vatsim uk
Operations

EAST MIDLANDS VMATS PART 2

EGNX

REVISION 2025/07 - EFFECTIVE 10 JULY 2025

DISTRIBUTION AND SCOPE

This manual is for controllers of East Midlands 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

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

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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. New text is marked in red. Changes are also described briefly in the table below.

AMENDMENT HISTORY

Revision	Effective Date	Notes
2025/07	10 Jul 2025	Removed all references to DTY SIDs with SAPCO due to SID truncation (throughout); Various editorial errors corrected; Updated Taxiway Restrictions (ADC 1.12); Updated Midlands Buffer Zone diagram (APC 4.1.2); Removed a specified reference to the RAD 1 frequency (LOW 1.3)
2023/13	28 Dec 2023	General updates throughout; QNH table updated to reflect VATSIM UK standard and correct MSL values (GEN 1.4); Added aerodrome restrictions in LVP (GEN 3.3 and GEN 3.4); Updated East Midlands Radar frequency (GEN 4.2); Updated EMW range (GEN 4.3); Added Section for RYR100T procedures (GEN Chapter 6); Added ADC Area of Responsibility (ADC 1.1 and ADC 2.1); Removed RWY 09 BPK SID (ADC 1.3); Added Taxiway restrictions (ADC 1.7); Updated stand allocation section (ADC 1.10); Updated circuit procedures (ADC 2.16.21); Updated procedures for issuing VFR/SVFR clearances and added SVFR deemed separations (ADC 1.9 and ADC 2.16); Updated procedure for flights to local airfields (ADC 1.7 and ADC 2.5); Updated RAD 2 area of responsibility (APC 1.3.2); Updated holding procedures (APC 3.3); Updated inbound releases (APC 3.4); Updated CDA requirements (APC 4.2.2); Added Runway 09 NDB approach missed approach (APC 4.4); Updated procedure for APC working outbound traffic (APC 5).
2022/05	19 May 2022	Restrictions on opening FIN documented (GEN 4.2); Updated LVP enforcement criteria (GEN 3.2); New speed table introduced (SEP 1.2); Addition of radar separation requirements (SEP 2.3); Updated taxiway restrictions (ADC 1.7); Updated VFR circuit procedures (ADC 2.1); Updated VFR departure procedures (ADC 2.3.2); Updated departure transfer tables (ADC 2.5); Addition of Flights to Local Airfields procedures (ADC 2.10 and APC 6); Addition of Change to MSL procedure (APC 2.3); Updated STARs (APC 3.3); Addition of Midlands Buffer Zone (APC 4.1.2).
2021/02	25 Feb 2021	Introduction of AC Daventry (LM) stand-alone sector with updated hand-off order (ADC 2.5); Updated policy on Aerodrome Traffic Monitor use (ADC 1.5); Release subject to APC note added for Runway 09 SIDs (ADC 2.4.1); Departures Subject to Radar Approval included in ADC section (ADC 2.9).
2021/01	28 Jan 2021	Corrected DTY 3N SID designator (ADC 2.4.2); Changed East Midlands director logon.

2020/13	03 Dec 2020	Corrected Transition Level/Minimum Stack Level table and added note regarding classification of 1013 hPa (GEN 1.4); Clarified requirement for controllers to ensure routes are compliant with the SRD (GEN 6.1); New RNAV5 STARs added to inbound routes table (APC 3.3); Added note about LARS provision (APC 6.1).
2020/11	08 Oct 2020	New speed separation table (SEP 1.2); Updated stand allocation (ADC 1.6); Removed reference to defunct SRA procedures; Simplified RADAR splitting (APC – All); Revised wording of Inbound releases (APC 3.7); Updated airspace diagram (APC 4.1); Updated references to MAN TMA East, now PC East; Updated radials and other magnetic tracks.
Rev 5 (1809)	15 Sep 2019	New template, and other minor changes to formatting, grammar and content; Definitions added to preface; Updated TL/MSL table; ATIS frequency changed; Removed MON from stand allocation; Arrival routes (STAR) table updated; Conspicuity code changed.
Rev 4	11 Jun 2016	Removal of Fanstop restriction; Update of LVP enforcement conditions and addition of runway holding point usage procedures during LVP.
Rev 3	21 Feb 2016	Minor formatting updates and spelling corrections; Updated speed table; Various minor clarifications to previously misleading procedures and statements; Amended acknowledgements placement.
Rev 2	31 Jul 2015	Major updates

INTRODUCTION AND STRUCTURE

The East Midlands virtual Manual of Air Traffic Services (vMATS) Part 2 is complementary to the MATS Part 1 (CAP493). Together, these two documents provide comprehensive instructions and information for East Midlands ATS controllers 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 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

1.1 Departing Aircraft

Departing aircraft will be passed the QNH by GMC either on pushback or taxi. Traffic remaining in the visual circuit will be passed the QFE (or QNH if requested) when circuit clearance is given.

1.2 Arriving/Transit Aircraft

When below the Transition Altitude, pilots are to fly with reference to the aerodrome QNH until established on final approach, at which point QFE may be used if requested. Aircraft will be passed the QNH by Approach Control when instructed to descend to an altitude or with the clearance to enter the CTR/CTA. The QFE will be passed on first contact with AIR to all aircraft joining the CTR VFR.

1.3 QFE Threshold

The QFE at the threshold of all runways is 10 hPa less than the QNH.

1.4 Transition Altitude

The Transition Altitude is 6,000 feet AMSL.

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

1.5 Transition Levels and Minimum Flight Levels

QNH (hPa)	Transition Level	Minimum Flight Level
1050 - 1060	FL60	FL70
1032 - 1049	FL65	FL70
1013 - 1031	FL70	
995 – 1012	FL75	FL80
977 - 994	FL80	
959 - 976	FL85	FL90
940 - 958	FL90	

> ***Note 1:*** *Whilst the transition level for East Midlands must always be determined with reference to the East Midlands QNH, the* ***Minimum Stack Level (MSL)*** *for each hold should be determined as set out in APC 3.3.*

> ***Note 2:*** *To avoid confusion, irrespective of the Transition Level, the lowest* ***Minimum Flight Level*** *for use shall be FL70 against a Transition Altitude of 6000 ft.*

Note 3: *The classification of 1013 hPa as 'high pressure' in the above table differs from MATS Part 1 to align with the London and Manchester TMAs.*

1.6 Altimeter Setting Region (ASR)

East Midlands is situated within the Barnsley ASR, the Regional Pressure Setting (RPS) may be issued to pilots receiving a UK FIS east of the East Midlands CTAs. The RPS can be obtained using the UK Controller Plugin. Traffic operating under East Midlands or Daventry CTAs, should be issued an appropriate QNH.

Chapter 2 Noise Abatement Procedures

Refer to the AIP Textual data (EGNX AD 2.1), Section 2.21 for a description of Noise Abatement Procedures.

Chapter 3 All Weather Operations

3.1 Aerodrome Equipment

Runway 27 is equipped for CAT III ILS operations and Runway 09 is equipped for CAT I.

3.2 Instrumented Runway Visual Range (IRVR)

IRVR readings will be provided in the METAR when the visibility is below 1500 m. The IRVR should then be passed to all arriving aircraft in the intermediate approach stage, to all departing aircraft as part of the taxi clearance, and via the ATIS.

3.3 Low Visibility Procedures

3.3.1 Enforcement

Low Visibility Procedures (LVP) will come into force when either:

- IRVR or Meteorological Visibility is 1500 m or less; or
- Cloud ceiling is 300 feet or less (defined as BKN [5-7 oktas] or OVC [8 oktas] layers).

The AIR controller shall notify RAD 1 when LVP are to be initiated and ensure that the ATIS is updated.

Due to the inability to accurately forecast on VATSIM, LVP shall only be cancelled when the reported IRVR, meteorological visibility and cloud ceiling are above the required minimum.

3.3.2 Ground Procedures

Holding Points S1 and S2, W1 and W2, M1 and M2 and H1 and H2 are closed when LVP are in force.

All Runway 27 departures will be via Holding Point A2 only, and all landing aircraft must only vacate the runway via Holding Point G2.

All Runway 09 departures will be via Holding Point G2 only and all landing aircraft must vacate the runway via Holding Point A2.

When the visibility or IRVR is less than 300 m, only one aircraft may operate on each apron at any given time. However, on the western apron one aircraft can be operating on Bravo and another on Juliet. For example, an aircraft may push back from Stand 103 while another aircraft taxis to Stand 123 via Juliet, but if an aircraft pushes back from Stand 103, an aircraft inbound to Stand 109 must not enter the Western Apron until it is clear.

When the visibility or IRVR is less than 300 m, aircraft must be held at intermediate holding points, e.g. one aircraft at A2, the next holding at A3 etc. When the meteorological visibility or IRVR is above 300 m, more than one aircraft may then be given taxi instructions provided they are told about each other and they may be given taxi to the same holding point.

When, during CAT II/III operations, GMC is open and Runway 27 is in use, coordination must take place between GMC and AIR prior to GMC issuing taxi clearance to an aircraft between A10 and A9 due to the possibility of confliction with traffic vacating at G2.

3.3.3 Runway Procedures

During LVP only one aircraft may enter/use the runway at once. Conditional clearances are not to be used.

Arriving aircraft must receive a landing clearance by 2 NM from touchdown or shall be instructed to go around.

3.3.4 Arrival Spacing

During CAT II/III operations, aircraft must be vectored onto the ILS approach with a minimum of 10 NM spacing, to allow for the increased time to vacate the runway at G2 before the next aircraft can be cleared to land. Further spacing to allow for a departure must be coordinated between ADC and APC.

3.4 Windshear Warnings

Once turbulence or windshear has been reported to East Midlands ATC, AIR (or RAD 2 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.

For the purpose of VATSIM, this may be considered accurate if reported by two separate pilots.

3.5 Meteorological Information

Provision of an ATIS is the responsibility of the AIR controller (who may delegate the responsibility to another controller) and must be broadcast on the nominated ATIS frequency. Aircraft are expected to confirm the current ATIS information on first contact with an East Midlands 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	EGNX
Reference Point Coordinates and Location	524952N 0011940W mid-point of 09/27
Elevation	306 feet AMSL
Transition Altitude	6000 feet
Safety Altitude	2000 feet

4.2 ATC Communication Facilities

Position	Service Designation	RTF Callsign	Frequency (MHz)
NX RAD 1	EGNX_APP	East Midlands Radar	126.180
NX RAD 2	EGNX_F_APP	East Midlands Director	120.130
NX AIR	EGNX_TWR	East Midlands Tower	124.005
NX GMC	EGNX_GND	East Midlands Ground	121.905
ATIS	EGNX_ATIS	East Midlands Information	122.680

Note 1: *East Midlands APC shall only be split into NX RAD 1 and NX RAD 2 positions when AIR is already open* ***and*** *when the traffic loading warrants such a split.*

Note 2: *East Midlands Radar (NX RAD 1)* ***may*** *optionally cross-couple (XC) with the real world LARS frequency 134.180 in AFV.*

4.3 Radio Navigation and Landing Aids

Type	IDENT	Frequency	Remarks
ILS 09 CAT I DME	I-EMW	109.350 MHz	LLZ / GP / DME 3° glideslope
ILS 27 CAT IIIb DME	I-EME	109.350 MHz	LLZ / GP / DME 3° glideslope
NDB	EMW	353.500 kHz	Range 10 NM
NDB	EME	393.000 kHz	Range 20 NM

Chapter 5 Use of Runways

5.1 Preferential Runway

In calm conditions, Runway 27 is the preferred runway when the tailwind component is less than 5 knots and the runway surface is dry.

5.2 Runway Change Procedures

In case of a change to runway direction, AIR shall initiate coordination with RAD 1 to suggest a last arrival and time for the runway change. RAD 1 will then notify TC Midlands and PC Southeast, before then coordinating a last arrival time with AIR. Based on this time, AIR should then coordinate with GMC as to the last departure. GMC will re-clear any previously cleared aircraft that will now depart on the new runway. At least 15 minutes notice (or a suitable alternative time selected in accordance with the traffic situation) should be given to controllers before a change in duty runway is effected.

AIR must then inform RAD 1 of the intended departures before, and the first departure after, the runway change (callsign and routing). RAD 1 will inform AIR of the first arrival after the runway change at this time.

AIR must obtain a release from RAD 1 before the first aircraft departs off the new runway.

5.3 Opposite Direction Departures/Approaches

Should a pilot request to depart in the opposite direction of the runway in use, the GMC controller shall first communicate the request to AIR, who shall initiate coordination with RAD 1. This coordination should begin well before the aircraft is ready for departure.

RAD 1 and AIR shall agree a course of action to ensure vertical separation between departures and other conflicting aircraft. If the aircraft is joining the ATS route network RAD 1 will notify PC Southeast or TC Midlands accordingly, stating the runway to be used, the aircraft's callsign and clarifying whether a release will be required. If a release is required, then it is assumed a release will also be required for the next departure following this traffic. Where a release is not required, RAD 1 is responsible for ensuring separation of this traffic with subsequent departures even if traffic is transferred to MPC.

East Midlands Radar (RAD 1) shall coordinate with AIR when intending to land an aircraft on a runway other than the one in use.

5.4 Land After Procedures

Normally only one aircraft is permitted to land or take-off on the runway in use at any one time. When the traffic sequence is two successive landing aircraft, the second may be permitted to land before the first one has cleared the runway in accordance with CAP 493 requirements. At the time of writing, all the following requirements must be fulfilled:

- The runway is long enough to allow safe separation between the two aircraft and there is no evidence to indicate that braking may be adversely affected
- It is during daylight hours
- The preceding landing aircraft is not required to backtrack in order to vacate the runway

- The controller is satisfied that the landing aircraft will be able to see the preceding aircraft which has landed, clearly and continuously, until it has vacated the runway
- The pilot of the following aircraft is warned - the AIR controller will provide said warning by issuing the second aircraft with the following instruction:
  "ABC123 Runway 27, land after the A319, surface wind 270 degrees 9 knots"

Responsibility for ensuring adequate separation between the two aircraft rests with the pilot of the second aircraft.

Chapter 6 RYR100T Procedures

6.1 General

Ryanair often conduct 'base training' at East Midlands, which involves flying a B738 in the circuit VFR. This is generally accommodated depending on traffic levels, and if required for integration, the aircraft will convert to IFR and be vectored into the arrival sequence by APC.

> ***Note:*** *The following procedures shall apply to all aircraft operators simulating 'base training' at East Midlands.*

Only one such aircraft will be permitted at any time for the purposes of integration.

For ease, the callsign may be abbreviated to *"Ryanair one hundred tango"* provided there will be no ambiguity or callsign confusion.

The circuit is generally flown to the north and quite 'tight' with a crosswind turn almost immediately after departure avoiding the village of Castle Donington. Then the aircraft should turn downwind to point just north of the power station, and turn base just after passing the power station, to establish on about a 3 NM final. Typically, the crosswind and base leg form part of a continuous turn to/from the downwind leg. A similarly tight circuit is also flown to the south when required.

6.2 Clearance

The clearance to operate in the circuit will be issued on stand by GMC, but must first be approved by AIR and APC. The clearance is issued as follows:
"Ryanair 100T, cleared [left-hand/right-hand] circuits, VFR, at altitude 2000 ft, QNHXXXX, squawk 4570."

The squawk of 4570 is reserved wholly for use by RYR100T when conducting circuits at East Midlands. Any other operator conducting base training shall be allocated a discrete local squawk.

6.3 Procedures

Prior to departure, ADC must obtain a release for RYR100T.

When RYR100T is operating in the circuit and there is inbound traffic being vectored for the approach, close coordination is required between ADC and APC to decide on the landing order and spacing. The following procedures can be used in order to achieve sufficient spacing:

- ADC can extend the circuit straight ahead after departure and downwind to fit behind other traffic on final, however, use caution to keep the circuit traffic inside controlled airspace. Due to the early turn after departure, it is recommended to plan ahead and instruct RYR100T to continue straight ahead while they are still on final.
- APC can issue delay vectors to allow ADC to fit the RYR100T in ahead or keep the vectors 'tight' to keep the inbound ILS traffic ahead of the RYR100T.
- APC can issue instructions to ADC to pass to RYR100T in order to vector them along with the other IFR arrivals.
- When there is a stream of inbound aircraft, it may be necessary for RYR100T to land and taxi back to the holding point to absorb some delay on the ground, or if they are

already airborne, they may need to be directed to a holding facility (EME/EMW/PIGOT/ROKUP).

- Due to tight airspace RYR100T **cannot** be instructed to orbit as this may take them outside controlled airspace.

ADC | AERODROME CONTROL

Chapter 1 Ground Movement Control

1.1 Area of Responsibility

Ground Movement Control (*"East Midlands Ground"*) is responsible for the safe and expeditious movement of aircraft on the aprons and taxiways. GMC also provides full departure clearance to standard IFR departures ensuring an appropriate SSR code is assigned, an initial altitude is entered into the electronic flight progress strip, and the flight plan is consistent with the Standard Route Document.

1.2 Issuing Clearances

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

1. Their stand number
2. Their aircraft type
3. The ATIS information letter they are in receipt of
4. The current East Midlands QNH.

GMC should ensure that both the stand number and aircraft type are confirmed by the pilot before issuing a clearance.

An IFR clearance should follow the format:

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

***Example**: "ABC123, cleared to Gatwick, SAPCO 1 November departure, squawk 3152"*

GMC 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 GMC controller will pass this to the pilot.

***Example:** "ABC123, correct. Information Alpha, East Midlands QNH 998 hectopascals"*

1.3 Standard Instrument Departures (SIDs)

East Midlands SIDs are conventional navigation departures and all climb to an initial altitude of either altitude 6,000 ft or FL90.

Route	09	27	Climb	Remarks
SAPCO	1P	1N	FL90	
POL	2P	--	6000 ft	Only available from Runway 09 and between the hours of 0700 and 2200L.
TNT	3P	2N	6000 ft	

***Note:** All Runway 09 SIDs are subject to release from East Midlands RAD 1.*

1.3.1 Allocation of Pole Hill (POL) SID

The POL SID from Runway 09 (POL 2P) is only available between 0700 and 2200 local each day. At all other times, pilots are to be issued with a Trent (TNT) SID.

1.4 Non-Standard Departures

Non-standard IFR departures are categorised into those joining the ATS route network not via SID and those leaving controlled airspace to the 'open FIR'. In both circumstances, coordination is required by GMC with RAD 1 prior to issuing clearance and the specifics of the after departure instructions should be communicated by GMC to the AIR controller.

1.4.1 Aircraft Unable to Accept a SID

Where a pilot wishes to join the ATS route network but is unable to accept an appropriate SID they may need to be given non-standard departure instructions. This traffic will be worked by East Midlands Radar after departure, who will issue after departure instructions either to GMC or to AIR at the holding point.

GMC shall coordinate the traffic, advising type and requested routing, with RAD 1 who may choose to pass after departure instructions to GMC at this point, or else wait until the holding point. The squawk allocation shall be generated by GMC using a UKCP general code.

GMC will clear these aircraft to their destination via their first filed airway and with an initial climb coordinated with RAD 1. GMC must then coordinate the traffic with the AIR controller, to clarify any assigned after departure instructions, or whether AIR will be expecting further instructions at the holding point.

1.4.2 Other Non-Standard Departures

Aircraft requesting other non-standard departures (i.e. departing to leave East Midlands controlled airspace IFR) should be coordinated with RAD 1 prior to clearance being issued.

GMC shall coordinate the traffic, advising type and requested routing, with RAD 1 who may choose to pass after departure instructions to GMC at this point, or else wait until the holding point. RAD 1 must issue a discrete local squawk code to GMC and initial cleared altitude on the East Midlands QNH.

GMC will clear these aircraft as coordinated. GMC must then coordinate the traffic with the AIR controller, to clarify any assigned after departure instructions, or whether AIR will be expecting further instructions at the holding point.

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 whilst 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 Groups	Includes (most popular destinations bold)
Belfast Group	**EGAA**, EGAC, EGAD, EGAE, EGAL
Dublin Group	**EIDW**, EIDG, EIME, EIWT

Dusseldorf Group	EDDG, EDDK, **EDDL**, EDGS, EDKB, EDKL, EDLA, EDLE, EDLM, EDLN, EDLP, EDLV, EDLW, ETNG, ETNN
Manchester Group	**EGCC, EGGP**, EGCN, EGNH, EGNJ, EGNL, EGNM, EGNO, EGNT, EGNV, EGSH
Paris Group	LFPB, **LFPG**, LFPN, LFPO, LFPT, LFPV
Scottish Group	**EGPF**, EGPG, **EGPH**, EGPK, EGPN

Level restrictions to these groups are as follows:

Destination	Maximum FL
EGBB/BE	85
EGLL, EGKK, EGGW, EGSS, EGWU	155
Other airfields under the **London TMA**	195
Belfast Group	285
Dublin Group (inc. EICM)	285
Dusseldorf Group (via EHAA)	335
Paris Group	295
EGNS	195
EGSH	195
EHRD	215
Manchester Group	105

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. A guide to issuing PDC through vSMR or text alias is available at docs.vatsim.uk.

1.6.1 Availability of PDC

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

- 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 GMC 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 GMC 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 GMC 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.

1.7 Flights to Local Airfields

1.7.1 Delay Absorption

A request for delay should be sent to the receiving MPC departure sector or TC Midlands when a clearance to any airport in the list below is issued via the ATS route network and the area sector should respond with any delay (a response without specifying a delay may be interpreted as no delay). Additional prenotes may be required (see the relevant section below).

The following airports are subject to this procedure and would also require a release by AIR before departure:

- Midlands: EGBB, EGBE
- LTMA: EGLL, EGSS, EGGW, EGKK
- MTMA: EGCC, EGGP, EGNM
- EGHI and EGHH

GMC 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 area sector when the delay is absorbed and the pilot is starting. *("GABCD starting for EGBB"*), no response is required from the area controller.
3. Greater than 20 minutes: MPC/TC Midlands to specify *"greater than 20 minutes"* or *"delay not determined"*. GMC to inform pilot of *"delay not determined, at least 20 minutes"* and ask whether they wish to proceed. GMC to re-coordinate at 20 minutes with MPC.

In the event the relevant MPC or TC sector is offline, the receiving APC unit should receive this coordination.

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

1.7.2 IFR Flights to Birmingham (EGBB)

Flight Plan Routing: SAPCO Y53 DTY L10 HON

Flights to Birmingham shall be cleared on the SAPCO SID, with an instruction to stop climb at altitude 5000 ft. When the aircraft taxis, East Midlands ADC shall inform Birmingham APC or other top-down ATC. IFR departures to Birmingham always require a release and will be transferred to either TC Midlands or East Midlands APC (or other top-down ATC) on departure, subject to the release from TC Midlands. Traffic operating below 4500 ft will be routing outside of controlled airspace and should be individually coordinated with NX RAD 1.

1.8 Flow Restrictions

1.8.1 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.

GMC 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.

1.9 VFR and SVFR Traffic

1.9.1 Visual Circuits

Pilots may request visual training circuits, which shall be approved by AIR prior to start-up. GMC will pass the departure clearance to the aircraft prior to taxi.

Visual circuits generally operate to the north side of the airfield at a height of 1000 feet QFE (or an altitude of 1300 feet QNH upon request) but can be varied to the south.

1.9.2 VFR Clearances

GMC may clear VFR departures routing via Long Eaton or Shepshed Lanes not above altitude 2000 ft East Midlands QNH without coordination with RAD 1. These departures do not require a pre-note or a release. The following phraseology should be used for these VFR clearances:

> ***Example:*** *"G-ABCD cleared to the control zone boundary via the Long Eaton/Shepshed Lane, remaining east/west of the M1 Motorway, not above altitude 2000 ft VFR, East Midlands QNH 1001, squawk xxxx"*

VFR Departures wishing to climb above 2000 ft or wishing to route into the arrival sector must be coordinated with and released by RAD 1.

Each departure must be allocated a discrete East Midlands squawk, selected from the range outlined in LOW 1.3.

1.9.3 Traffic Management

Smaller aircraft (e.g. C152/P28A) will be expected to depart from Holding Point S1 for Runway 27 or M1 for Runway 09, unless another holding point has been requested.

1.10 Stand Allocation

Stand allocation will normally be automated by UKCP.

In the event of a UKCP failure it is the responsibility of the GMC controller to assign stands to aircraft.

1.11 Pushback Clearance

Clearance to push should include the stand number, to improve the situational awareness of other aircraft on frequency.

Example: *"ABC123, stand 4, push and start approved, face east"*

Turboprop aircraft shall be passed the outside air temperature with clearance to start.

Direction of pushback shall be issued to all aircraft unless there is only one direction possible to push.

To allow for 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.

1.12 Taxiway Restrictions

The Maintenance Area and Kilo Apron are not under direct ATC control. All aircraft movements beyond holding points MA, M4 and M5, and K1 are at the discretion of the pilot and phraseology for taxiing in such areas is as follows:

"Callsign, taxi at your own discretion to holding point M5, then taxi holding point A1 runway 27" or,
"Callsign, vacate left at hotel, taxi holding point M4 via A and M, then at your own discretion".

1.12.1 Aircraft Restrictions

Code C Aircraft and higher:

- Cannot use Taxiway MA (restricted to B350 or smaller).
- Must be held on Taxiway A abeam Q and T while an aircraft parks on Stand 24 when either aircraft is Code D or larger.

Code D Aircraft and higher:

- MD11 and Code E or higher aircraft cannot use Taxiway M.
- Cannot proceed between A4 and A6 when aircraft are manoeuvring on Stands 21, 23, 24, 5, 6 or 30.
- Cannot use Taxiway C (Code D aircraft must push back onto Q).
- Shall not use Taxiway D unless arriving or departing a stand in the East Apron.

Code E Aircraft and higher:

- Are not permitted to use Taxiway J south of Holding Point J.
- Can use Taxiway N to access Stand 42 only.
- Cannot use Taxiway U.
- Are not ensured separation from other Code E or higher traffic when manoeuvring in the East Apron. The only suitable stands in this apron are 83W and 73L.

Code F Aircraft (B748, AN124, etc):

- Cannot use Taxiway A while another code F is using the runway and vice-versa.
- Cannot use Taxiway A between A3 and A4 while a code E aircraft (or MD11) is on Taxiway D.
- Taxiway V is restricted to B748 and smaller.
- Are not permitted to taxi past a runway holding point where an aircraft of any size is holding – the Code F traffic must either receive intermediate holding point in this situation, unless the other aircraft will have departed by the time it passes.

1.12.2 A380/AN225 Restrictions

This traffic is only permitted to use: the runway, taxiway between A1 and G1, taxiway between G1 and Foxtrot. As such, departures from Runway 27 must enter the runway via G1 and backtrack to vacate A1 and arrivals from Runway 09 must taxi to W1 to backtrack the runway. Coordination of these arrival/departure procedures is needed between GMC and AIR.

Alpha cannot be used by Code E aircraft when these aircraft are on the runway.

Bravo cannot be used by Code D aircraft when these aircraft are on taxiway G/F.

1.13 Non-Direct Taxi Instructions to Stand

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

> ***Example:*** *"ABC123 taxi via A, hold at V, expect stand 6"*

1.14 Departure Handoff

Aircraft shall be transferred to AIR within reasonable time to allow AIR to issue instructions prior to the holding point. GMC should only retain traffic if a potential confliction exists.

1.15 Helicopter Traffic

VFR helicopters will normally use Runway 09/27 for takeoff/landing and are to ground/air taxi to parking on GMC's frequency following fixed wing procedures.

Squawk 4573 (conspicuity) is assigned to Costock Helicopters (CTK) operating inside the East Midlands CTR.

Chapter 2 Air Control (AIR)

2.1 Area of Responsibility

Air Control (*"East Midlands Tower"*) is responsible for the safe and expeditious use of the active runway. AIR also provides information to aircraft on an instrument approach and VFR remaining in the visual circuit and operating within the 'Aerodrome Area of Responsibility'. AIR is also responsible for transferring departures to the relevant unit (see ADC 2.5) and obtaining clearances for non-standard operations and releases as required.

2.1.1 Delegated Responsibilities

Aerodrome Control (ADC) is responsible for all aircraft flying within the 'Aerodrome Area of Responsibility' which is defined as:

- The Long Eaton and Shepshed lanes
- A 4 NM radius centred on the aerodrome reference point
- The departure sector, defined as:
  - Runway 09: That portion of the East Midlands CTR east of the eastern edge of the Long Eaton/Shepshed lane
  - Runway 27: That portion of the East Midlands CTR west of the western edge of the Long Eaton/Shepshed Lane
- Operating at or below altitude 2,000 feet on the East Midlands QNH

2.2 Line Up Procedures

2.2.1 RTF 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 if ambiguous, and
3. For traffic entering the runway to facilitate taxiway positioning, the holding point designator at which the aircraft is to vacate the runway.

2.2.2 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 as long as there is a sufficient gap.

2.3 Conditional Clearances

2.3.1 Conditionals behind Arriving Traffic

To assist with situational awareness when lining up behind arriving traffic, the distance from touchdown should be included.

> ***Example:*** *"ABC123 behind the landing Boeing 737-800 at 3 miles, via A1, line up Runway 27 behind"*

A conditional line up clearance shall only be issued against the first aircraft on approach.

2.3.2 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.

2.3.3 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.

2.3.4 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.

2.4 Runway Clearances

It is accepted that a degree of anticipation is permissible in the issuance of take-off and landing clearances. In all cases, except where a land-after clearance (see GEN 5.5) is issued, 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.

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

2.5 Flights to Local Airfields

GMC will have coordinated initially with relevant local controllers – see ADC 1.7.

A release must be obtained from the receiving MPC or TC Midlands controller by AIR for flights to the following local airfields:

- Midlands: EGBB, EGBE
- LTMA: EGLL, EGSS, EGGW, EGKK
- MTMA: EGCC, EGGP, EGNM
- EGHI and EGHH

Aircraft subject to a release must depart no later than 5 minutes after the release time provided.

2.6 Wake Separation

2.6.1 Wake Turbulence Separation

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

2.6.2 Holding Points

There are no wake turbulence exemptions for holding points at East Midlands.

2.7 Speed Limitation on Departure

A speed limit of 250 KIAS applies to all departures from East Midlands whilst flying below FL100. Controllers should not remove this speed restriction when aircraft are in Class D airspace.

If departing aircraft are unable to comply with these speeds, this may impact on the initial time separations applied by ATC. In all such cases, pilots will:

If before take-off -

- Inform GMC when requesting start-up clearance stating the minimum speed acceptable. GMC is to inform the appropriate area controller who may specify a new limitation and/or additional take-off separation as necessary, which shall be communicated to AIR. AIR is to advise the pilot, before take-off, of any higher speed limitation imposed.

If after take-off –

- Inform ATC the minimum speed acceptable.

The onus for removing the speed limitation rests with the appropriate area sector controller who will advise the aircraft as soon as the traffic situation permits. AIR controllers are not to remove a speed limitation without first obtaining the approval of the appropriate departure controller.

2.8 Departure Separation

Reduced Separation In the Vicinity of the Aerodrome (RSIVA) cannot be applied at East Midlands; time-based departure separation is required for all departures.

2.8.1 Route Separation

The standard departure interval between any two successive flights shall be 2 minutes but aircraft whose tracks diverge by 45 degrees after departure and do not subsequently cross can be reduced to 1 minute (subject to wake turbulence).

Where traffic requires a release from PC Southeast, TC Midlands or East Midlands Radar, receipt of this release does not permit this departure interval to be reduced.

Runway 27		
Leading Aircraft	**Following Aircraft**	**Time (mins)**
TNT	TNT	2
	SAPCO	1
SAPCO	TNT	1
	SAPCO	2

Runway 09		
Leading Aircraft	**Following Aircraft**	**Time (mins)**
TNT / POL	TNT / POL	2
	SAPCO	1
SAPCO	TNT / POL	1
	SAPCO	2

2.8.2 Speed Separation

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

Subject to wake vortex separation, the interval may be reduced to 1 minute provided that the following aircraft is two groups slower than the preceding aircraft.

2.8.2.1 Table of Aircraft Speed Groups

East Midlands utilises VATSIM UK's harmonised speed table to categorise aircraft for departure separation. The table at time of writing is shown below. Updates published to the harmonised speed table apply to East Midlands.

Group 4	Group 3	Group 2	Group 1
All jet aircraft except:	BAE146/Avro RJ	ATR variants	BN2P/T
- Those in Group 3	CL35/CL60	DH8A/B/C	C208
- Concorde	CRJ1/2/7/9/X	F50	DA62
- Military Jets	D328/J328	JS31/32/41	DHC6
	DH8D	King Air variants	E110
	E135/145	PC12	
	E50P/55P	SF34	
	P180	SW3/4	
	SB20	TBM7/8/9	
	Citations except C56X/680/68A/700/750		

2.9 Departures Subject to Radar Approval (Departure Releases)

AIR is to obtain a departure release from RAD 1 prior to issuing take-off clearance for:

- All SID departures from Runway 09.
- All non-standard IFR and SVFR departures.
- Departures from the non-departure runway (prior coordination required) and any subsequent departure.
- The first departure following a runway change.
- The first departure following a missed approach.
- VFR departures except those via published entry/exit lanes or that remain within the Aerodrome Area of Responsibility.
- Aircraft not on the speed table, plus the subsequent departure – this information shall be specifically coordinated in the release request.
- Where the following aircraft is 3 groups faster than the leading aircraft – this information shall be specifically coordinated in the release request.
- When a 'check' is enforced by East Midlands Radar.

2.10 Transfer of Control and Communication

2.10.1 Departures

Standard IFR Departures may only be transferred to the appropriate frequency 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 in coordination with RAD 1.

Non-standard IFR, VFR and SVFR departures are transferred to RAD 1 once clear of aerodrome traffic.

2.10.2 Departure Handoff Priority

Departure	Routing	1	2	3	4	5	6	7	8
SID (RWY 27)	SAPCO	TCM	LM	LC	LSC	L	RAD 1		
	TNT	PC SE	PC E	PC	LNW	LN	L	RAD 1	Top-Down Order*
SID (RWY 09)	TNT / POL	RAD 1	Top-Down Order*	PC E	PC	LNW	LN	L	
	SAPCO	RAD 1	Top-Down Order*						
Non-Standard	Open FIR	RAD 1	Top-Down Order*						

Top-Down Order*	TCM	LM	LC	LSC	L

RAD 1 can request to work any standard departure as part of the response to a departure release.

- PCSE MPC Southeast
- PCE MPC East
- PC MPC Bandbox
- TCM TC Midlands
- LM AC Daventry
- LC AC Central
- LSC AC South/Central Bandbox
- LNW AC Lakes
- LN AC North
- L AC Bandbox

2.10.3 Aircraft on Approach

Transfer of control between RAD 2 and AIR shall be no later than 4 NM from touchdown. Transfer of communication should occur as soon as possible once established on the final approach track.

East Midlands Radar remains responsible for radar separation and wake turbulence separation of aircraft until touchdown and therefore changes to instructions shall not be given by AIR without prior coordination.

2.11 Landing Clearance

2.11.1 Runway Designator

The runway designator should be included in all landing clearances.

2.11.2 Cancelling Approach Clearance

It is the responsibility of AIR 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.

2.12 Arrival Spacing

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

Traffic shall not typically be spaced closer than 5 NM on final approach. AIR should coordinate the spacing required with FIN to allow outbound traffic. As a rough guide:

- 6 NM for one departure
- 10 NM for two departures

2.13 Minimum Radar Separation

Minimum radar separation for East Midlands Radar is 3 NM, however East Midlands Radar shall not issue spacing below 4 NM on final approach.

2.14 Missed Approaches

The standard missed approach procedures are as published on approach charts and are detailed below (with minor wording modification for clarity). The DME and EME/EMW NDBs are always serviceable on VATSIM.

Runway	Missed Approach Procedure
ILS 09 LOC 09	Climb straight ahead to 3000 ft or D4.6 I-EMW, whichever is earlier, then turn left to EMW at 3000 ft, or as directed.
NDB DME 09	Climb straight ahead to 3000 ft or D3.2 I-EMW, whichever is earlier, then turn left to EMW at 3000 ft, or as directed.
ILS 27 LOC 27	Climb straight ahead to 3000 feet or D8.8 I-EME, whichever is earlier, then turn right to EME at 3000 ft, or as directed.
NDB DME 27	Climb straight ahead to 3000 feet or D8.8 I-EME, whichever is earlier, then turn right to EME at 3000 ft, or as directed.

2.15 Go Around Procedure

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

1. Activate the UKCP Go-Around Alarm (if in use)
2. Establish separation between the go-around and departing traffic:
    a. Go-around traffic shall not be cleared above the missed approach altitude
    b. Tactical headings may be issued only if absolutely necessary to avoid an immediate conflict and should be limited to turns of 30 degrees from the runway track
    c. Traffic should be monitored visually where able, or via the ATM
3. Coordinate with RAD 1 to agree tactical headings and action required for traffic
4. Pass traffic information where required or useful
5. Suspend departures until a release is obtained from RAD 1

Coordination with East Midlands Radar for go-around traffic shall be with RAD 1. On occasion, the East Midlands Radar controllers may choose to delegate this to RAD 2, however this must be explicitly coordinated in advance and must never be coordinated during a go-around.

Where AIR has issued a heading to departing traffic, it must be transferred to East Midlands Radar (RAD 1 unless otherwise coordinated) who will work the traffic prior to transfer to MPC.

The next departing aircraft following a missed approach requires a release from RAD 1.

2.16 VFR and SVFR Traffic

2.16.1 Departures

Standard VFR/SVFR, staying within the Aerodrome Area of Responsibility within the CTR shall be transferred to RAD 1 at the zone boundary. Other flights should be transferred to RAD 1 as soon as practical once clear of aerodrome conflicts.

2.16.2 Circuit Procedures

Visual circuits generally operate to the north side of the airfield at a height of 1000 feet QFE or an altitude of 1300 feet QNH but can be varied to the south.

GMC will require approval from AIR before allowing startup. Circuit instructions are passed at the holding point.

Smaller aircraft (e.g. C152/P28A) will be expected to depart from Sierra 1 (**S1**) for Runway 27 or Mike 1 (**M1**) for Runway 09 unless another holding point has been requested. Aircraft remaining within the visual circuit should be instructed to squawk 7010 and assumed to be unvalidated and unverified.

AIR shall be responsible for notifying RAD 1 that the circuit is active. RAD 1 shall communicate this to RAD 2.

Until advised otherwise, it may be assumed circuit aircraft will be making a touch and go.

2.16.3 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 any 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 can 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 10 NM.

2.16.4 Re-join Procedures

Joining aircraft are to be coordinated between East Midlands Radar and AIR as soon as possible. VFR aircraft following the standard entry/exit lanes at or below 2,000 ft can be transferred to AIR within the zone boundary.

2.17 Helicopter Procedures

Helicopters shall use the runway threshold as an aiming point for arrivals and all departures will use the runway.

All aprons and taxiways at East Midlands are close enough to the runway that wake turbulence shall be considered for helicopters unable to ground taxi.

2.18 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.
- Separation can be established between departing aircraft by issuing an altitude restriction or an early turn onto track, provided that this is co-ordinated with the relevant Area Control sector controller in advance.

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 East Midlands APC positions is adopted:

RAD 1	- Radar 1 (RTF callsign "East Midlands Radar")
RAD 2	- Radar 2 (RTF callsign "East Midlands Radar")
East Midlands Radar	- Collective term for both East Midlands APC roles

1.2 Area of Responsibility

East Midlands Radar is responsible for the East Midlands CTR and CTA, alongside delegated portions of the Daventry CTA. East Midlands provides services to:

- Arriving traffic transferred by Manchester Prestwick Control or London Terminal Control inbound to East Midlands;
- Aircraft approaching from outside of controlled airspace, until control is transferred to Aerodrome Control;
- Certain standard and non-standard departures transferred by Aerodrome Control until leaving controlled airspace or transfer to Area Control;
- Overflights of the East Midlands CTR/CTA and delegated airspace under the control of East Midlands Radar.

RAD 1 may also provide UK FIS services to low-level traffic within 30 NM of East Midlands.

> ***Note:*** *It is permissible for the APC controllers to coordinate an alternative division of responsibilities. However, NX RAD 1 should always be the controller accepting inbound releases for IFR aircraft from TC Midlands and PC Southeast, and where the altered responsibilities affect ADC, they must be notified.*

1.3 Function

East Midlands Radar provides Approach and Approach Radar Control functions as defined in CAP 493 (MATS Part 1).

Specific functions are:

1.3.1 Radar 1 (RAD 1)

- Accepts releases and provides control and initial sequencing of traffic released by TC Midlands or PC Southeast until control is transferred to RAD 2 or ADC;
- Controls overflying aircraft within East Midlands controlled airspace and delegated airspace;
- Coordination with ADC for all except range checks, final approach spacing, low approach/landing clearances;
- Coordinates with ADC for unplanned go-arounds;
- Coordinates with other relevant ATSUs;

- Implements and revokes departure checks;
- Provides UK Flight Information Services (subject to workload) within the vicinity of East Midlands airspace;
- Provides a Radar Service to non-airways departures;
- Issues clearances to VFR/SVFR traffic entering the CTR;
- Assumes the responsibilities of RAD 2 in their absence.

1.3.2 Radar 2 (RAD 2)

- Provides control of traffic transferred by RAD 1 until transfer to Aerodrome Control;
- Provides vectoring to final approach stages;
- Liaises with AIR for range checks and final approach spacing;
- Radar monitoring of traffic on final approach to ensure separation is not eroded.

1.4 East Midlands Radar Bandbox/Splitting Procedures

RAD 1 may be opened at any time. AIR must be open before opening RAD 2.

When splitting/bandboxing East Midlands Radar, RAD 2 shall inform AIR.

Chapter 2 Radar/Director General Operating Procedures

2.1 General Procedures

RAD 1 shall accept releases for traffic inbound to East Midlands via ROKUP and PIGOT and is responsible for executive coordination and overall flow of traffic through East Midlands airspace. This does not preclude RAD 2 from coordinating with other agencies as required. Both positions will manage their own electronic flight progress strips.

2.2 Inbound Releases

RAD 1 will receive inbounds to ROKUP from PC Southeast and PIGOT from TC Midlands as either the silent release or a full release.

2.2.1 Silent Release Procedures

A silent release may be issued by electronic transfer of the track data-block to East Midlands Radar according to the table below. Traffic can be released under these conditions 10NM in trail, constant or increasing or else coordinated with a full release.

Via	Agreement	Speed	Conditions
PIGOT	Descending FL100	Max 250 knots	Cross VELAG FL130 or below. (*Note 1*)
ROKUP	Descending MSL, minimum FL80	Max 250 knots	(*Note 2*)

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

Note 2: *Traffic is either transferred direct ROKUP or on a radar heading between DIPSO and EMBOR to prevent holding. PC SE shall transfer traffic so that it has*

sufficient time to make contact with East Midlands 10 NM before ROKUP, otherwise traffic must be transferred on a radar heading.

Silent release conditions are detailed in APC 3.4 and APC 4.2.1.

Traffic that cannot be transferred to East Midlands Radar under the silent release conditions should be coordinated as a full release.

2.2.2 Full Release Procedures

Where traffic cannot be transferred under a silent release, a full release shall be issued. This shall normally be coordinated verbally and read back in full. A full release shall specify:

- Hold Name *"Full Release"*
- Callsign
- Cleared Flight Level
- Release Point
- Contact Point
- Any additional instructions or restrictions.

Example: *"PIGOT Full Release, ABC123, FL100, released VELAG contact time 48."*

2.2.2.1 Use of UKCP for Releases

A full release should be issued by verbal coordination. However, where this is not possible due to sector workload, MPC or LTC may choose to issue a release via UKCP. In this situation, the release given is considered valid at the time of electronic transfer of the track data-block.

Releases of this type shall only be by a full release or a release with both turn and descent instructions. Where this is not the case, East Midlands shall clarify the release with the Area controller. Unless clarified, such traffic cannot receive turn or descent instructions until ROKUP or PIGOT.

2.3 Transfer of Data and Control between Radar Controllers

Transfer of control from RAD 1 to RAD 2 is not to be carried out until the aircraft is clear of confliction with any aircraft remaining under the control of RAD 1 or MPC unless this traffic is coordinated between the two controllers.

Transfer of data and control from RAD 1 to RAD 2 shall be by electronic transfer of the aircraft track data-block and is to be coincident with the transfer of communication. The track is to be accepted once the receiving controller has RTF contact with the pilot.

The track data-block shall be updated prior to transfer with the cleared level, assigned heading and any speed restriction.

2.4 Identification and SSR Validation and Verification Procedures

All IFR aircraft receiving radar services from East Midlands Radar 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 East Midlands 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 any other unit outside controlled airspace, which has been issued a unique SSR code allocated 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 East Midlands Radar

2.5.1 Use of 3 NM Reduced Separation

East Midlands Radar controllers may apply reduced radar separation of 3 NM between aircraft provided that:

- Both aircraft are identified, and
- 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: *TC Midlands, PC Southeast and Birmingham APC are authorised to apply reduced radar separation of 3 NM.*

2.5.2 Deemed Separations

There are no deemed separations at East Midlands.

2.6 Terrain and Obstacle Clearance

Within the Surveillance Minimum Altitude Area (SMAA) the lowest level that can be assigned is 2000 ft, with a single higher area south of the aerodrome at 2100 ft. Aircraft within the Final Approach Vectoring Areas (FAVAs) that are either established on an instrument approach or are cleared to establish at an angle of 40° or less may descend to 1800 ft. The Minimum Sector Altitude (MSA) within 25 NM of East Midlands are:

NW	NE	SW	SE
2600 ft	2500 ft	2500 ft	2500 ft

East Midlands ATC SMAA chart: **AD 2.EGNX 10-1R.**

2.7 Change to MSL Procedure

Minimum stack levels (MSLs) are determined in accordance with APC 3.3.

When a change to the East Midlands or Birmingham QNH results in a new MSL, the first controller within the unit to note the change shall notify other controllers of the change, including PC Southeast and TC Midlands accordingly. This controller shall coordinate an

agreed effective change time that is at least 5 minutes from the time the pressure change was noted. Aircraft operating at the old MSL are deemed separated from the Transition Altitude until the new MSL is in effect.

Chapter 3 Inbound Procedures

3.1 Information to Arriving Aircraft

After an arriving aircraft has made its initial call to RAD 1, 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 weather code, if not reported correctly;
- Any changes in the operational status of visual or non-visual aids essential for approach and landing;
- LVP in operation, if not already received from the ATIS;
- Any delay to be expected.

Except for traffic transferred between RAD 1 and RAD 2, all East Midlands Radar controllers are to confirm the cleared level of an aircraft coming under their control on first RTF 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, the first controller is to confirm aircraft type, including type variants.

East Midlands arrivals 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 (STARs)

3.2.1 East Midlands STARs

Designator	Route
AMPIT 2E	AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
BEGAM 1E	BEGAM – MCT – VEGAR – TNT – DIPSO – ROKUP
CROFT 1E	CROFT – MCT – VEGAR – TNT – DIPSO – ROKUP
DOLOP 1E	DOLOP – AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
DTY 1E	DTY – VELAG – UPDUK – PIGOT
HEMEL 1E	HEMEL – WELIN – VELAG – UPDUK - PIGOT
LIBSO 1E	LIBSO – GOLES – DESIG – MCT – VEGAR – TNT – DIPSO - ROKUP
MAKUX 1E	MAKUX – SOSIM – GIGTO – MALUD – AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
MALUD 1E	MALUD – AMPIT – NOKIN – NUGRA – VEGAR – TNT – DIPSO – ROKUP
POL 1E	POL – MCT – VEGAR – TNT – DIPSO - ROKUP
VEGUS 1E	VEGUS – GOLES – DESIG – MCT – VEGAR – TNT – DIPSO - ROKUP
WAL 2E	WAL – NUGRA – VEGAR – TNT – DIPSO - ROKUP

All East Midlands STARs are for RNAV1-capable aircraft. If a pilot is simulating a non-RNAV1 capable flight, they should file the alternate routes listed in the SRD, terminating at ROKUP and PIGOT.

3.2.2 Stack Switching

There are no pre-planned routes for stack switching at East Midlands; should aircraft need to be stack-swapped, necessary coordination should take place between RAD 1, PC Southeast and TC Midlands in order to ensure the separation of aircraft.

3.3 Holding Procedures

PIGOT and ROKUP are to be used by traffic inbound via a STAR. East Midlands APC must vector traffic prior to reaching the hold, to prevent conflict with subsequent traffic transferred according to the silent release. Where this is not possible, the silent release must be cancelled and traffic individually coordinated.

Stack	Inbound Radial / Direction	Minimum Holding Level	Maximum Holding Level	Holding Speed Limit
ROKUP	292° | Right Hand	MSL	FL140	220 knots
PIGOT	186° | Left Hand	MSL (≥ FL80)	FL120	220 knots
EME	268° | Left Hand	3000 ft	6000 ft	
EMW	088° | Right Hand	3000 ft	5000 ft	

Note 1: *MSL at **ROKUP** is to be determined by the **East Midlands QNH**.*

Note 2: *MSL at **PIGOT** is to be determined by the **Birmingham QNH**.*

Note 3: *The minimum holding level for use at PIGOT is MSL, with an overriding minima of FL80, due to the base of controlled airspace of CTA-16 (FL75).*

Note 4: *Although the minimum holding level for the EME and EMW is 3000 ft, traffic should generally not be held below 4000 ft to allow departures to climb to 3000 ft below.*

3.3.1 Holding at Flight Levels

The lowest flight level available for holding at PIGOT and ROKUP is Minimum Stack Level (MSL), with an overriding minima of FL80 at PIGOT.

Minimum Stack Level (MSL) is to be determined using the table in GEN 1.5. MSL may differ for each stack, as it is based off two different QNHs – see APC 3.3 above for which QNH each stack bases its MSL off.

3.3.2 Holding Pattern Separation

ROKUP and PIGOT are separated from each other at all published levels.

The EME and EMW holds are **not** separated from each other, or any departures from either runway.

3.4 Inbound Releases

The release point for traffic transferred under the silent release varies by arrival route. This is documented in APC 4.2.

For all traffic not subject to the silent release, a full release is passed as detailed in APC 2.2. For traffic for which no release is received, and which is not transferred according to silent release conditions, East Midlands Radar should assume a release point of ROKUP or PIGOT and shall not issue turn/descent instructions until passing these points..

3.5 Transfer of Communication Procedures

Terminal Control sectors shall transfer traffic inbound to each stack in sufficient time for holding instructions to be passed. If not possible, MPC or LTC shall instruct the aircraft to hold prior to transfer.

3.6 Expected Approach Times

Expected Approach Times are to be issued at 5-minute intervals for radar vectored approaches if the delay is more than 20 minutes.

EATs are not normally passed if the expected delay is less than 20 minutes, instead, the usual phrases used are *"Less than 5 minutes"*, *"5 to 10 minutes"*, *"10 to 15 minutes"* and *"15 to 20 minutes"*.

Chapter 4 Procedures for Intermediate and Final Approach

4.1 East Midlands Controlled Airspace

4.1.1 Airspace

Class D airspace is established to the north-east and to the south-east of East Midlands with base levels stepping up from between 1500 feet and FL75.

The portion of the East Midlands CTA airspace (Class D) east of the eastern edge of Daventry CTA-3 and coincident with the boundaries of the East Midlands CTA up to and including FL105 is the responsibility of East Midlands Radar. East Midlands Radar, however, delegate a portion of their airspace to PC Southeast sector.

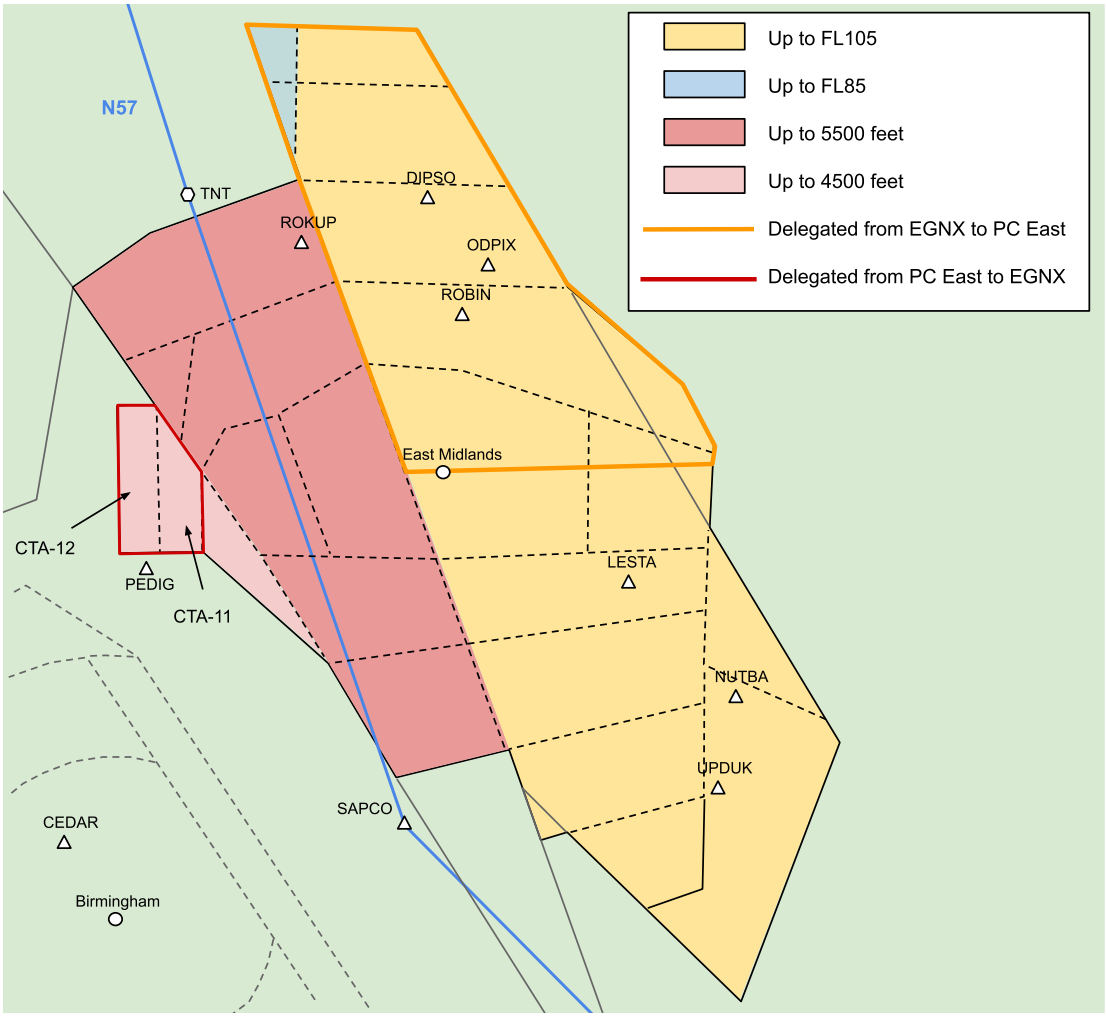
The delegated airspace is the area north of the Runway 27/09 centreline. PC Southeast may use this airspace at FL80 and above or MSL and above (whichever is higher e.g. when MSL is FL70, EGNX may transit this airspace at FL70).

MSL	Level at ROKUP	Level NX can operate at
FL70	FL80	FL70 and below
FL80	FL80	6000 feet and below
FL90	FL90	6000 feet and below

In order to assist EGNX with the handling of traffic for Runway 09, PC Southeast sector has delegated a portion of the Daventry CTA up to and including 5000 feet to EGNX APC. The airspace in question is above CTA-11 and CTA-12.

These airspace delegations are depicted in Figure 1.

Figure 1 – East Midlands Airspace Diagram

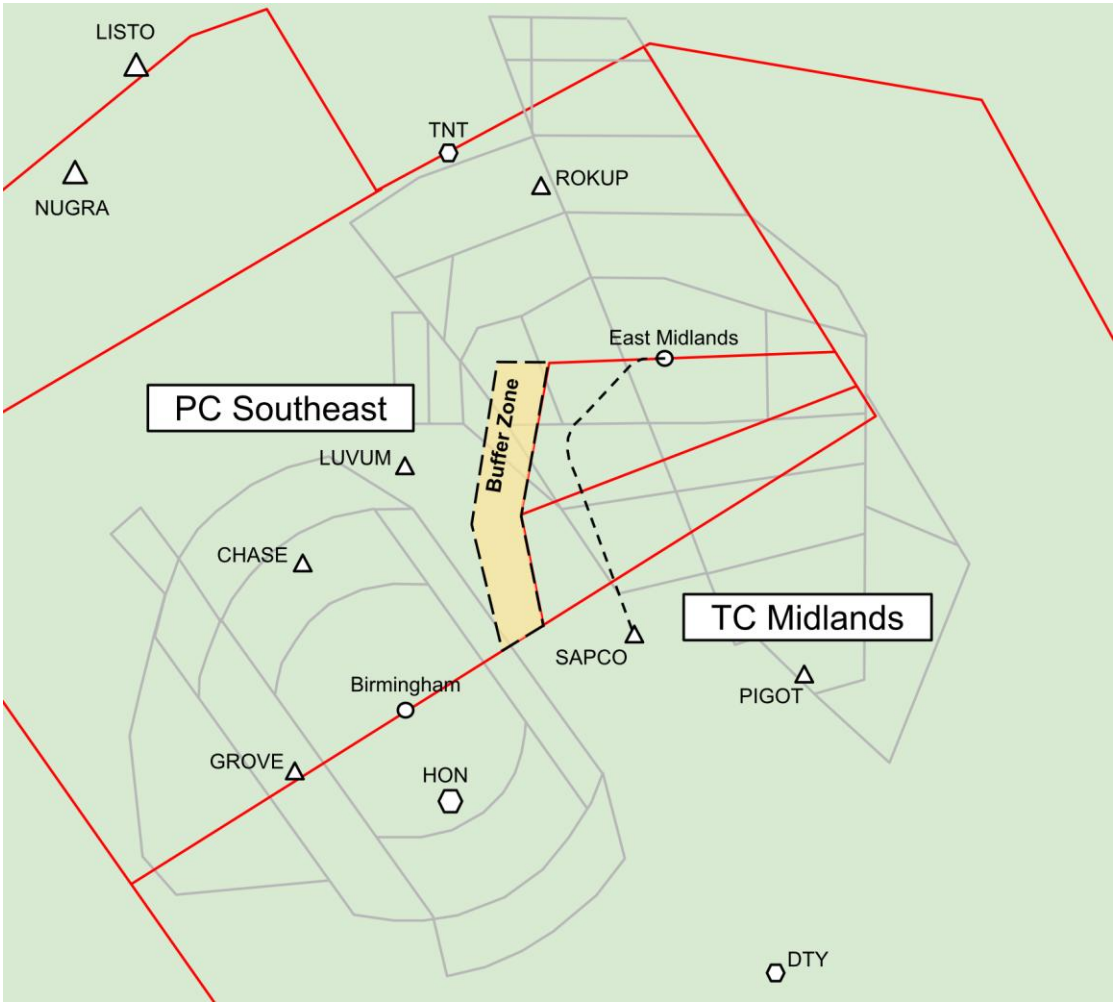


4.1.2 Midlands Buffer Zone

The 3 NM Midlands Buffer Zone (depicted in Figure 2) is established to ensure that radar separation is maintained between northbound Birmingham (departing Runway 15) and Coventry departures controlled by PC Southeast, and southbound departures from East Midlands under the control of TC Midlands.

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

Figure 2 – Midlands Buffer Zone



4.2 Intermediate Approach Procedures

Once inbound traffic enters the lateral limits of East Midlands Airspace, traffic shall not again be vectored outside those lateral limits without coordination. East Midlands Radar remains responsible for separation of inbound traffic against East Midlands SID traffic below MSL.

4.2.1 Silent Release Traffic

Traffic meeting the conditions of a silent release have specified release points.

4.2.1.1 Silent Release Procedure via ROKUP

- Inbounds via ROKUP are released for descent to MSL, then further when east of the eastern edge of Daventry CTA-3.
- Inbounds via ROKUP are released for right hand turns only until within the confines of the East Midlands CTA.
- Inbounds via ROKUP on Runway 09 must not be vectored back west into East Midlands CTA-6 until they are at altitude 5000 ft or below.

4.2.1.2 Silent Release Procedure via PIGOT

- Inbounds via PIGOT are released for descent to FL80, then further within the confines of the East Midlands CTA.
- Inbounds via PIGOT must not be vectored west of the 360 degree track off VELAG until within the confines of the East Midlands CTA and at or below FL100.
- Inbounds via PIGOT when Runway 09 is in use must not be vectored west of the eastern edge of Daventry CTA-3 until they are at or below FL70. On Runway 27, aircraft shall not be vectored west of the eastern edge of Daventry CTA-3 unless at or below 5000 ft.

4.2.2 Continuous Descent Approaches

The aim of a continuous descent approach is to enable aircraft to make a continuous descent with the minimum use of flaps or other high-lift, high-drag devices. The use of a continuous descent, where level-offs do not occur reduces fuel consumption and noise levels.

East Midlands Radar will aim to provide continuous descent approaches from 6000 ft to 1000 ft with only one period of level flight of not more than 2.5 NM. To achieve a CDA, aircraft will ideally be given a minimum of two range from touchdown checks during descent.

4.2.3 Range from Touchdown

The range from touchdown information should be passed:

- When issuing the first clearance to descend to an altitude;
- Upon first contact with RAD 2;
- If it is judged to help the pilot with their descent planning;
- When a previous estimate becomes invalid or inaccurate.

4.2.4 Speed Control

Speed control may be applied on a tactical basis to the extent determined by the radar controller. For aircraft which are unable to maintain 160 knots, RAD 2 will ascertain the final approach speed and inform East Midlands AIR.

4.2.5 Avoidance of Noise Sensitive Areas

There are no areas defined as noise sensitive for the intermediate approach phase.

4.3 Final Approach Procedures

4.3.1 Responsibility

RAD 2 is responsible for the **separation** of inbound aircraft until touchdown as described in APC 4.3.6.

Controllers will typically apply increased spacing to facilitate departures as described in APC 4.3.7. It is the responsibility of AIR to monitor runway arrival spacing and to notify any required increases in arrival spacing to RAD 2.

RAD 2 shall typically retain inbound aircraft on frequency until they are either established on the final approach track or able to continue visually.

4.3.2 Descent Restrictions

Traffic shall not be issued descent below 2000 ft unless established on, or establishing the final approach track, within the FAVA.

4.3.3 Vectoring Restrictions

A 3 NM wide buffer zone is established to the west of the East Midlands RMA in order to ensure that separation is maintained between northbound Birmingham and Coventry departures and southbound departures from East Midlands. Traffic shall not be vectored into this buffer zone above 5,000 feet on the East Midlands QNH without prior coordination.

4.3.4 Coordination with AIR

RAD 2 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.

4.3.5 Non-Precision Approaches

East Midlands provides NDB DME approaches for both Runway 09 and Runway 27. Aircraft wishing to commence a full procedure should be held at the EME or EMW according at or above 4000 ft East Midlands QNH.

In order to maintain separation, aircraft should not be permitted to commence the procedure whilst aircraft are established on the final approach track for an ILS approach.

Traffic shall not be cleared below 2500 ft until within the East Midlands SMAA or on an establishing heading of no greater than 40 degrees.

4.3.6 Final Approach Separation

RAD 2 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' (sometimes referred to as 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:*** *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.

4.3.7 Final Approach Spacing

RAD 2 is responsible for ensuring the agreed final approach **spacing** is maintained until the lead aircraft reaches 4 NM from touchdown.

The minimum spacing approved on final approach is 4 NM, however typically RAD 2 shall not reduce spacing to below 6 NM without coordination with AIR to permit departures.

4.4 Missed Approach Procedures

The Standard Missed Approach procedures are published in the UK AIP and detailed below.

Runway	Missed Approach Procedure
ILS 09 LOC 09	Climb straight ahead to 3000 ft or D4.6 IEMW, whichever is earlier, then turn left to EMW at 3000 ft, or as directed.
NDB DME 09	Climb straight ahead to 3000 ft or D3.2 I-EMW, whichever is earlier, then turn left to EMW at 3000 ft, or as directed.
ILS 27 LOC 27	Climb straight ahead to 3000 feet or D8.8 I-EME, whichever is earlier, then turn right to EME at 3000 ft, or as directed.
NDB DME 27	Climb straight ahead to 3000 feet or D8.8 I-EME, whichever is earlier, then turn right to EME at 3000 ft, or as directed.

4.4.1 ATC Actions

- AIR will alert RAD 1 of the missed approach.
- AIR will hold departures and if there are other inbound aircraft on an instrument approach, shall instruct the aircraft to “climb straight ahead to altitude 3000 ft” APC may relay a heading and level to give to the AIR controller and a frequency for the aircraft to contact.

Chapter 5 Outbound Procedures

5.1 General

East Midlands Radar is responsible for handling all non-standard IFR departures, as well as all standard instrument departures departing Runway 09.

The separation between departing aircraft before transfer to a radar controller is the responsibility of East Midlands AIR and is normally achieved by the application of timed intervals between successive departures (see ADC 2.8).

5.1.1 Identification of Departing Traffic and SSR Validation/Verification

East Midlands Radar is responsible for identification and SSR validation and verification of any outbound traffic worked before transfer to LTC or MPC.

5.1.2 Departure Speed Limits

To improve departure flow and assist LTC/MPC controllers to maintain separation between aircraft, a speed limit of 250 KIAS applies to all outbound aircraft below FL100. East Midlands Radar must not remove the 250 KIAS below FL100 speed restriction.

5.2 Responsibility for SID departures

RAD 1 is responsible for the separation of IFR traffic departing Runway 09 against inbounds released by MPC or LTC. This is primarily achieved through the departure release required from RAD 1 for all IFR departures from Runway 09, whereby RAD 1 will not release traffic until safe to do so. Most traffic should therefore be suitable for transfer to MPC/LTC immediately after departure from East Midlands. Upon transfer to the appropriate Area Control sector, the Area controller may climb traffic and vector the traffic off the SID track so long as it proceeds in the same general direction.

5.2.1 SIDs from Runway 27

All Standard Instrument Departures from Runway 27 will be handed to PC Southeast (northbound) or TC Midlands (southbound), unless ADC is informed otherwise by East Midlands Radar.

When East Midlands Radar is vectoring inbounds in a non-standard manner (for example, over the top) and/or likely to vector close to the SID track, a departure check must be coordinated with AIR and any releases issued with a level which maintains vertical separation against the conflicting inbound aircraft.

East Midlands Radar should then request a coordinated climb from the appropriate sector, in order to climb the departure above the arrival before handing the departure to the appropriate Area Control sector clear of conflictions.

5.2.2 SIDs from Runway 09

East Midlands Radar may instruct East Midlands AIR to handoff northbound SIDs (TNT/POL) directly to PC Southeast Sector after departure. Otherwise, the traffic will be transferred to East Midlands Radar as soon as any local conflictions are resolved.

Due to the interaction with arrival aircraft, East Midlands Radar may impose a climb restriction during the release – a suggested restriction is to altitude 4000 feet against downwind arrivals at around 5000 feet.

East Midlands Radar may instruct East Midlands AIR to handoff southbound SIDs (via SAPCO) directly to London TC Midlands after departure. Otherwise, the traffic will be transferred to East Midlands Radar as soon as any local conflictions are resolved.

Due to the interaction with arrival traffic, East Midlands Radar may impose a climb restriction during the release – the restriction may vary from 4000 feet to 6000 feet.

Unless able to climb to normal SID levels and transfer clear of conflict from arrivals, East Midlands Radar should then request a coordinated climb from the appropriate Area Control sector, in order to climb the departure above the arrival before handing the departure to the appropriate sector clear of conflictions.

5.2.2.1 Vectoring of Departures

East Midlands APC are permitted to vector departures from Runway 09 when required in order to separate against inbounds, provided the following noise abatement conditions are met:

- Aircraft are not vectored off TNT / POL SIDs until at or above 5000 feet.
- Aircraft are not vectored off SAPCO SIDs until at or above 6000 feet.

However, if required, for operational reasons (for example, weather avoidance), aircraft may be vectored off any SID at or above 3000 ft.

Departures must remain within the lateral constraints of East Midlands controlled airspace.

Any aircraft that are vectored off the SID track should have resumed their own navigation before transfer to the next controller unless a heading is coordinated with the next departure sector.

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

5.2.2.2 Climb above SID Levels

East Midlands APC is not to climb outbound aircraft above the SID altitude / level without prior coordination with the appropriate departure sector. However, coordinating higher climb with the appropriate sector is strongly advised in order to resolve conflicts with inbound vectored traffic.

5.2.2.3 Transfer of Departures

All aircraft on SIDs should be transferred to TC Midlands or PC Southeast clean of any inbounds or other conflicting traffic.

5.3 Departures Subject to Radar Approval

5.3.1 Standard Instrument Departures

All Standard Instrument Departures from Runway 09 are subject to release from RAD 1. These releases are requested during the taxi phase and are valid up to 5 minutes after the expected airborne time.

A release from RAD 1 for this traffic does not permit AIR to depart traffic faster than allowed in departure separation rules.

5.3.2 Other Release Requirements

The East Midlands AIR controller must obtain departure release from East Midlands APC before clearing aircraft in any of the following categories for take-off:

- All SID departures from Runway 09.
- All non-standard IFR and SVFR departures.
- Departures from the non-departure runway (prior coordination required) and any subsequent departure.
- The first departure following a runway change.

- The first departure following a missed approach.
- VFR departures except those via published entry/exit lanes or that remain within the Aerodrome Area of Responsibility.
- Aircraft not on the speed table, plus the subsequent departure – this information shall be specifically coordinated in the release request.
- Where the following aircraft is 3 groups faster than the leading aircraft – this information shall be specifically coordinated in the release request.
- When a 'check' is enforced by East Midlands Radar.

East Midlands AIR will normally clear all other departures for take-off without prior reference to East Midlands Radar. Such departures will be transferred direct to the appropriate AC/TC sector, unless otherwise instructed by East Midland Radar.

The AIR controller will inform East Midlands Radar if an aircraft is observed to deviate from the SID to the extent that departure separation may be eroded.

5.4 Non-Standard IFR Departures

East Midlands Radar is responsible for providing a radar service to non-ATS route network departures until they are clear of controlled airspace and no longer wish to receive a service.

East Midlands Radar is responsible for the issuing of departure clearances for all IFR departures which are not filed to fly a SID. The clearances given must consider noise preferential routes and terrain clearance where applicable.

GMC will request clearance from East Midlands Radar for any non-standard IFR departure. It is GMC's responsibility to pass the instructions to the pilot and obtain a suitable readback. The AIR controller will request release from East Midlands Radar when the departure is ready to depart and will also request release for any subsequent SID departure.

Chapter 6 Flights to and from Birmingham (EGBB)

6.1 Flights to Birmingham

Flight Plan Routing: SAPCO Y53 DTY L10 HON

Flights filed above 4500 ft (routing inside the Daventry CTA) will be pre-noted by East Midlands GMC to Birmingham APC when the aircraft is taxiing.

Initial climb will be to **5000 ft**.

AIR will request a release from RAD 1 who shall obtain a release from TC Midlands and coordinate as to presentation of the traffic. Typically, TC Midlands will allow the traffic to transit the Daventry CTA at 5000 ft with a direct radar handover between East Midlands Radar and Birmingham APC. If TC Midlands approves this then East Midlands RAD 1 shall coordinate a radar handover with Birmingham APC once the traffic is airborne. Traffic must not be turned off SID until coordination has been effected with Birmingham APC.

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

Once a release has been obtained, RAD will pass the details and any relevant departure instructions to AIR and impose a 'check all' behind the departure.

6.2 Flights from Birmingham

Flights from Birmingham 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

Traffic from Birmingham operating above 4500 ft is handled in a similar manner to East Midlands-Birmingham flights with Birmingham GMC pre-noting East Midlands APC when the traffic is taxiing.

Initial climb will be to **5000 ft**.

When accepting an inbound at 5000 ft from Birmingham, East Midlands RAD 1 must implement an appropriate check for East Midlands outbounds.

LOW | LOW-LEVEL OPERATIONS

Chapter 1 General Principals

1.1 Provision of Air Traffic Services

RAD 1 is responsible for all VFR and SVFR aircraft operating within the East Midlands CTR/CTA, unless the aircraft is operating within the ADC area of delegated responsibility.

RAD 1 may, subject to workload, offer UK FIS to aircraft operating outside controlled airspace within 30 NM of East Midlands.

ADC is delegated responsibility for VFR aircraft operating within their delegated area of responsibility, outlined in ADC 2.1.

1.2 Coordination

1.2.1 Departure Coordination

GMC will issue VFR and SVFR traffic with standard exit clearances without coordination with East Midlands Radar. Clearances will be issued to 'not above' altitude 2000 ft, East Midlands QNH. Both VFR and SVFR departures issued clearances without coordination with RAD 1 will be issued the East Midlands conspicuity squawk 4571.

Permitted departure routes for GMC to issue to VFR/SVFR traffic are listed in ADC 1.9.2.

Where an alternative route is required/requested, this will be coordinated in advance of clearance with RAD 1.

AIR will issue a departure warning to RAD 1 prior to issuing take-off clearance for VFR traffic on standard routes but is not required to wait for a response. SVFR traffic and traffic on a non-standard departure route require a release before departure.

1.2.2 Arrival Coordination

RAD 1 will coordinate with AIR to request a clearance for VFR/SVFR traffic wishing to join at East Midlands. AIR should approve the request if practicable, after which RAD will issue a standard clearance to join via an appropriate route, not above altitude 2,000 feet on the East Midlands QNH. RAD 1 should transfer the aircraft to AIR at or before the zone boundary.

1.3 SSR Code Allocations

1.3.1 East Midlands

When identifying an aircraft for the purpose of providing a radar service or for the benefit of adjacent units, aircraft shall be given a local squawk code between the ranges of 4550-4567. Squawk 4571 is the conspicuity code assigned to East Midlands; this squawk shall be treated as unvalidated and unverified.

Squawk 4573 (conspicuity) is assigned to Costock Helicopters (CTK) operating inside the East Midlands CTR.

Squawk 4570 is assigned to RYR100T when operating in the circuit.

Frequency Monitoring Code ('Listening Squawk')

Aircraft operating outside controlled airspace around East Midlands may select the code 4572. This indicates that the aircraft is maintaining a listening watch on the RAD 1 frequency, however the Mode A and C readout displayed must be treated as unvalidated and unverified, respectively.

1.3.2 Birmingham

Aircraft operating in the vicinity of Birmingham being worked by Birmingham Radar may display a Birmingham local squawk code between the ranges of 0401-0420. Squawk 0010 is the frequency monitoring code for Birmingham and aircraft displaying this code will be maintaining a listening watch on the Birmingham Radar frequency.

Chapter 2 Airspace

The East Midlands CTR/CTAs are classified as Class D. Aircraft are permitted to operate in the CTR and CTA in VMC and IMC conditions under either VFR or SVFR/IFR as appropriate.

2.1 Aerodromes in the Vicinity

Tatenhill (EGBM) is a small airfield located 16 NM west of East Midlands. It houses two tarmac runways, alongside the Midlands Air Ambulance base.

RAF Syerston (EGXY) is a small RAF airfield located 18.8 NM to the north-east of East Midlands, featuring a single tarmac runway. RAF Syerston is home to 2 Flying Training School which encompasses the RAF Central Gliding School. Fast Jet traffic may occasionally visit RAF Syerston.

Nottingham (EGBN) is a small airfield located 10.4 NM north-east of East Midlands. Nottingham houses a helicopter maintenance facility alongside various flying schools and 2425 Squadron of the RAF Air Cadets.

Leicester (EGBG) is a small airfield located 17.3 NM south-south-east of East Midlands. Leicester is home to one of the largest PPL(H) and CPL(H) flying schools in the UK, with training aircraft ranging from the Cabri G2 to AW109.

Derby (EGBD) is a grass airfield of three runways located 10.6 NM to the west-north-west of East Midlands. Derby houses a significant flying school which includes the provision of aerobatic training.

2.2 Visual Reference Points

VRP	Position Relative to East Midlands
Bottesford	NE
Church Broughton	WWN
M1 J22	S
M42 J11	SW
Melton Mowbray	EES
Trowell (M1 Service Area)	N

Chapter 3 Helicopter Operations

All helicopter traffic shall utilise a suitable runway as the aiming point for arrivals. Traffic shall be coordinated and transferred in the same manner as fixed wing traffic.

There are no helicopter-specific routes within the East Midlands CTR. Airborne helicopter traffic is handled similarly to fixed wing VFR/SVFR traffic.

Chapter 4 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.

East Midlands is a designated Lower Airspace Radar Service (LARS) provider and accordingly, RAD 1 may provide UK FIS to traffic flying outside controlled airspace, normally only to traffic flying under the LTMA/MTMA.

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 beyond 30 NM of East Midlands must not be given.

GLOSSARY

Abbreviation	Section
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
FIS	Flight Information Service
FL	Flight Level
Ft	Foot (feet)
GMC	Ground Movement Control
GMC	Ground Movement Planner
GS	Groundspeed
hPa	Hectopascal
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organisation
ILS	Instrument Landing System
KIAS	Knots Indicated Airspeed
MDI	Minimum Departure Interval
MHz	Megahertz
MPC	Manchester Prestwick Control
MSL	Minimum Stack Level
MTMA	Manchester TMA
NM	Nautical Mile
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
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.