Group	FL290 *via XIDIL*
Paris Group, LFOB/OP/RG	FL290
EGPX FIR (except EGPD)	FL280
EGGD/FF/TE	FL160 *via N92*

Group	Includes (most popular destinations emboldened)
Basel Group	LFGA, LFGB, LFSB, LFSM
Brussels Group	EBAW, **EBBR**, EBCI, EBCV, EBMB
Dublin Group	EIDG, **EIDW**, EIME, EIWT
Duesseldorf Group	EDDG, **EDDK**, **EDDL**, EDGS, EDKB, EDKL, EDLA, EDLE, EDLM, EDLN, EDLP, EDLV, EDLW, ETNG, ETNN
Farnborough Group	EGHL, **EGLF**, EGLK, EGTD, EGTF, EGVO
Haamstede Group	EHBD, EHEH, EHGR, EHMZ, **EHRD**, EHSE, EHVK, EHWO
Jersey Group	EGJA, EGJB, **EGJJ**
London Group	**EGGW**, EGKB, **EGKK**, **EGLC**, **EGLL**, EGMC, EGSC, **EGSS**, EGTO, EGWU
Paris Group	LFPB, **LFPG**, LFPN, LFPO, LFPT, LFPV

1.6 Pre-Departure Clearance (PDC)

When both the controller and pilot are suitably equipped, a PDC may be offered in order to clear pilots electronically. The operation of the controller PDC clients is explained in operations guides for the separate options for hosting this facility – the TopSky plugin, vStrips, vSMR and Hoppie's ATC ACARS client host instructions as to how to use their programs on their respective websites.

1.6.1 Availability of PDC

PDC clearances will **not** be available (and should **not** be issued) in the following circumstances:

- For traffic routing via BRUMI 1M **outside** the hours of operation of flexible use airspace or via LUXTO/MOSUN (**regardless** of the FUA hours of operation).
- Up to half an hour before a runway change, to prevent the incorrect issuing of a SID. The actual availability of PDC will be at the GMP controller's discretion.
- When the route of an aircraft's flight plan needs to be changed, or for expedition due to a flow restriction on a certain routing.

  Note: *Should the GMP controller elect to continue issuing PDC clearances within the 30-minute period before a runway change they shall only issue manual PDC clearances and deactivate auto-PDC. This is to prevent the inadvertent issue of an auto-PDC clearance with an incorrect SID without the GMP controller noticing.*

In all the above cases, the pilot should be advised by ACARS message to call the controller by voice in order to obtain ATC clearance.

1.6.2 Auto-PDC Restrictions

When auto-PDC is in operation the following restrictions apply:

- BRUMI 1M (Runway 33) should be set to *Refuse PDC* when Flexible Use Airspace is **inactive** and a clearance to leave controlled airspace should be passed over voice.

1.7 Flow Restrictions

1.7.1 Calculated Take-off Times (CTOT)

A Calculated Take-Off Time (CTOT), sometimes referred to as a 'slot', is issued to a sequence of departures as a long-term flow management system when there is a significant excess of aircraft wishing to depart the aerodrome. CTOTs will usually only be employed as a method of flow control on VATSIM during particularly busy events.

On VATSIM, the adherence to slot times is clearly not as important as the real world, and a deviance of 5 minutes before or, 10 minutes after is typically required during events. Since CTOTs are generally locally assigned, instead of being based on restrictions in Europe, adherence rules as strict as this do not tend to be employed, although it may be deemed acceptable to delay aircraft who have not met a reasonable CTOT.

GMP controllers should retain aircraft on stand until a reasonable time to facilitate the meeting of a slot time in order to prevent both RTF congestion on ground frequencies and the blocking of taxiways. The time for pushback and taxi distance should therefore be considered when determining a suitable time to transfer the aircraft to GMC.

1.7.2 Minimum Departure Intervals (MDI)

During periods of enroute congestion, area control may impose a Minimum Departure Interval (MDI) between specified departures. The maximum validity of this MDI may be 30 minutes, at which point if further restrictions are required, area control will inform Birmingham ADC of a new MDI. The MDI may of course be removed at any point.

1.7.3 Airfield Reasonable Departure Spacing (ARDS)

It is as much the responsibility of GMP to monitor the number of departures at the holding point as it is the job of AIR. There is no formal flow restriction associated with the concept of ARDS, but GMP must consider how factors such as the meteorological conditions will affect AIR's ability to maintain a reasonable departure rate.

1.8 Flights to Local Airfields

1.8.1 Delay Absorption for Flights to the London and Manchester TMAs

A pre-note should be sent to the receiving Area Control sector when a clearance to any airport in the London TMA (including Southampton (EGHI) and Bournemouth (EGHH)) or Manchester TMA (including Isle-of-Man (EGNS) and Newcastle & Durham (EGNT/NV)) is issued and the Area Control sector should respond with any delay (a response without specifying a delay may be interpreted as no delay).

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 the receiving AC sector when the delay is absorbed and the pilot is starting. *("GABCD starting for EGLL"*), no response is required from AC.
3. Greater than 20 minutes: AC 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 AC.

Traffic to the LTMA, EGHI and EGHH is coordinated with TC Midlands Sector:

1. TCM – TC Midlands (LTC_M_CTR)
2. LM – AC Daventry (LON_M_CTR)
3. LC – AC Central (LON_C_CTR)
4. LSC – AC South Central (LON_SC_CTR)
5. L – AC Bandbox (LON_ CTR)

Traffic to the MTMA, EGNT/NV and EGNS is coordinated with PC Southeast sector:

1. PCSE – PC Southeast (MAN_SE_CTR)
2. PCE – PC East (MAN_E_CTR)
3. PC – PC Bandbox (MAN_CTR)
4. LNW – AC Lakes (LON_NW_CTR)
5. LN – AC North (LON_N_CTR)
6. L – AC Bandbox (LON_CTR)

In the event the relevant Area Control sector is offline coordination shall be with RAD, or in the absence of RAD the receiving unit's APC controller.

In most situations, this coordination should ideally take place via text communication.

1.8.2 IFR Flights to East Midlands (EGNX)

Flight Plan Routing (33): UNGAP DCT DTY
Flight Plan Routing (15): DTY
Flight Plan Routing (non-RNAV): DCT DTY

Flights above 4500 ft shall follow the LTMA delay absorption procedure. **Traffic shall be cleared to 5000 ft initially** and should expect a level between 5000 ft and FL80 for cruise; higher may rarely be issued by Area Control. Alongside AC Daventry, GMP shall prenote RAD.

Traffic operating below 4500 ft will be routing outside of controlled airspace and should be coordinated with RAD.

1.8.3 IFR Flights to Coventry (EGBE)

IFR flights to Coventry should remain on stand and be pre-noted to RAD to confirm any delay. If any delay is required, GMP shall follow the same actions as the LTMA/MTMA delay absorption procedure. This traffic will receive a non-standard departure clearance from the RAD controller issued via AIR and as such should not be cleared on any SID.

1.9 Non-Standard IFR Departures

All non-SID IFR departures shall be coordinated with RAD.

1.10 VFR Clearances

Light, propellor-driven traffic operating low-level and wishing to leave the CTR shall do so via one of the published VRPs. GMP may issue clearance to aircraft, not above 2000 ft via:

- M42 Junction 10 Tamworth
- M6 Junction 3 Bedworth
- Frankly Reservoirs
- M40/42 Interchange

GMP shall issue a local SSR code starting at 0417 and working downwards.

> ***Example:*** *"G-ABCD cleared to leave the Birmingham Control Zone via Frankley Reservoirs, not above altitude 2000 ft, VFR, squawk 0417."*

GMP will pre-note AIR and RAD of the flight with the callsign, aircraft type, squawk and cleared routing (preferably via text coordination).

For a departure wishing to route in another direction or unable to route via a VRP, a departure clearance shall be obtained from RAD while the aircraft is on stand.

1.11 Transfer to GMC

GMP should use the following phraseology when transferring to GMC:

> ***Example:*** *"ABC123, hold position. Contact Birmingham Ground 121.805."*

The phrase *"start approved"* should only be used when the pilot has requested to start an engine on stand.

Chapter 2 Ground Movement Control (GMC)

2.1 Area of Responsibility

Ground Movement Control (GMC) *("Birmingham Ground")* is responsible for the movement of aircraft on the main apron, the Elmdon apron and taxiways. Aircraft will be given pushback instructions when required. Departures will be taxied to the runway holding point and handed to AIR as early as possible, clear of potential conflicts. Arrivals will be taxied to stand. In the absence of GMP then GMC will take on these functions.

2.1.1 Departure Handoffs

Aircraft should be handed to AIR with reasonable timing to prevent excessive delays and to allow AIR to sequence aircraft effectively.

2.2 Pushback Clearance

Clearance to push must include the stand number of the aircraft being given clearance. This is to aid bring attention to nearby aircraft of the movement.

> ***Example:*** *"ABC123 stand 24, push and start approved, face west."*

Start clearance will be provided once the aircraft is ready for pushback. Turbine aircraft will be passed the outside air temperature.

Aircraft will request pushback once ready to do so from GMP. GMP must instruct aircraft to hold position and contact GMC. Single engine piston aircraft and smaller GA/business aircraft may not need pushback as they can taxi straight off stand.

To allow another aircraft to taxi out or into an adjacent stand, aircraft may be instructed to carry out a 'long push' to abeam a specific stand.

2.3 Runway Crossings

When aircraft are required to hold short of a runway prior to crossing, GMC shall append *"hold short runway [runway]"*, even though an instruction to hold at a holding point may have already been issued.

> ***Example:*** *"GVUKA taxi to holding point T1 via D, T, hold short Runway 15."*

GMC may not cross traffic across an active runway, nor may crossing be relayed from AIR. Crossing clearances must be issued by AIR on the AIR frequency.

2.4 Taxiway Restrictions

2.4.1 A380 Ground Movements

The stands capable of handling an Airbus A380 are as follows:

- 54C
- 85C

If a third A380 is operated with both the above stands in use, it can be parked on T or U to hold.

Departing A380 aircraft **must** use the CAT II/III hold points (i.e. A2 and S2) regardless of meteorological conditions.

For A380 (Code F) compatible taxiways, see AIP chart AD 2-EGBB-2-3.

2.4.2 Taxiway Restrictions

The following taxiway restrictions apply:

Location	Restriction
Taxiway G	Not available for code D or E aircraft
Taxiway D between D4 and D5	Maximum wingspan of 42 m
Taxiway T	One-way taxi route from T4 to T2 (i.e. taxi only east to west)
Aircraft vacating Runway 15/33 at Taxiway T	Cannot be held clear of the runway and short of Taxiway A/D
The Alpha Loop taxiway	Only available for code A, B and C aircraft

2.5 Non-Direct Taxi Instructions to Stand

Where a clear route and taxi instruction cannot be issued to take an aircraft to its stand, the phrase *"expect stand"* should be used to inform the aircraft of their parking position.

Example: *"ABC123 taxi via A, hold short of T, expect stand 15."*

2.6 Elmdon Apron

The Elmdon Apron is used for parking of general aviation flights, military aircraft and cargo flights. Oversize aircraft shall use either Stands 83C, 84C, 85C and 86C or the Elmdon Apron.

It is common, but not mandatory, for inbound aircraft routing to the Elmdon Apron to be coordinated with GMC by AIR and remain on AIR frequency.

Chapter 3 Air Control (AIR)

3.1 Area of Responsibility

Air Control (AIR) *("Birmingham Tower")* controls movement of aircraft on the runway and holding at all runway holding points. Additionally, AIR also has responsibility for providing information to aircraft making an instrument approach and VFR traffic both in the visual circuit and within the vicinity of the ATZ. AIR is responsible for obtaining departure releases when required.

3.1.1 Delegated Responsibilities

AIR is responsible for traffic operating under VFR within and in the vicinity of the ATZ. Traffic in the vicinity of the ATZ should be coordinated with FIN and FIN will be informed of the presence of aircraft within the visual circuit.

3.2 Line Up Procedures

3.2.1 RT Phraseology

All instructions to enter a runway shall include:

1. The relevant runway designator
2. The holding point designator at which the aircraft is to enter the runway, including from full length
3. For crossing traffic, the holding point designator at which the aircraft is to vacate the runway.

3.2.2 Multiple Aircraft on the Runway

The AIR controller needs to be aware of the potential effects of jet blast when lining up multiple aircraft on the runway. It is generally acceptable to line up two aircraft simultaneously when the aircraft are lining up at different holding points, for example when there is one aircraft departing from E1 and the other S1 on Runway 33 or the same situation but with A1 and B for Runway 15.

3.3 Conditional Clearances

3.3.1 RT Phraseology

To assist flight crew with situational awareness, when issuing conditional clearances, the distance from touchdown of any relevant landing traffic should be included.

> ***Example:*** *"ABC123 behind the landing A320 at 4 miles, via E1 line-up Runway 33 behind."*

3.3.2 Runway Safeguarding Phraseology

The word *"follow"* must not be used in conditionals in the runway holding area. Aircraft should not be instructed to *"follow"* another one to prevent two aircraft lining up with only one of them having clearance to do so. Aircraft should not be told their number in the intended departure sequence. Instead, AIR may issue approximate airborne times as either a time past the hour, or an approximate wait in minutes.

3.3.3 Intersection Conditionals

Aircraft at an intersection may only be issued a conditional line up or crossing instruction behind the next departing aircraft. I.e. The aircraft should be able to perform the intended action behind the next aircraft that passes them.

3.3.4 Maximum Runway Conditionals

It is recommended that a maximum of two conditionals shall be active at any one time. I.e. An aircraft may be lining up behind a departure on the runway, and another aircraft may be lining up behind them.

3.4 Runway Clearances

It is accepted that a degree of anticipation is permissible in the issuance of take-off and landing clearances. In all cases take-off/landing clearances shall not be passed until the preceding aircraft:

- Has passed the runway edge markings and
- Is in motion, continuing in the required direction.

Vacating aircraft must not be instructed to stop until they have passed entirely beyond the runway holding point and at a minimum shall be passed an instruction to turn left or right on the taxiway as they vacate. The exception to this is aircraft vacating at C1 which may be instructed to hold at C2 but the controller must then ensure the aircraft is clear of the C1 holding point before issuing another clearance to take-off/land.

When a clearance is issued in anticipation of meeting the vacated requirement, controllers shall continuously monitor the situation and take positive action if the requirement may not be met.

3.5 Flights to Local Airfields

GMP will have coordinated initially with the relevant local controllers – see ADC 1.8.

AIR must get a departure release for all traffic to the London TMA (including EGHH/EGHI), the Manchester TMA (including EGNT/NV and EGNS) and East Midlands from the relevant Area Control sector. Additionally, flights to East Midlands are subject to release from RAD.

Aircraft subject to a release must depart within +5 minutes of the release time.

3.6 Wake Separation

3.6.1 Wake Turbulence Separation

Wake turbulence separation should be provided in accordance with MATS Part 1.

3.6.2 Holding Points

There are **no** holding points for that are considered to be the same point for the purposes of departure wake vortex separation.

3.7 Departure Separation

All departure separations must be considered as **minima** and should not be reduced by AIR using RSIVA, or by any other means.

3.7.1 Table of Aircraft Speed Groups

To permit the calculation of the correct time interval between departures, aircraft are categorised into five groups, as shown in the following table:

Group 4	Group 3	Group 2	Group 1
All jet aircraft **except**:	BAe 146 / Avro RJ variants	ATR variants	BN2P/T
- *Those in Group 3*	Citations **except**	DH8A/B/C	C208
- *Concorde*	*C56X/680/68A/700/750*	F50	DA62
- *Military fast jets*	CL35/CL60	JS31/32/41	DHC6
	CRJ1/2/7/9/X	King Air variants	E110
	D328/J328	PC12	
	DH8D	SF34	
	E135/145	SW3/4	
	E50P/55P	TBM7/8/9	
	P180		
	SB20		

Aircraft not included in Groups 1 to 4 are to be the subject of a separation agreed by RAD.

3.7.2 Route Separation

For the purposes of departure separation, all SID departures (including the LUXTO 15 and MOSUN 15 procedures) from the same runway are considered to be the same departure routing. The basic routes separation that shall be applied by the AIR controlled between successive departures is 2 minutes.

When a faster aircraft follows a slower aircraft, the interval between departures is to be increased by 1 minute per successive speed group.

Subject to wake vortex separation, the departure interval may be reduced to 1 minute when the following aircraft is two speed groups slower than the first aircraft.

> ***Note:*** *Where time-based separation is used as the sole means of departure separation, 1 minute shall be not less than 60 seconds and 2 minutes shall be not less than 120 seconds.*

3.8 Departures Subject to Radar Approval

For any departures in the first list AIR must obtain a **departure release** from RAD before clearing the aircraft for take-off:

- Traffic to East Midlands (EGNX)
- Where the following aircraft is 3 speed groups faster than the lead
- Aircraft departing following a missed approach
- Aircraft departing immediately prior to and following a change of runway direction
- VFR departures
- Whenever RAD implements a radar check.

For any departures in the second list AIR must obtain a **departure release** from RAD before clearing the aircraft for take-off and must also obtain a **release for the subsequent departure**:

- Aircraft not on the speed table
- Non-airways IFR departures (including all Coventry (EGBE) departures) and SVFR departures
- Whenever AIR requires an aircraft to deviate from the SID
- LUXTO/MOSUN/BRUMI departures.

AIR will inform RAD if an aircraft is observed to deviate from the SID to the extent that departure separation may be eroded.

Aircraft subject to a release must depart within +5 minutes of the release time.

3.9 Transfer of Control and Communication

3.9.1 Departures

Departures may only be transferred to the radar controller once all aerodrome conflictions have been resolved. Ideally transfer shall occur no later than 2000 ft or 2.5 NM from the departure end of the runway, though if required to retain traffic to resolve a confliction, the AIR controller shall look out for pilots climbing to above their initial (cleared) level and take action.

If the departure time separation applied does not achieve the expected airborne separation, then the AIR controller should intervene to establish positive track separation by the use of an early turn onto a heading. This action is to be retrospectively co-ordinated with the appropriate radar controller.

3.9.2 Handoff Priority

North	LUVUM
West	LUXTO, MOSUN, BRUMI
South	ADMEX, COWLY, CPT, DTY, UNGAP

Departure	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
North	RAD	LM	TCM	LC	LSC	L	PCSE	PCE	PC	LNW	LN
West	RAD	LM	TCM	LC	LSC	L	LW				
South	RAD	LM	TCM	LC	LSC	L					

RAD – Birmingham Radar (EGBB_APP)

LM – AC Daventry (LON_M_CTR)

TCM – TC Midlands (LTC_M_CTR)

LC – AC Central (LON_C_CTR)

LNW – AC Lakes (LON_NW_CTR)

L – AC Bandbox (LON_CTR)

PCSE – PC Southeast (MAN_SE_CTR)

PCE – PC East (MAN_E_CTR)

LSC – AC South Central (LON_SC_CTR)

PC – PC Bandbox (MAN_CTR)

LN – AC North (LON_N_CTR)

3.10 Aircraft on Approach

The transfer of communications of an aircraft from FIN to AIR should occur no later than 6 NM from touchdown and is prior to the transfer of control.

FIN remains responsible for radar separation and wake turbulence separation of aircraft until touchdown and therefore no changes to speed may be given by AIR without agreement with FIN.

3.11 Landing Clearance

3.11.1 Runway Designator

The runway designator should be included in all landing clearances.

3.11.2 Cancelling Approach Clearance

It is the responsibility of the AIR controller to issue landing clearances to all aircraft. If they are not satisfied that an approach can continue safely, they may issue instructions to re-position a particular aircraft or instruct the aircraft to go-around.

3.12 Arrival Spacing

All arrival wake turbulence separation is as per MATS Part 1.

In routine operations FIN shall ideally achieve spacing of 8 NM to allow a departure between arrivals.

3.13 Minimum Radar Separation

A minimum radar separation of 3 NM applies between IFR/SVFR aircraft.

3.14 Missed Approaches

The standard missed approach procedures are as published on approach charts. The table below details the missed approach procedure for instrument approaches.

Runway	Procedure	Missed Approach Procedure
33	ILS	Climb straight ahead to 3000 ft, then as instructed
	RNP LOC/DME	Climb straight ahead (326°) to 3000 ft, then as instructed
	NDB/DME	Climb straight ahead (322°) to 3000 ft, then as instructed
15	ILS	Climb straight ahead (146°) to 1000 ft, then turn right onto track 166° to 3000 ft, then as instructed
	RNP LOC/DME	Climb straight ahead (146°) to 1000 ft, then turn right onto track 166° to 3000 ft, then as instructed

NDB/DME	Climb straight ahead (151°) to 1000 ft, then turn right onto track 166° to 3000 ft, then as instructed

3.15 Go-Around Procedure

On becoming aware of, or after initiating a go-around, the AIR controller is to:

1. Take initial action to establish separation between the go-around and departing traffic:
    a. Go-around traffic shall not be cleared above 3000 ft
    b. Tactical headings may be issued if necessary
    c. Traffic should be monitored visually where able, or via the ATM
2. Coordinate with the RAD controller as soon as able, ideally concurrently with any initial corrective action. Coordination should:
    a. Agree routing and cleared level of departure and go-around traffic
    b. Agree frequency for go-around traffic to be transferred to
3. Pass traffic information where required or useful
4. Relay any instructions from RAD to relevant traffic and monitor situation until transfer to RAD

The next departing aircraft following a missed approach requires a release from RAD.

3.16 Circuit Procedures

Circuits may take place to either the east or the west of the aerodrome at an altitude of 1500 ft QNH at the discretion of the AIR controller. FIN shall be informed when the circuit is active and ceases to be active, and whenever the downwind leg for traffic extends beyond 4 NM. VFR traffic remaining within the visual circuit should be instructed to squawk the circuit conspicuity SSR code 7010.

SVFR circuits require the approval of FIN and shall be coordinated to ensure standard separation is maintained against other IFR or SVFR traffic unless AIR is able to provide reduced separation in the vicinity of the aerodrome (RSIVA).

3.16.1 Integrating Circuit Traffic with IFR Approaches

VFR traffic may be instructed to orbit at the start or end of the downwind leg, to land or to leave the circuit and hold away from the instrument approach. Traffic information is to be passed as appropriate. Circuit traffic must report the relevant traffic in sight before turning base.

If the pilot cannot see the aircraft on final, they must either extend downwind or orbit left/right at the end of their downwind leg until the aircraft on final is sighted or has landed. Once the traffic is in sight or has landed, wake turbulence advisories should be passed (if applicable) with the instruction to report final.

Except when AIR is able to apply RSIVA SVFR traffic must either land or be routed to maintain 3 NM separation from the final approach track whenever inbound IFR traffic is within 25 NM. FIN will provide AIR with a 25 NM range check with regards to IFR inbounds.

3.16.2 Re-join Procedures

Aircraft shall typically be cleared to join a base leg appropriate to the direction of arrival, however AIR may integrate traffic however necessary. Overhead joins are not normally to be permitted.

3.17 Helicopter Procedures

Helicopters shall land/depart from the runway however, subject to traffic, National Police Air Service (NPAS) helicopters (ICAO UKP) may conduct approaches to or take-off from the operating base located on the Elmdon Apron under the control of AIR. When such traffic routes directly to or from the Elmdon Apron coordination with GMC is required to avoid conflicts with ground movements. Movements to and from the Elmdon Apron are to be instructed *"lift/set-down at your discretion"*.

Police helicopters intending to land at the Elmdon Apron from the west can be cleared straight in providing necessary traffic information and runway information has been passed and there are no possible conflicts. Helicopters approaching from the east shall be routed to hold northeast of the eastern aerodrome boundary followed by a clearance to route across the runway when safe.

Standard wake turbulence separation requirements must be applied between a helicopter movement and the traffic which precedes it. Wake turbulence separation must be applied between air taxiing helicopters within 760 m of the runway and departing traffic and, if entering the runway, the helicopter should be considered as if it is departing from an intermediate point of the runway.

While helicopters are operating on the manoeuvring area extreme caution must be exercised regarding rotor blade clearance and turbulence.

3.18 Use of the Aerodrome Traffic Monitor

An Aerodrome Traffic Monitor (ATM) is available, and the information derived from the ATM may be used by all AIR controllers to:

- Determine the landing order, spacing and distance from touchdown of arriving aircraft
- Assist in applying longitudinal separation for departing aircraft
- Enable controllers to confirm that the initial track of departing aircraft conforms with the clearance issued
- Provide information to aircraft on the position of other aircraft in the circuit or carrying out an instrument approach.

Additionally, ***radar validated controllers (S3+)*** may utilise the ATM for advanced uses:

- Following identification, validate SSR codes of departing aircraft and verify associated mode C read-outs
- Monitor the progress of overflying aircraft identified by Approach Radar Control to ensure that they do not conflict with the tracks of arriving or departing aircraft.
- Establish separation between departing aircraft

- Pass traffic information
- Establish separation in the event of a missed approach
- Assist in taking initial corrective action when the separation between arriving aircraft becomes less than the prescribed minima.

APC | APPROACH CONTROL

Chapter 1 Area of Responsibility and Sector Organisation

1.1 General

In this section, the following conventions for the naming of the Birmingham APC positions is adopted:

RAD	- Birmingham Radar
FIN	- Birmingham Director
Birmingham APC	- Collective RAD and FIN functions

1.1.1 Area of Responsibility

The area of responsibility for Birmingham APC is the Birmingham CTR and CTA, and Area Control airspace as delegated to Birmingham APC within 40 NM of Birmingham.

Birmingham APC shall provide approach control and approach radar control services to aircraft from the time and place at which:

- Arriving aircraft are released by Area Control until:
  - Control is transferred to ADC, or
  - They are clear of controlled airspace and transferred to an appropriate agency
- Aircraft approaching from outside controlled airspace place themselves under the control of Birmingham APC until control is transferred to ADC
- Overflying aircraft are within the relevant controlled airspace
- Departing aircraft are transferred from ADC until:
  - Control is transferred to the relevant area control sector, or
  - They are clear of controlled airspace and are transferred to an appropriate agency.

1.2 Function

Birmingham APC shall provide services appropriate for the approach and approach radar control functions, as specified in MATS Part 1, for aircraft arriving and departing Birmingham airport.

Specific functions are listed on the following page.

1.2.1 Birmingham Radar (RAD)

- Acceptance of releases and control of aircraft inbound to Birmingham from the release point until control is transferred to either FIN or ADC
- Coordination and control of overflying aircraft within the Birmingham APC area of responsibility including transit flights within Birmingham controlled airspace
- Initial radar vectoring and sequencing for ILS, RNP, NDB/DME, and/or visual approaches
- Control of aircraft departing Birmingham on standard instrument departures until control is transferred to the relevant Area Control sector
- Provision of a radar service to non-airways IFR departures and arrivals
- Control of non-IFR traffic entering, operating in, or leaving Birmingham controlled airspace
- Liaison with the AIR controller on pertinent issues excepting range checks, final approach spacing and landing or go-around clearances
- Executive co-ordination with other units
- Coordination with FIN as required including the delegation of control of any aircraft as agreed between the two controllers
- Provision of UK Flight Information Services (subject to workload) to aircraft operating outside controlled airspace within the vicinity of Birmingham
- Assumes responsibility for FIN functions outside its period of operation.

1.2.2 Birmingham Director (FIN)

- The control of aircraft landing at Birmingham from the time they are transferred by RAD until they are transferred to Birmingham ADC
- Provision of final radar vectoring and sequencing for ILS, RNP, NDB/DME, and/or visual approaches
- Coordinating planned and unplanned missed approaches and retaining control of such traffic
- Liaison with the AIR controller as required for range checks, final approach spacing and landing or go-around clearances
- Control of any aircraft for which the delegation of control from RAD has been agreed.

Chapter 2 Radar Controller General Operational Procedures

2.1 General Procedures

RAD is responsible for acceptance of inbound releases to the two holding stacks – CHASE and GROVE – and the initial sequencing of inbounds by radar vectors. The arrival order is derived from the stack ATA or EAT subject to tactical considerations. RAD is also responsible for the initial control of all outbounds from Birmingham. FIN is responsible for final sequencing of inbounds by radar vectors following transfer from RAD.

RAD is the master director and responsible for executive coordination and overall flow through the Birmingham area of responsibility. This does not preclude FIN from coordinating with other agencies. Both directors manage their own electronic flight progress strip display.

2.2 Inbound Releases

All inbound releases will be to RAD. Inbounds routing to CHASE and GROVE will be released in accordance with the silent release procedures detailed in APC 3.4. It is the responsibility of Birmingham APC to cancel the silent release procedures with Area Control, in good time, when it is unable to accept an aircraft in accordance with the silent release.

Aircraft that are not able to be released in accordance with these procedures shall be released by means of either a full release or, if in conflict with an overflying aircraft, a radar release. For reasons of expedition Birmingham APC may request, and Area Control may offer alternative releases for aircraft that would otherwise be subject to the standard releases.

Except where agreed in a full release or radar release, following transfer of communication Birmingham APC may apply or remove speed control and issue descent/vector aircraft in accordance with the release procedures. Birmingham APC must 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. Once traffic has entered the Birmingham area of responsibility, it shall not be instructed to leave it.

2.3 Transfer of Data and Control between APC Controllers

Transfer of data and control to FIN will be by electronic transfer of the aircraft track data-block coincident with the transfer of communication.

RAD is to ensure that all information on the electronic flight progress strip is accurate before transfer to FIN. When this is the case, no verbal coordination is required, unless either controller feels it necessary for reasons of clarity, or to highlight non-standard positioning or coordinated restrictions.

On transfer of control from RAD to FIN, controllers should use the phrase *"Contact Birmingham Director 131.005 with callsign only."*

2.4 Identification and SSR Validation and Verification Procedures

All aircraft under the control of Birmingham APC must be identified, the assigned SSR code validated, and Mode C return verified. Except where described below this is to be by one of the methods described in MATS Part 1. Aircraft transferred from another radar unit either by standing agreement or individual coordination are deemed to have been validated and the Mode C return verified.

Aircraft departing Birmingham which are automatically code-callsign converted (correlated) with the correct callsign and are not displaying a squawk error (DUPE) indicator within the track data-block are deemed identified and validated. The first radar controller working these aircraft must however verify the Mode C return.

Any aircraft that does not automatically code-callsign convert, is displaying an incorrect callsign, or that is displaying a squawk error (DUPE) indicator shall be reassigned a unique code; however, for initial identification a controller may request an IDENT to avoid requiring the pilot to set a new squawk during the workload intensive departure phase.

Aircraft departing Coventry or any other unit outside controlled airspace, which has been passed a UKCP airways SSR code or a Birmingham local SSR code allocated by Birmingham APC prior to departure, shall be instructed to IDENT or identified by another method regardless of whether automatic code-callsign conversion has taken place.

2.5 Separation Requirements for Birmingham APC

Birmingham APC controllers may apply reduced radar separation of 3 NM between aircraft provided that:

- Both aircraft are identified, and
- If greater than 3 NM, the appropriate wake turbulence separation is applied, and
- If applied against an aircraft under the control of another agency, direct voice communication is available between the controllers, and the other agency must also be approved to apply reduced radar separation.

  Note 1: *All PC sectors, AC Daventry, and East Midlands APC are authorised to apply 3 NM radar separation.*

  Note 2*: AC West is* ***not*** *authorised to provide 3 NM radar separation.*

2.6 Terrain and Obstacle Clearance

Within the Surveillance Minimum Altitude Area (SMAA) the lowest level that can be assigned in the sector north-west of Birmingham is 2500 ft, except for the defined area adjacent to the Runway 15 FAVA where it is 2000 ft. In the sector south-east of Birmingham it is 2000 ft.

Aircraft within the Final Approach Vectoring Areas (FAVAs) for Birmingham, which are either established on the approach track or are on an intercept of 40° or less and cleared to establish the final approach track, may be descended to 1800 ft.

The Minimum Sector Altitude (MSA) within 25 NM of Birmingham is:

NW	NE	SW	SE
2500 ft	2500 ft	2500 ft	2200 ft

Birmingham ATC SMAA chart: **AD 2.EGBB-5-1**.

2.7 Change to MSL Procedure

When a change to the QNH results in a new MSL, the first controller to note the change shall initiate coordination to agree 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 altitude 6000 ft until the new MSL is agreed to be in effect.

Chapter 3 Inbound Procedures

3.1 Information to Arriving Aircraft

After an arriving aircraft has made its initial call to RAD, the following information shall be passed as soon as practicable:

- Runway in use and the type of approach, if not already received from the ATIS
- Current ATIS code
- LVP in operation, if not already received from the ATIS
- Any delay to be expected.

RAD is to confirm the cleared level of an aircraft transferred from Area Control sectors on first contact. If it is not volunteered by the pilot it is to be requested and verified by the receiving controller before giving any executive instruction. In addition, RAD is to confirm aircraft type, including type variants. Any aircraft type which is not as filed must be changed as soon as possible and advised to any controller who may be reliant on up-to-date information, say for the provision of wake vortex separation.

Aircraft that have received the information above must be kept informed of the following until they have landed:

- Significant changes in the meteorological and runway conditions
- Relevant reports from other pilots
- Implementation or cancellation of LVP.

3.2 Standard Arrival Routes

Hold	Designator	Arrival Via	Route
CHASE	AMPIT 1B	L15	AMPIT - NOKIN - CREWE - CHASE
	BEGAM 1B	UP16	BEGAM - MCT - VEGAR - ELEZE - CHASE
	CROFT 1B	(U)L612	CROFT - MCT - VEGAR - ELEZE - CHASE
	DOLOP 1B	(U)Y124	DOLOP - AMPIT - NOKIN - CREWE - CHASE
	LIBSO 1B	UL975	LIBSO - FIZED - GOLES - DESIG - MCT - VEGAR - ELEZE - CHASE
	MAKUX 2B	FRA and L15, Q38 (FL150-FL255)	MAKUX - SOSIM - GIGTO - MALUD - AMPIT - NOKIN - CREWE - CHASE
	MALUD 1B	(U)L975, Q37	MALUD - AMPIT - NOKIN - CREWE - CHASE
	POL 1B	N57, P18	POL - MCT - VEGAR - CHASE
	VEGUS 1B	Y70	VEGUS - GOLES - DESIG - MCT - VEGAR - ELEZE - CHASE
	WAL 1B	L10, L975	WAL - CREWE - CHASE
GROVE	FIGZI 1B	L180, N91	FIGZI - BIFIN - GROVE
	HEMEL 1B	L610, T420, Q3, M184	HEMEL - BUZAD - WELIN - PUFAX - HON - OSKOT - GROVE
	SILVA 1B	Q41, M183, M605	SILVA - YOHDA - HON - OSKOT - GROVE

3.3 Holding Procedures

The table below indicates the holding areas available for Birmingham Group traffic:

Hold	Inbound Course	Direction	Holding Levels	Holding Speed
BHX	147°	Right	2500 ft – 6000 ft	ICAO standard
CEDAR	147°	Right	2500 ft – 6000 ft	ICAO standard
CHASE	149°	Right	5000 ft – FL140	Max 210 knots IAS
GROVE	103°	Right	FL70 – FL140	Max 210 knots IAS
MAPLE	327°	Left	2500 ft – 6000 ft	ICAO standard

CHASE and GROVE are the standard holds for inbound traffic. While the CHASE hold is published to 5000 ft, holding only occurs down to Minimum Stack Level (MSL).

BHX, CEDAR and MAPLE are contingency holds related to the procedural approach and missed approach procedures; only one of CEDAR or MAPLE may be used at any one time. These holds are published to FL80, however holding above 6000 ft should only occur in exceptional circumstances and never above MSL.

3.3.1 Holding Pattern Separation

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 knots IAS). 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 the 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.*

Traffic holding at BHX, CEDAR and MAPLE holds are not separated, additionally traffic in these holds are not separated against traffic holding at CHASE or GROVE.

3.3.2 Level Allocation at CHASE and GROVE

RAD is responsible for the GROVE hold from FL70 to FL140. Holding of traffic at FL150 and above is subject to approval from AC Daventry who shall retain control of any traffic.

Typically, RAD is responsible for the CHASE hold from FL70 to FL120 with PC Southeast retaining traffic at FL130 and above, however PC Southeast may delegate control of traffic holding at FL130 and FL140 to RAD. Holding of traffic at FL150 and above is subject to approval from PC Southeast who shall retain control of any traffic.

> ***Note:*** *Traffic holding at FL150 or above in the GROVE and CHASE holds are* ***not*** *deemed separated and only one hold may be used at FL150 or above.*

Traffic is typically not held below MSL+1 to allow for sequencing of traffic at MSL.

3.4 Inbound Releases

3.4.1 Inbounds via CHASE

Inbounds via CHASE will be transferred from PC Southeast to RAD by means of the following silent transfer agreement:

Via	Standing Agreement	Release Point
CHASE	Descending FL90	Passing FL120

Note 1: *Traffic will be transferred level separated at CHASE with PC Southeast descending successive inbounds to FL90 when the prior inbound is observed to have vacated FL90. If this cannot be achieved, then PC Southeast is responsible for coordinating each inbound.*

Note 2: *RAD shall suspend the silent release procedure when holding at CHASE.*

Note 3: *Restrictions for vectoring/descending inbounds via CHASE once passed FL120 are detailed in APC 4.2.1.1.*

3.4.2 Inbounds via HON to GROVE

Inbounds via HON to GROVE will be transferred from AC Daventry to RAD by means of the following silent transfer agreement:

Via	Standing Agreement	Release Point
HON	FL90 level HON	HON

Note 1: *Traffic will be transferred 10 NM in trail or greater, constant or increasing. If this cannot be achieved, then AC Daventry is responsible for coordinating each inbound.*

Note 2: *RAD shall suspend the silent release procedure when holding at GROVE at FL90 or above.*

3.4.3 Inbounds via BIFIN to GROVE

Inbounds via BIFIN to GROVE will be transferred from AC West to RAD by means of the following silent transfer agreement:

Via	Standing Agreement	Release Point
BIFIN	FL130 level BIFIN	GROVE

Note 1: *Traffic will be transferred 10 NM in trail or greater, constant or increasing. If this cannot be achieved, then AC West is responsible for coordinating each inbound.*

Note 2: *Transfer of communication shall be after FIGZI but prior to BIFIN.*

Note 3: *RAD shall suspend the silent release procedure when holding at GROVE.*

Note 4: *The silent transfer agreement is replaced with a reduced radar handover outside the hours of operations of Birmingham/Cotswold FUA – see APC 4.2.4.*

3.5 Transfer of Communication Procedures

Transfer of communication should occur in the correct order for each holding facility.

Aircraft will be transferred to RAD in sufficient time for contact to be established before reaching the holding facility so that heading or holding instructions may be passed. If this is not possible, the aircraft will be instructed by the releasing Area Control sector to hold on reaching the facility.

3.6 Expected Approach Times (EATs)

EATs are not normally passed if the expected delay is less than 20 minutes; instead, the anticipated hold delay shall be passed in 5-minute intervals, standard phrases for this are: *"Less than 5 minutes"*, *"5 to 10 minutes"*, *"10 to 15 minutes"* and *"15 to 20 minutes."*

If the expected delay is greater than 20 minutes, then EATs shall be issued in 5-minute intervals for both radar vectored or procedural approaches.

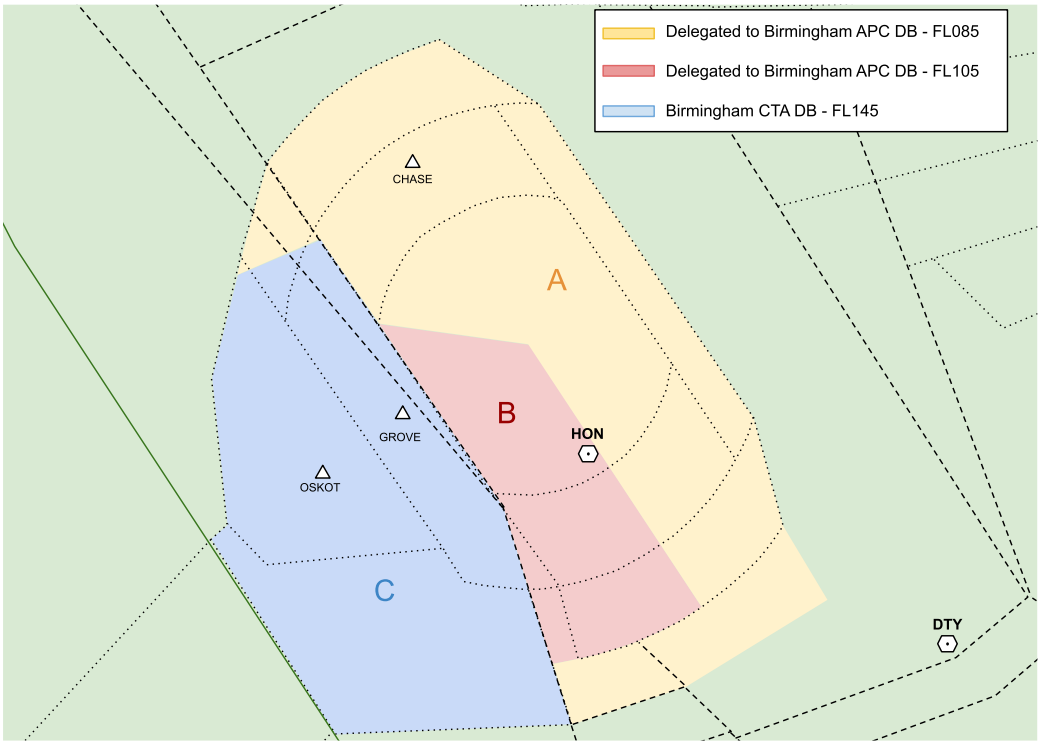
Birmingham APC shall only issue an EAT alongside a specific additional instruction to hold.

Chapter 4 Procedures for Intermediate and Final Approach

4.1 Birmingham APC Area of Responsibility

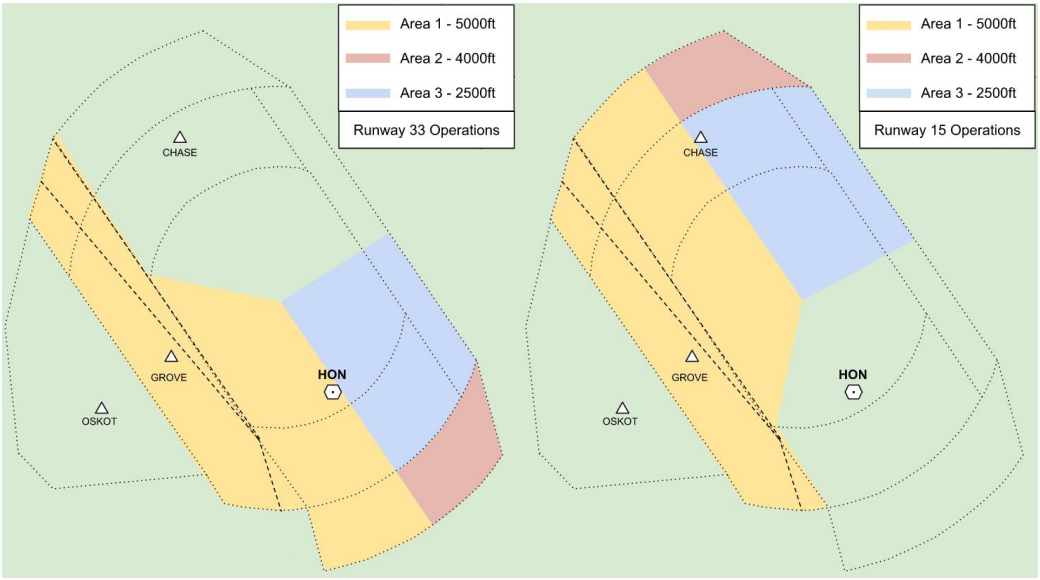
Birmingham APC is responsible for the Birmingham CTR and CTAs. Additionally, Birmingham APC is the delegated controlling authority for those portions of the Daventry CTA, delegated by Area Control, shown in Figure 1. FIN is delegated control of those areas shown in Figure 2.

Figure 1 – Birmingham APC Area of Responsibility



4.1.1.1 FIN Delegated Airspace

Figure 2 – FIN Delegated Airspace



4.1.2 Birmingham and Cotswold Flexible Use Airspace

Birmingham CTA 10 and Cotswold CTAs 15-18 are designated Flexible Use Airspace (FUA). These portions of airspace are established between 1700-0900 local Monday-Thursday and 1700 local Friday-0900 local Monday (extended to include public holidays). Outside of these hours the airspace reverts to Class G.

Controllers should note that Delegated Area C includes Birmingham CTA 10, when established it exists FL65-FL105, outside the hours of operations the overlying Daventry CTA remains active with a base of FL105.

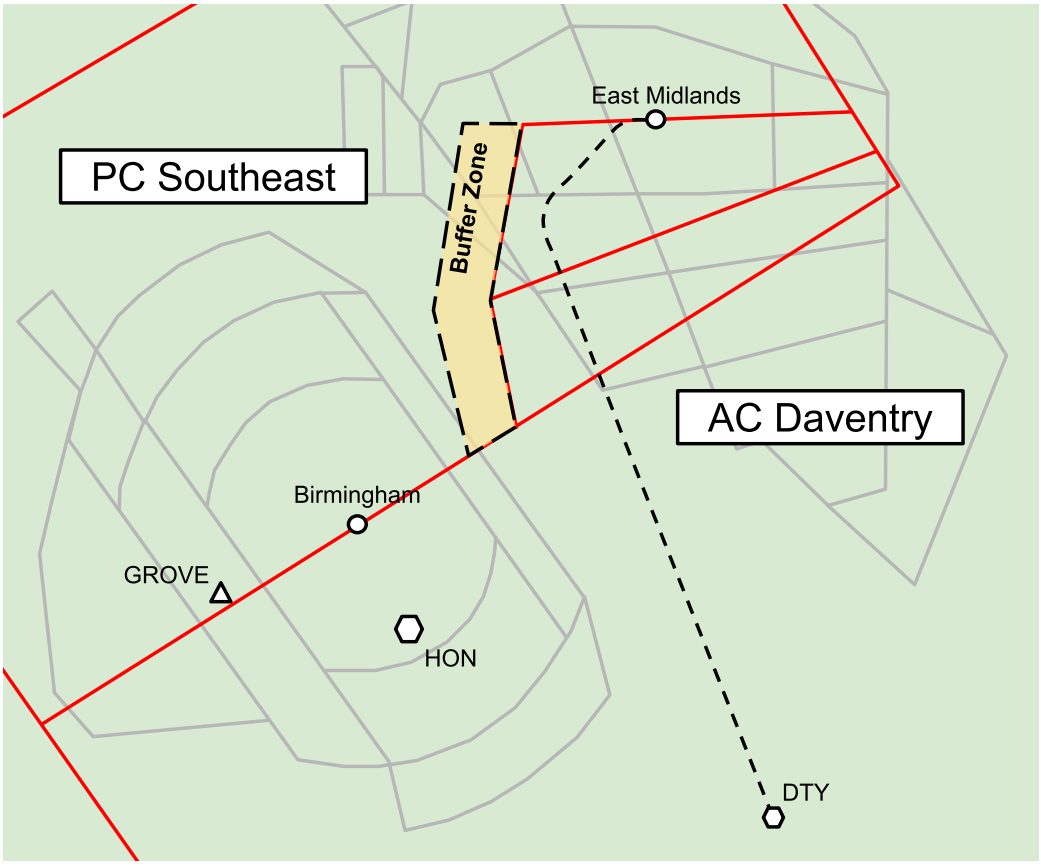
4.1.3 Midlands Buffer Zone

The 3 NM Midlands Buffer Zone is established to ensure that radar separation is maintained between northbound Birmingham (Runway 15) and Coventry departures controlled by PC Southeast, and southbound departures from East Midlands under the control of AC Daventry.

The base of the Buffer Zone is coincident with the designated base (DB) of controlled airspace. However, the Buffer Zone does not exist where it overlaps with the Birmingham and East Midlands CTAs laterally and vertically.

Birmingham APC shall ensure that all northbound departures are clear of the Buffer Zone before transfer to PC Southeast.

Figure 3 – Midlands Buffer Zone



4.2 Intermediate Approach Procedures

4.2.1 Vectoring and Descent before Release Point

4.2.1.1 Inbounds via CHASE

RAD may vector for right turns only and descend inbounds after passing FL120 when they ensure separation from Birmingham/Coventry outbounds – this is achieved when:

- There are no outbounds, or
- When outbounds are retained by RAD until transferred clean to PC Southeast, or
- When outbounds under the control of PC Southeast are observed to climb above FL80 (PC Southeast is responsible for separation of all outbounds under its control cleared above FL80).

Inbounds via CHASE which are turned right will be considered fully released upon entering the Birmingham Area of Responsibility or upon passing abeam CHASE, whichever sooner.

4.2.1.2 Inbounds via BIFIN to GROVE

Traffic is released for descent to FL80 on contact (subject to the base of controlled airspace) and released for turns after BIFIN subject to outbounds – RAD is responsible for providing separation against outbound traffic previously transferred to AC West.

4.2.1.3 Inbounds via HON to GROVE

4.2.1.3.1 Runway 33 Operations

Traffic is released for descent below FL90 and vectoring once west of the extended centreline. Additionally, when RAD ensures 5 NM separation against all outbound Birmingham/Coventry traffic at or below FL90 then inbound traffic may be issued descent and turns up to 30° left of track upon entering Daventry CTA 9 (that section of the Daventry CTA north of DTY VOR).

4.2.1.3.2 Runway 15 Operations

Traffic is released for descent below FL90 and vectoring at HON.

Additionally, when RAD implements a departure check and there are no conflicting outbounds then traffic may be issued descent/turns to position for a left-hand downwind upon entering the lateral confines of Birmingham delegated airspace prior to HON.

In the event there is conflicting traffic then RAD must coordinate with AC Daventry.

4.2.2 Inbounds via BIFIN outside FUA Hours of Operation

Outside the hours of operation of Birmingham/Cotswold Flexible Use Airspace (APC 4.1.2) inbounds via BIFIN will leave controlled airspace at FIGZI. AC West will continue to route inbounds via the FIGZI 1B STAR and will transfer inbounds descending to FL130 level BIFIN (to maintain consistency with the silent transfer agreement) **but** transferred by means of a **reduced radar handover**. AC West shall verbally coordinate the reduced radar handover with RAD in the format:

"BIFIN radar handover, [Callsign], [UK FIS type]."

***Note:** If AC West initiates a transfer without conducting the verbal reduced radar handover then RAD may assume the traffic is under a Deconfliction Service.*

Unless specified in the reduced radar handover, traffic is fully released on contact subject to outbounds routing to MOSUN (APC 5.7) – RAD is responsible for providing separation against outbound traffic previously transferred to AC West.

It is the responsibility of AC West to initiate coordination with RAD when unknown traffic in Class G airspace prevents AC West from achieving the standing agreement.

RAD will provide clearance to enter the Birmingham CTR/CTA and integrate the inbound into arrival stream/instruct the inbound to hold at GROVE as required.

4.2.3 Altitude Control – Continuous Descent Approach (CDA) Procedure

Upon issuing descent below MSL level instructions should be issued with the aim of achieving a continuous descent approach except where necessary to achieve separation. The aim of the CDA procedure is to provide pilots with the ATC assistance necessary for them to achieve a low power, continuous descent during intermediate and final approach, ideally at speeds which require minimum use of flaps or other drag/lift aids.

The procedure requires ATC to pass adequate *"range from touchdown"* information. Range from touchdown shall typically be provided on first descent below MSL and again on first contact with FIN. Should the range become inaccurate, a new range shall be issued.

4.2.4 Speed Control

When the use of speed control is necessary for sequencing or separation, controllers should instruct aircraft to maintain 210 knots upon leaving the holding facility. Other speeds may be used if operationally necessary but controllers should avoid instructing aircraft to accelerate beyond 210 knots following a period of holding.

4.2.5 Initial Sequencing

All inbound vectoring typically takes place to the west of the aerodrome to deconflict against outbounds. However, RAD may vector within the delegated airspace to the east of the aerodrome but is responsible for separating against outbounds and shall implement a departure check. RAD retains responsibility for separating outbounds against inbounds vectored to the east following transfer to FIN.

4.2.5.1 Inbounds from CHASE

Inbounds from CHASE must not descend below MSL until 3 NM west of the extended centreline during Runway 33 operations unless a departure check is in place. This is to ensure separation against outbounds climbing to altitude 6000 ft.

4.2.6 Transfer of Traffic to FIN

Traffic shall be transferred to FIN **in the intended landing order**, clean of outbounds and other traffic under the control of RAD, and on a heading tracking towards FIN Area 1 (or, for inbounds from the south provided early descent, positioned on a westerly heading).

RAD is not required to have achieved an inbound stream at a particular level and may transfer inbounds at or descending to any level between 4000 ft and MSL provided that there is sufficient spacing to allow FIN to finalise a sequence. Where successive inbounds are not separated by the application of headings/speed control RAD must transfer them to FIN level separated.

It is expected that the interface between RAD and FIN is flexible and varies dependent on the workload of the RAD controller; when workload is low, RAD may transfer inbounds to FIN in a well-defined stream at 4000 ft; when workload is high during periods of holding or high outbound demand, RAD may transfer inbounds in a rough sequence at higher levels.

> ***Example:*** *During periods of holding it would be appropriate for RAD to transfer a GROVE inbound to FIN descending to 5000 ft followed by a CHASE inbound leaving the hold and descending to MSL, allowing FIN to establish the inbounds into a stream and descend the CHASE inbound below MSL when appropriate.*

4.3 Final Approach Procedures

4.3.1 Responsibility

FIN is responsible for radar vectoring to final approach and the issuing of approach clearances, including visual approach clearances where appropriate.

FIN shall ensure that inbound aircraft remain within FIN delegated airspace unless coordination has been effected with RAD.

FIN shall typically retain inbound aircraft on frequency until they are either established on the final approach track and descending in accordance with the instrument approach or are able to continue visually.

4.3.2 Final Approach Spacing

FIN is responsible for applying final approach **spacing** until 4 NM from touchdown, accounting for any 'catch-up' due to speed/performance differences.

The requirement to apply radar and wake turbulence **separation** until **touchdown** (see below) overrides any spacing guidance or agreement.

The minimum spacing between aircraft on final approach to Runway 33 is 5 NM, and to Runway 15 it is 6 NM.

Typically, FIN should apply 8 NM spacing to allow for a departure between every inbound. It is the responsibility of AIR to monitor runway arrival spacing and to notify any required increases in arrival spacing to FIN.

Controllers should note that a reduced landing rate and therefore increased spacing is required during LVP – see guidance in GEN 3.1.6.

4.3.3 Final Approach Separation

FIN is responsible for applying both radar and wake turbulence **separation** on final approach until touchdown.

The radar separation minima are described in APC 2.5 and wake turbulence separation between aircraft on final approach shall be applied in accordance with MATS Part 1 (CAP 493).

The 'catch-up' or compression that occurs after the leading aircraft passes 4 NM from touchdown must be factored into the spacing provided to ensure that radar and wake turbulence separation are provided until touchdown. In most cases, adding 1 NM to the required **separation** between aircraft and maintaining this until 4 NM from touchdown will act as a sufficient buffer.

> ***Note 1:*** *FIN shall not assume Reduced Separation in the Vicinity of an Aerodrome is being applied without coordination.*
>
> ***Note 2:*** *Aircraft performing a visual approach are responsible for their own wake turbulence separation.*

If either radar or wake turbulence separation are eroded below the required minima, the approach must be discontinued and the aircraft taken off the approach.

4.3.4 Coordination with AIR

FIN shall provide AIR with a 10 NM range check with regards to:

- Traffic conducting other than an ILS approach (type of approach must be specified)
- Traffic which is not code-callsign converted
- Traffic which is conducting a training approach or not intending to land.

Additionally, when SVFR circuits are being conducted, FIN shall provide AIR with a 25 NM range check with regards to all IFR inbounds.

4.3.5 Final Sequencing

Traffic will be transferred to FIN in the intended landing order, clean of outbounds and other traffic under the control of RAD, and on a heading tracking towards FIN Area 1 (or, for inbounds from the south provided early descent, positioned to establish the Runway 33 extended centreline), level at or descending to any level between 4000 ft and MSL.

FIN may vector/descend within the FIN Delegated Airspace without reference to RAD and is not required to descend inbounds transferred at MSL by any particular point. Where RAD transfers inbounds from the south in a left-hand radar circuit for Runway 15 FIN may continue to sequence the inbound outside of FIN Delegated Airspace; RAD remains responsible for separation against any outbounds.

When vectoring to establish inside a 12 NM final, FIN shall avoid descending inbounds below 4000 ft until they are seen to turn on to base, this is to avoid an inadvertent descent outside of controlled airspace in the event of a late turn on to base.

4.3.6 Speed Control on Final Approach

Controllers shall apply speed control as required to achieve and maintain final approach spacing. When applying speed control, controllers shall apply a maximum of 160 knots restriction within 6 NM to touchdown and shall not apply speed control within 4 NM to touchdown.

4.3.7 RNP Approaches

Aircraft requesting an RNP approach will be radar vectored to position them on an intercept heading prior to the intermediate fix (IF). Controllers shall not issue vectors to any point beyond the IF. When instructed to resume own navigation, the aircraft's current track must be within 45 degrees of the final approach track.

4.3.8 Non-Precision Approaches

Aircraft requesting a non-precision approach should typically be radar vectored to final.

Full procedural approaches shall be coordinated with AIR with a departure check implemented until the aircraft reports or is observed to be beacon outbound.

4.3.9 Visual Approaches

FIN may clear aircraft, which are visual with the aerodrome, for a visual approach provided that they are not cleared to descend below 2500 ft until either:

- Coordination is effected with AIR, or
- The aircraft is on a base leg to join the final approach track at not less than 5 NM from touchdown or is established on the final approach track.

Where coordination with AIR has taken place, provided the aircraft has reported visual with the aerodrome and the position of traffic permits, aircraft may be cleared for a visual approach at any point.

FIN should provide level restrictions to ensure containment within controlled airspace and shall continue to radar monitor the flight and ensure that separation is maintained against other traffic.

> ***Note:*** *These instructions are in addition to the Visual Approach procedures detailed in MATS Part 1, Section 3, Chapter 1, Part 12.*

4.3.10 Transfer of Communication

Aircraft shall be transferred to AIR in the intended landing order before reaching 6 NM on final approach.

4.4 Missed Approach Procedures

The table below details the missed approach procedure for instrument approaches. In the event of a go-around AIR will coordinate with RAD as described in ADC 3.15.

Runway	Procedure	Missed Approach Procedure
33	ILS	Climb straight ahead to 3000 ft, then as instructed
	RNP LOC/DME	Climb straight ahead (326°) to 3000 ft, then as instructed
	NDB/DME	Climb straight ahead (324°) to 3000 ft, then as instructed
15	ILS	Climb straight ahead (147°) to 1000 ft, then turn right onto track 166° to 3000 ft, then as instructed
	RNP LOC/DME	Climb straight ahead (146°) to 1000 ft, then turn right onto track 166° to 3000 ft, then as instructed
	NDB/DME	Climb straight ahead (151°) to 1000 ft, then turn right onto track 166° to 3000 ft, then as instructed

Chapter 5 Outbound Procedures

5.1 General

RAD is responsible for the initial control of all Birmingham outbounds.

> ***Note:*** *Following coordination with AC Daventry, southbound SID departures from Runway 15 may be transferred directly from AIR to AC Daventry. When this is agreed RAD remains responsible for separation against inbounds and overflights within the Birmingham APC area of responsibility.*

Initial separation between departing aircraft is the responsibility of AIR and is normally achieved by the application of timed intervals between successive departures. AIR will inform RAD if an aircraft is observed to deviate from the SID to the extent that departure separation may be eroded.

5.2 Identification of Departing Traffic and SSR Validation/Verification

RAD is responsible for identification, and SSR validation and verification of all Birmingham outbounds under its control in accordance with APC 2.4 and this must be performed prior to transfer of outbound traffic to the next agency.

> ***Note:*** *Following coordination, when southbound SID departures from Runway 15 are transferred directly from AIR to AC Daventry, the AC Daventry controller will be responsible for identification, and SSR validation and verification of any affected outbounds.*

5.3 Departure Speed Limits

In order to improve departure flow and assist AC controllers to maintain separation between aircraft a speed limit of 250 knots IAS applies to all outbound aircraft below FL100. RAD must not remove the 250 knot below FL100 speed restriction unless this is coordinated in advance with Area Control. Additionally, the majority of SIDs include an initial speed limit of 200-220 knots IAS to ensure track keeping on initial turns. This restriction must not be removed by RAD.

5.4 Departures Subject to Radar Approval

For any departures in the first list AIR must obtain a **departure release** from RAD before clearing the aircraft for take-off:

- Traffic to East Midlands (EGNX)
- Where the following aircraft is 3 speed groups faster than the lead
- Aircraft departing following a missed approach
- Aircraft departing immediately prior to and following a change of runway direction
- VFR departures
- Whenever RAD implements a radar check.

For any departures in the second list AIR must obtain a **departure release** from RAD before clearing the aircraft for take-off and must also obtain a **release for the subsequent departure**:

- Aircraft not on the speed table
- Non-airways IFR departures (including all Coventry (EGBE) departures) and SVFR departures
- Whenever AIR requires an aircraft to deviate from the SID
- LUXTO/MOSUN/BRUMI departures.

AIR will inform RAD if an aircraft is observed to deviate from the SID to the extent that departure separation may be eroded.

Aircraft subject to a release must depart within +5 minutes of the release time.

5.5 Vectoring and Climbing Departures

All Birmingham SIDs have stop altitudes of 6000 ft. Except when required for reasons of safety (including but not limited to emergencies, ensuring separation, weather avoidance), aircraft are not to be vectored off the SID track until at or above:

- 6000 ft for Runway 33 northbound departures
- 3000 ft for Runway 33 southbound/westbound departures
- 3000 ft for Runway 15 northbound/westbound departures
- 4000 ft for Runway 15 southbound departures

This restriction does not apply to propeller driven aircraft of 5700 kg or less.

Aircraft vectored off the SID track shall be re-established on the SID track (either own navigation or an appropriate radar heading) prior to transfer to Area Control. Where this cannot be achieved RAD shall coordinate with the appropriate Area Control sector.

RAD is responsible for ensuring outbounds are separated against inbounds under the control of FIN operating within FIN delegated airspace.

5.6 Agreements with Area Control

All outbound traffic on SIDs may be transferred to the appropriate Area Control sector on a silent handover in accordance with the following conditions:

Direction	To	Level	Condition
North	PC Southeast	FL80 (*see note)*	When Runway 15 is in use, RAD will allocate a heading to achieve 5 NM separation east of CHASE but not track into the Midlands Buffer Zone
West	AC West	FL120	Released for climb to FL140 (higher subject to AC Daventry) – RAD is responsible for separation against inbounds via BIFIN
South	AC Daventry	6000 ft	Following SID track

Note: *During periods of double-low pressure (QNH < 977 hPa) when MSL is FL90, the standing agreement with PC Southeast is cancelled as FL80 will not ensure separation against East Midlands outbounds at 6000 ft. RAD is to climb the Birmingham outbound to 6000 ft and coordinate a level with PC Southeast.*

Successive departures shall be separated by **5 NM** constant or increasing when transferred to Area Control and clean of inbounds/overflights. RAD may apply tactical headings to ensure minimum separation in which case the aircraft shall be instructed to *"report heading to [Area Control Callsign], [frequency]."*

Aircraft which cannot be transferred in accordance with the above conditions shall be coordinated with the Area Control sector appropriate for the direction of flight.

5.7 Outbounds to MOSUN outside FUA Hours of Operation

Outside the hours of operation of Birmingham/Cotswold Flexible Use Airspace (APC 4.1.2) the N92 ATS route (LUXTO – OKTAD) is disestablished. Outbounds from Runway 33 will route via the BRUMI 1M SID then route direct MOSUN, outbounds from Runway 15 will fly the MOSUN 15 procedure (ADC 1.4). These outbounds will leave controlled airspace at the Birmingham CTA boundary and shall be provided a Deconfliction Service (reduced to a Traffic Service if workload or other factors prevent RAD from applying a Deconfliction Service).

RAD shall transfer outbounds to AC West, either on own navigation MOSUN or a radar heading, climbing to FL120, by means of a **reduced radar handover**. RAD shall verbally coordinate the reduced radar handover with AC West in the format:

"MOSUN radar handover, [Callsign], [UK FIS type]."

Traffic is to be transferred once it is outside of controlled airspace and, unless specified by RAD during the handover, outbounds are released for climb on contact (subject to AC Daventry controlled airspace). RAD is responsible for providing separation against inbound traffic routing via BIFIN (APC 4.2.2).

RAD is responsible for coordinating with AC West when unknown traffic in Class G airspace prevents RAD from achieving the standing agreement.

> ***Note:*** *In the absence of AC West, RAD may provide a Deconfliction Service to 40 NM (i.e. to MOSUN) from Birmingham (subject to workload).*

5.8 Non-Airways Departures

RAD is responsible for providing a radar service to non-airways departures until they are clear of controlled airspace and is (subject to workload) responsible for providing UK FIS within the vicinity of Birmingham to any traffic leaving controlled airspace which requires a service.

GMP will request clearance from RAD for any non-standard IFR, VFR or SVFR departure.

After departure instructions for non-airways departures (except for propeller driven aircraft of 5700 kg or less) must comply with the noise preferential routings in GEN 2.1.

Chapter 6 Flights to and from East Midlands (EGNX) and the London and Manchester TMAs

6.1 Flights to East Midlands

Flights to East Midlands will route via the following routings:

Flight Plan Routing (33): UNGAP DCT DTY
Flight Plan Routing (15): DTY
Flight Plan Routing (non-RNAV): DCT DTY

Flights filed above 4500 ft (routing inside the Daventry CTA) will be pre-noted by GMP to RAD and AC Daventry. AC Daventry will notify GMP of any delay which will be absorbed on the ground. Initial climb will be to **5000 ft**.

AIR will request a release from RAD who shall obtain a release from AC Daventry and coordinate as to presentation of the traffic. Typically, AC Daventry will allow the traffic to transit the Daventry CTA at 5000 ft with a direct radar handover between Birmingham RAD and East Midlands APC. If AC Daventry approves this then RAD shall coordinate a radar handover with East Midlands APC once the traffic is airborne. Traffic must not be turned off SID until coordination has been effected with East Midlands APC.

If low level traffic within the Daventry CTA prevents this then AC Daventry will agree a level for the traffic between 5000 ft and FL80 prior to transfer to AC Daventry.

Traffic operating below 4500 ft will be routing outside of controlled airspace and RAD is responsible for providing appropriate non-standard departures instructions, providing (subject to workload) a radar service outside of controlled airspace and coordinating with East Midlands APC. When the RAD controller can observe from the situation display that East Midlands traffic is holding they should consider holding traffic routing outside of controlled airspace on the ground at Birmingham until coordination has been effected with East Midlands APC.

6.2 Flights from East Midlands

Flight Plan Routing: DTY L10 HON

AC Daventry will provide RAD a pre-note when the aircraft is cleared.

Traffic from East Midlands operating above 4500 ft is handled in a similar manner to Birmingham-East Midlands flights with AC Daventry specifying either a radar handover from East Midlands APC to Birmingham RAD at 5000 ft or, when low level traffic within the Daventry CTA prevents this, positioning by AC Daventry into the HON inbound stream.

When accepting an inbound at 5000 ft from East Midlands, RAD must implement an appropriate check for Birmingham outbounds.

6.3 Flights to and from the London and Manchester TMAs

These flights are subject to pre-note and release from the appropriate Area Control sector as described in ADC 1.8.1 and ADC 3.5 however from an APC perspective they shall be handled as normal IFR flights.

Chapter 7 Coventry Airport (EGBE) Procedures

7.1 General

Coventry Airport (elevation 267 ft) is located 11 NM southeast of Birmingham. It is located outside of controlled airspace beneath the Birmingham CTA with a 2.5 NM ATZ from the surface to 2000 ft AAL (2267 ft AMSL) however those portions of the ATZ within Birmingham controlled airspace are delegated to Birmingham APC.

Coventry has a single Runway 05/23 and an Aerodrome Flight Information Service (AFIS) (*"Coventry Information"*) is provided on 123.825 MHz. Traffic in communication with Coventry AFIS will be instructed to squawk SSR code 0420 however the Mode A and C readout displayed must be considered unvalidated and unverified, respectively.

The Warwickshire & Northamptonshire Air Ambulance operates from Coventry and there is a Major Trauma Centre (with helipad) at University Hospital Coventry & Warwickshire located in Walsgrave at 3.5 NM on the Runway 23 extended centreline.

Birmingham RAD is responsible for the control of Coventry IFR traffic joining/leaving the ATS route network within the vicinity of Coventry.

Birmingham RAD is **not** responsible for the provision of top-down control at Coventry.

7.2 IFR Inbounds

IFR inbounds routing via the ATS route network will route via the Birmingham STARs documented in APC 3.2. Area Control will release traffic in accordance with the inbound releases documented in APC 3.4 however they may be able to release traffic at a lower level to facilitate descent outside of controlled airspace.

RAD shall provide Coventry AFIS with an estimated time of arrival and obtain any relevant information for the inbound (to include the Coventry runway in use).

RAD shall position the inbound to enable a visual approach and, when permitted by the ATC SMAC (APC 2.6), descend traffic to 2000 ft with a clearance to leave controlled airspace by descent. RAD shall provide (subject to workload) a Deconfliction Service to Coventry inbounds outside of controlled airspace. Should traffic request a descent below 2000 ft this may be approved with a *"taking your own terrain clearance, descent approved"* warning and a downgrade to a Traffic Service. The inbound should be transferred to Coventry AFIS once clear of controlled airspace and having reported Coventry in sight.

> ***Note 1:*** *For approaches to Runway 05 traffic will, typically, remain inside Birmingham controlled airspace until descending on final approach.*
>
> ***Note 2:*** *When vectoring to Runway 05 controllers should consider Wellesbourne Mountford (EGBW) and Snitterfield Gliding Site which lie in close proximity to the Runway 05 extended centreline at 10-12 NM.*

In the event the inbound is unable to proceed visually to Coventry then it may perform an instrument approach to Birmingham as a cloud-break procedure before leaving the Birmingham CTR for Coventry under a VFR or SVFR clearance. Alternatively, the inbound may divert to Birmingham or another nominated diversion aerodrome.

7.3 IFR Outbounds

Coventry AFIS will coordinate IFR outbounds joining the ATS route network with Birmingham RAD. RAD is responsible for obtaining an airways joining clearance from the appropriate Area Control sector for the direction of flight and for providing appropriate after departure instructions and the UKCP Airways SSR code to Coventry AFIS.

Traffic will typically route to join controlled airspace via:

- TNT/PEDIG for northbound traffic – coordination with PC Southeast
- COWLY/DTY/KIDLI/WCO for southbound traffic – coordination with AC Daventry.

RAD shall typically provide a climb to 5000 ft with turn on track to the initial fix when there is no conflicting traffic. When there is conflicting traffic then the Coventry outbound shall be released to *"remain outside controlled airspace"* with a clearance to join controlled airspace provided at an appropriate point.

RAD shall identify/validate/verify the departure in accordance with APC 2.4 and provide an appropriate UK FIS (ideally a Traffic or Deconfliction Service subject to workload) before entry into controlled airspace.

Coventry outbounds shall be transferred to Area Control in accordance with the agreements for Birmingham traffic outlined in APC 5.6. When this is not possible RAD is responsible for initiating coordination. Birmingham RAD must comply with the buffer zone procedures detailed in APC 4.1.3 prior to transfer to PC Southeast, a clearance issued to enter the airways *"on track"* a point by PC Southeast does **not** negate this restriction.

7.4 VFR Traffic and IFR Traffic from Outside Controlled Airspace

Birmingham RAD may provide a UK FIS subject to workload.

Coventry VFR circuits operate to the south of the airfield.

LOW | LOW LEVEL OPERATIONS

Chapter 1 General

1.1 Provision of Air Traffic Services

RAD is responsible for all VFR and SVFR aircraft operating within the Birmingham CTR/CTA and may offer UK FIS to aircraft outside controlled airspace, subject to controller workload.

ADC is delegated responsibility for VFR aircraft operating within the ATZ and for issuing standard clearances to VFR traffic leaving the Birmingham CTR.

1.2 Coordination

GMP will pre-note RAD when providing a standard VFR clearance not above altitude 2000 ft (ADC 1.10 and LOW 3.2) and will coordinate with RAD to obtain non-standard VFR/SVFR/IFR clearances.

AIR will obtain a release from RAD for all VFR/SVFR/non-standard IFR departures.

RAD will coordinate with AIR with regards to traffic wishing to operate within or in the vicinity of the ATZ, and with FIN with regards to traffic likely to conflict with the final approach.

1.3 SSR Code Allocations

Birmingham is allocated the local SSR code allocation 0401-0417. APC shall allocate codes from 0401 upwards for inbound/transit/non-standard/UK FIS traffic and ADC shall allocate codes from 0417 downwards for standard VFR departures.

Code 0010 is the designated frequency monitoring code (“listening squawk”), aircraft squawking this code in the vicinity of the Birmingham CTR/CTA should be maintaining a listening watch on the Birmingham Radar frequency 123.980 MHz, however the Mode A and C readout displayed must be considered unvalidated and unverified, respectively.

Birmingham APC controllers shall be familiar with the following special purpose codes used by aircraft operating in the vicinity of Birmingham:

0420 - allocated to aircraft in communication with Coventry AFIS.

7010 - allocated to aircraft conducting VFR circuits.

These codes are not validated or verified.

Chapter 2 Airspace

2.1 Classification

The Birmingham CTR/CTA is classified as Class D airspace. Aircraft are permitted to operate in the CTR and CTA in VMC and IMC conditions under either VFR or SVFR as appropriate.

2.2 Visual Reference Points (VRPs)

The following VRPs are for use by aircraft operating in the vicinity of Birmingham:

VRP	Cardinal/Ordinal Position
Frankley Reservoirs **522513N 0015955W**	**West**
Lichfield Junction 524110N 0014755W	North
M6 Junction 3 (Bedworth) **522745N 0012939W**	**East**
M6 Hilton Park Services 523838N 0020323W	Northwest
M40/M42 Interchange **522055N 0014835W**	**Southwest**
M42 Junction 10 (Tamworth) **523612N 0013833W**	**Northeast**
Studley 521604N 0015353W	Southwest

The VRPs highlighted in **bold** are those that GMP may issue to departing VFR aircraft not above altitude 2000 ft without individual coordination with RAD.

2.3 Other Aerodromes in the Vicinity

Coventry (EGBE) is a licensed airport 11 NM southeast of Birmingham, an AFIS (*"Coventry Information"*) is provided on 123.825 MHz.

Wellesbourne Mountford (EGBW) is a licensed airport 17 NM south of Birmingham, an AFIS (*"Wellesbourne Information"*) is provided on 124.025 MHz.

Wolverhampton/Halfpenny Green (EGBO) is a licensed airport 19 NM northwest of Birmingham, an AFIS (*"Halfpenny Green Information"*) is provided on 123.0 MHz.

RAF Cosford (EGWC) is an RAF station 23 NM northwest of Birmingham, an approach control service (*"Cosford Approach"*) is provided on 135.875 MHz.

Chapter 3 VFR and SVFR Operations

3.1 VFR and Special VFR Minima

VFR and SVFR flights within the Birmingham CTR/CTA are permitted in accordance with the criteria detailed in the UK AIP. For flights not entering the ATZ the VMC minima relate to in-flight conditions as opposed to airport reported weather.

In marginal weather conditions, when the reported meteorological visibility falls below 5 km or the reported cloud ceiling falls below 1500 ft, RAD shall inform pilots of transiting aircraft requesting a VFR clearance of the reported weather and ask them to specify the type of clearance required. It is the pilot's responsibility to determine their flight conditions, whether or not the relevant VMC can be maintained, and whether they can accept a SVFR clearance bearing in mind they must remain clear of cloud and in sight of the surface.

Controllers should note that pilots may be simulating alternate weather to real world conditions and therefore may be able to maintain VMC at any time. If the pilot reports this to be the case, the controller may choose to issue a VFR or SVFR clearance.

3.2 VFR Operations

Standard VFR outbounds will be cleared by GMP, not above altitude 2000 ft, via either M42 Junction 10 (Tamworth), M6 Junction 3 (Bedworth), Frankly Reservoirs or M40/42 Interchange depending on direction of flight. Traffic will be assigned an SSR code from 0417 descending and will be pre-noted to RAD.

VFR outbounds wishing to operate not in accordance with the above will be subject to individual clearance from RAD. All VFR outbounds are subject to release from RAD.

Transit traffic shall be cleared by the most appropriate route for the situation, typically not above 2000 ft. Traffic transiting the ATZ or the vicinity shall be coordinated with AIR. Inbounds shall be cleared no further than the ATZ boundary until coordinated with AIR and should be positioned for a base-leg join for the runway in use.

3.3 SVFR Operations

RAD is to provide standard separation between IFR and SVFR traffic, and between SVFR and other SVFR traffic, except when AIR agrees to provide RSIVA. There are no deemed separation standards for SVFR traffic.

SVFR circuits require the approval of FIN and only one aircraft may conduct SVFR circuits at any one time during which time FIN must provide AIR a 25 NM range check with regards to IFR inbounds.

Clearance shall **not** be given to operate SVFR below 1500 ft within that sector of the Birmingham CTR enclosed by the bearings 240°T and 360°T.

Chapter 4 Helicopter Operations

There are no specific helicopter procedures at Birmingham and helicopter traffic should be handled as per fixed wing traffic while outside of the ATZ.

AIR will handle helicopters as detailed in ADC 3.17.

Chapter 5 UK Flight Information Services (FIS)

MATS Part 1 details the services which may be provided outside controlled airspace. The provision of UK FIS is to be limited so that it does not adversely affect the service provided to aircraft inside controlled airspace.

Outside the hours of operation and/or boundaries of responsibility of adjacent units tasked with providing the Lower Airspace Radar Service (LARS), RAD may provide UK FIS to traffic flying outside controlled airspace, but normally only within the immediate vicinity of Birmingham controlled airspace.

The adjacent units tasked with providing LARS are East Midlands Radar, Brize Radar and Shawbury Approach, and consideration should be given to transferring UK FIS traffic which is not seeking to transit the Birmingham CTR to these units.

Controllers must not give a Deconfliction Service or radar vectors under a Traffic Service to aircraft below SMAA levels or minimum sector altitudes.

A radar service outside of 40 NM of Birmingham must not be given.

GLOSSARY

Abbreviation	Definition
AC	Area Control
ADC	Aerodrome Control
AIR	Air Controller (i.e. Tower Controller)
APC	Approach Control
CTA	Control Area
CTR	Control Zone
DME	Distance Measuring Equipment
EAT	Estimated Approach Time
FIN	Birmingham Director
FIS	Flight Information Service
FL	Flight Level
FRA	Free Route Airspace
ft	Foot (feet)
GMC	Ground Movement Control
GMP	Ground Movement Planner
GS	Groundspeed
hPa	Hectopascal
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organisation
ILS	Instrument Landing System
Kts	Knots
LTMA	London TMA
MDI	Minimum Departure Interval
MHz	Megahertz
MSL	Minimum Stack Level
MTMA	Manchester TMA
NM	Nautical Mile
RAD	Birmingham Radar
RFC *	Released for Climb
RFD *	Released for Descent
RFT *	Released for Turn
SID	Standard Instrument Departure
SSR	Secondary Surveillance Radar
STAR	Standard Terminal Arrival Route
TMA	Terminal Manoeuvring Area
PC	Manchester Prestwick Control (MTMA sectors)
UKCP	UK Controller Plugin

* Although these acronyms are not used in this document, they may be useful for controllers to be aware of as common notation in text coordination.