

MANCHESTER VMATS PART 2
EGCC

REVISION 2026/05 - EFFECTIVE 25 MAY 2026

DISTRIBUTION AND SCOPE

This manual is for controllers of Manchester 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

| Revision | Effective Date | Notes |
|----------|-------------------|--|
| 2026/05 | 25 May 2026 | Updated Winter dual runway operation times (GEN 5.2.1); Updated level capping table (ADC 1.5); Improved NWTC text (LOW 2.3); Removed references to Coventry (EGBE) prior to closure in June 2026 (throughout); Various editorial improvements and clarifications |
| 2025/02 | 20 February 2025 | Changed Use of Runways section to clarify correct configurations (GEN 5.2); Manchester Low Level Route changed to the Northwest Transit Corridor (LOW 2.3); Changes to ownership of the Manchester CTA between Liverpool and Manchester (APC 1.2); Liverpool RMA Areas E and F changed (APC 4.1) |
| 2024/05 | 16 May 2024 | Flight level caps via LAMSO increased to 350 (ADC 1.5); Removed occurrences of MONTY SID; Revised dual runway procedures (GEN 5.2) |
| 2024/01 | 25 January 2024 | Updated all 25MHz spacing frequencies to 8.33MHz. |
| 2023/09 | 07 September 2023 | Removed EGTT level cap to EH** via KOK as deemed not relevant (ADC 1.5); Update the southern runway availability periods (GEN 5.2) |
| 2023/03 | 23 March 2023 | AXCIS 1M STAR replaces OKTEM1M (APC 3.2); Visual reference points updated with AIRAC (LOW 2.5); Stretton Aerodrome now termed Stretton Disused Aerodrome VRP (LOW 2.2.2). |
| 2023/01 | 26 January 2023 | Corrected chapter numbering in LOW section; Corrected CAT III holding point to F1 for crossing. |
| 2022/13 | 29 December 2022 | New release version – replacing entire previous versions. |
| Rev 3 | 19 February 2016 | - |
| Rev 2 | 15 February 2016 | - |

INTRODUCTION AND STRUCTURE

The Manchester 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 Manchester 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 Procedures (VFR & SVFR 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.

LIST OF FIGURES

| | |
|---|----|
| Figure 1 – Responsibility of Manchester CTA | 38 |
| Figure 2 – Manchester RMA Runways 23L/R | 47 |
| Figure 3 – Manchester RMA Runways 05L/R (with Liverpool delegated airspace overlaid)..... | 48 |
| Figure 4 – Liverpool RMA | 48 |
| Figure 5 – Leeds Bradford Airspace | 51 |

CONTENTS

| | |
|--|----------|
| Distribution and Scope | 2 |
| Exclusion of Liability..... | 2 |
| Acknowledgements..... | 2 |
| Definitions | 2 |
| Marked Changes | 3 |
| Amendment History..... | 3 |
| Introduction and Structure..... | 4 |
| Time References | 4 |
| List of Figures..... | 4 |
| Contents..... | 5 |
| GEN Unit General Operating Procedures | 9 |
| Chapter 1 Altimeter Setting Procedures | 9 |
| 1.1 Departing Aircraft..... | 9 |
| 1.2 Arriving / Transiting Aircraft..... | 9 |
| 1.3 QFE Threshold..... | 9 |
| 1.4 Transition Altitude..... | 9 |
| 1.5 Transition Level and Minimum Stack Level | 9 |
| 1.6 Altimeter Setting Region (ASR)..... | 10 |
| Chapter 2 Noise Abatement Procedures..... | 10 |
| 2.1 Departures..... | 10 |
| 2.2 Arrivals..... | 10 |
| Chapter 3 All Weather Operations..... | 10 |
| 3.1 Aerodrome Equipment..... | 10 |
| 3.2 Low Visibility Procedures (LVP) | 11 |
| 3.3 Windshear Warnings | 12 |
| 3.4 Meteorological Information | 12 |
| Chapter 4 Description of Airfield..... | 13 |
| 4.1 Airfield Geographical Data..... | 13 |
| 4.2 ATC Communication Facilities | 13 |
| 4.3 Radio Navigation and Landing Aids | 13 |
| Chapter 5 Use of Runways | 14 |
| 5.1 Preferential Runway | 14 |
| 5.2 Runway Configuration | 14 |
| 5.3 Runway Change Procedures..... | 16 |

| | | |
|--------------------------------------|---|-----------|
| 5.4 | Opposite Direction Departures/Approaches..... | 16 |
| 5.5 | Runway Vacation Guidelines | 16 |
| 5.6 | Land After Procedures | 17 |
| ADC Aerodrome Control | | 18 |
| Chapter 1 | Ground Movement Planner (GMP) | 18 |
| 1.1 | Area of Responsibility | 18 |
| 1.2 | Issuing Clearances | 18 |
| 1.3 | Standard Instrument Departures | 19 |
| 1.4 | Non-Standard Departures | 19 |
| 1.5 | Flight Level Capping..... | 20 |
| 1.6 | Pre-Departure Clearance (PDC)..... | 21 |
| 1.7 | Flights to Local Airfields..... | 22 |
| 1.8 | Flow Restrictions | 23 |
| 1.9 | VFR and SVFR Clearances | 24 |
| 1.10 | Transfer to GMC | 24 |
| 1.11 | Stand Allocation..... | 24 |
| Chapter 2 | Ground Movement Control (GMC)..... | 25 |
| 2.1 | Area of Responsibility | 25 |
| 2.2 | Pushback Clearance..... | 25 |
| 2.3 | Runway Crossings..... | 25 |
| 2.4 | Taxiway Restrictions | 25 |
| 2.5 | Non-Direct Taxi Instructions to Stand | 26 |
| 2.6 | Preferred Taxi Routings | 26 |
| 2.7 | Departure Handoff | 26 |
| 2.8 | VFR and SVFR Traffic..... | 26 |
| 2.9 | Helicopter Traffic | 26 |
| Chapter 3 | Air Control (AIR)..... | 27 |
| 3.1 | Area of Responsibility | 27 |
| 3.2 | Line Up Procedures..... | 28 |
| 3.3 | Conditional Clearances | 28 |
| 3.4 | Runway Clearances..... | 29 |
| 3.5 | Flights to Local Airfields..... | 29 |
| 3.6 | Wake Separation | 30 |
| 3.7 | Speed Limitation on Departure | 30 |
| 3.8 | Departure Separation | 30 |
| 3.9 | Departures Subject to Radar Approval..... | 32 |

| | | |
|-------------------------------------|--|-----------|
| 3.10 | Transfer of Control and Communication..... | 33 |
| 3.11 | Landing Clearance | 34 |
| 3.12 | Arrival Spacing | 34 |
| 3.13 | Minimum Radar Separation | 34 |
| 3.14 | Missed Approaches | 34 |
| 3.15 | Go Around Procedure..... | 34 |
| 3.16 | VFR/SVFR Procedures..... | 35 |
| 3.17 | Helicopter Procedures..... | 36 |
| 3.18 | Use of the Aerodrome Traffic Monitor..... | 36 |
| 3.19 | Southern Taxiways..... | 37 |
| APC Approach Control | | 38 |
| Chapter 1 | Area of Responsibility and Sector Organisation | 38 |
| 1.1 | General | 38 |
| 1.2 | Area of Responsibility | 38 |
| 1.3 | Function..... | 39 |
| 1.4 | Manchester Approach Bandbox/Splitting Procedures..... | 40 |
| Chapter 2 | Radar Director/Controller General Operational Procedures | 40 |
| 2.1 | General Procedures | 40 |
| 2.2 | Inbound Releases..... | 40 |
| 2.3 | Transfer of Data and Control between APC Controllers | 41 |
| 2.4 | Identification and SSR Validation and Verification Procedures..... | 42 |
| 2.5 | Separation Requirements for Manchester Approach | 42 |
| 2.6 | Terrain and Obstacle Clearance..... | 42 |
| 2.7 | Change to MSL Procedure | 43 |
| Chapter 3 | Inbound Procedures | 44 |
| 3.1 | Information to Arriving Aircraft..... | 44 |
| 3.2 | Standard Arrival Routes (STARs)..... | 44 |
| 3.3 | Holding Procedures | 45 |
| 3.4 | Inbound Releases..... | 45 |
| 3.5 | Transfer of Communication Procedures | 46 |
| 3.6 | Expected Approach Times (EATs) | 46 |
| Chapter 4 | Procedures for Intermediate and Final Approach..... | 47 |
| 4.1 | Radar Manoeuvring Area (RMA) | 47 |
| 4.2 | Intermediate Approach Procedures | 50 |
| 4.3 | Final Approach Procedures..... | 53 |
| 4.4 | Missed Approach Procedures..... | 54 |

| | | |
|---|---|-----------|
| Chapter 5 | Outbound Procedures | 55 |
| 5.1 | General | 55 |
| 5.2 | Responsibility for SID departures | 55 |
| 5.3 | MPC Departure Sectors – Vectoring Outbounds Subject Inbound Traffic | 55 |
| 5.4 | Departures Subject to Radar Approval | 56 |
| 5.5 | Non-Standard IFR Departures | 57 |
| Chapter 6 | Flights to and from Local Airfields | 58 |
| 6.1 | Flights to MTMA Airfields | 58 |
| 6.2 | Flights to Liverpool | 58 |
| 6.3 | Flights from Liverpool | 58 |
| 6.4 | Flights from other MTMA Airfields..... | 58 |
| LOW Low Level Operations | | 59 |
| Chapter 1 | General Principles..... | 59 |
| 1.1 | Provision of Air Traffic Services | 59 |
| 1.2 | Coordination..... | 59 |
| 1.3 | SSR Code Allocations | 59 |
| Chapter 2 | Airspace | 59 |
| 2.1 | Classification | 59 |
| 2.2 | Standard Visual Routes..... | 60 |
| 2.3 | Northwest Transit Corridor | 60 |
| 2.4 | Aerodromes in the Vicinity..... | 61 |
| 2.5 | Visual Reference Points (VRPs)..... | 61 |
| Chapter 3 | Helicopter Operations | 62 |
| 3.1 | Helicopter Routes | 62 |
| 3.2 | Helicopter Departures and Arrivals | 62 |
| Chapter 4 | UK Flight Information Services (UK FIS)..... | 62 |
| Glossary..... | | 63 |

GEN | UNIT GENERAL OPERATING PROCEDURES

Chapter 1 Altimeter Setting Procedures

1.1 Departing Aircraft

Departing aircraft should state the QNH on first contact with GMP, otherwise it should be issued by the GMP controller. The QFE will be used for any traffic in the visual circuit, unless requested otherwise. Aircraft should be informed of any subsequent change to the QNH/QFE at the earliest opportunity.

1.2 Arriving / Transiting Aircraft

At or below the Transition Altitude, an aircraft's vertical position will be controlled by reference to the Manchester QNH. The QFE may be requested by aircraft on final approach. Aircraft will be issued the QNH once cleared to descend to an altitude, with any non-precision approach clearance, and to any aircraft operating within or underneath Manchester controlled airspace. Aircraft should be informed of any subsequent change to the QNH at the earliest opportunity.

1.3 QFE Threshold

The QFE for all runway thresholds is 9 hPa less than the QNH.

1.4 Transition Altitude

The Transition Altitude (in the Manchester TMA) is 5000 ft AMSL.

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

1.5 Transition Level and Minimum Stack Level

The Transition Level (TL) and Minimum Stack Level (MSL) for the Manchester TMA are determined by reference to the following table:

| Manchester QNH (hPa) | Transition Level (TL) | Minimum Stack Level (MSL) |
|----------------------|-----------------------|---------------------------|
| 1050 - 1060 | FL50 | FL60 |
| 1032 - 1049 | FL55 | FL60 |
| 1013 - 1031 | FL60 | FL60 |
| 995 - 1012 | FL65 | FL70 |
| 977 - 994 | FL70 | FL70 |
| 959 - 976 | FL75 | FL80 |
| 940 - 958 | FL80 | FL80 |

***Note:** QNH 1013 hPa is considered **high** pressure within the Manchester TMA.*

1.6 Altimeter Setting Region (ASR)

Aircraft operating beneath the Manchester TMA shall be issued the Manchester QNH. Outside of this area traffic may be issued the appropriate Regional Pressure Setting (RPS) – this is the Barnsley RPS to the east of the TMA and the Holyhead RPS to the west of the TMA.

Chapter 2 Noise Abatement Procedures

2.1 Departures

Noise abatement procedures for aircraft departing Manchester and joining the ATS route network are included in the appropriate Standard Instrument Departures (SID). Non-standard clearances for traffic with a MTOW of 5700kg or greater shall follow one of the noise preferential routings (NPR) defined in EGCC AD 2.21 of the AIP.

All departures must achieve 500 ft AAL (757 ft AMSL) before any turn from runway track.

Early turns on track prior to the NPR termination altitude may be issued for traffic with a MTOW of 23,000 kg or less (examples include ATR series, BAe 146/Avro RJ series, CRJ series, EMB-135/145 and most corporate aircraft). Other than this, Manchester Approach and Manchester Prestwick Control (MPC) shall not vector aircraft off the NPR prior to the NPR termination altitude except for reasons of safety.

| Via | Runway | NPR Terminates At |
|---------------|--------|-------------------|
| LISTO / SANBA | All | 5000 ft |
| ASMIM | 05L/R | 4000 ft |
| EKLAD / KUXEM | 23L/R | 3000 ft |
| POL | All | 4000 ft |
| SONEX | 23L/R | 4000 ft |
| DESIG | 05L/R | 4000 ft |

2.2 Arrivals

Jet aircraft shall not be issued descent below 2000 ft prior to joining the final approach track, for any runway, in order to establish the final approach track above 1500 ft AAL. Traffic of MTOW greater than 5700kg shall not join the final approach track closer than 3 NM or less than 1000 ft AAL (1257ft AMSL).

Chapter 3 All Weather Operations

3.1 Aerodrome Equipment

Runway 05L/23R is equipped for Category II/III ILS operations. Runway 05R is equipped only for Category I operations. Runway 23L is served by non-precision approaches only.

The terrain profile for Runway 05L is such that a category II approach is only safe when the ILS status is Category III **and** only permitted for aircraft in ICAO approach speed categories A and B (V_{AT} no greater than 120 knots).

3.2 Low Visibility Procedures (LVP)

3.2.1 Enforcement

Two sets of Low Visibility Procedures (LVP) are used at Manchester. “LVP Visibility” shall be initiated when the IRVR is less than 600 m, regardless of the cloud ceiling. “LVP Cloud” shall be initiated when IRVR remains above 600 m, but the cloud ceiling is 200 ft or less.

The AIR 1 controller shall immediately notify FIN when LVP are to be initiated, coordinate a runway change where needed and ensure that the ATIS is updated.

Where aircraft are on approach and the CAT I holding points are in use by other aircraft, AIR shall inform arriving aircraft of the IRVR and that LVP are not yet in force and ask whether they wish to continue approach.

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.

3.2.2 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.

3.2.3 Procedures – LVP Visibility

These procedures are enacted when the IRVR less than 600 m. The airport must revert to single runway operations in this LVP state. Traffic that has **already crossed** Runway 23R/05L when LVP Visibility is declared may depart from Runway 23L.

3.2.3.1 Taxiways & Category II/III Holding Points

Departing aircraft will be required to use the following holding points during LVP Visibility:

- Runway 05L: A1, AG1, AF1
- Runway 23R: J1, M1

Taxiway lighting requirements in real world require aircraft to vacate via the following taxiways. This may be suggested to pilots as a vacate instruction, but is not enforced:

- Runway 05L: M, J, H
- Runway 23R: BD, AE, AG, A

The following taxiways are **not** to be used during LVP:

- Q
- NB

3.2.4 Procedures – LVP Cloud

These procedures are enacted when the cloud ceiling is 200 ft or less **but** the IRVR remains 600 m or greater.

Runway 23L may continue to be used for departures during this LVP state. However, when on easterlies, the airport must revert to single runway operations.

3.2.4.1 Taxiways & Category II/III Holding Points

Taxiway restrictions are as per LVP Visibility ([GEN 3.2.3](#)). When in dual runway operations, aircraft may utilise Runway 23L holding points per normal operations, however holding for Runway 23R (to cross) is only permitted at F1, H1 and P1.

3.2.5 Arrival Spacing

During both LVP states, absolute separation requirements are unchanged; however, aircraft should be sequenced to ensure a landing clearance by 2 NM from touchdown. Standard arrival spacing should therefore be increased to 10 NM from touchdown to allow a safe departure between each arrival. Where FIN and AIR have coordinated, individual spacing may be reduced to 6 NM. Arrivals shall be vectored to establish the ILS by 10 NM from touchdown.

3.3 Windshear Warnings

Once turbulence or windshear has been reported to Manchester 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. On VATSIM, this may be considered accurate if reported by two separate pilots.

3.4 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 121.980 MHz. Aircraft are expected to confirm the current ATIS information on first contact with a Manchester station. When LVP are in force then this should be included in the ATIS broadcast.

Chapter 4 Description of Airfield

4.1 Airfield Geographical Data

| | |
|---------------------------------|------------------|
| ICAO Code | EGCC |
| Aerodrome Reference Point (ARP) | 532114N 0021630W |
| Elevation | 257 ft |
| Transition Altitude | 5000 ft |

4.2 ATC Communication Facilities

Aerodrome Control (ADC)

| Callsign | Logon Callsign | Abbreviation | Frequency (MHz) |
|------------------------|----------------|----------------|-----------------|
| Manchester Information | EGCC_ATIS | ATIS | 121.980 |
| Manchester Delivery | EGCC_DEL | GMP | 121.705 |
| Manchester Ground | EGCC_GND | GMC | 121.855 |
| Manchester Tower | EGCC_N_TWR | AIR 1 | 118.630 |
| Manchester Tower | EGCC_S_TWR | AIR 2 | 119.405 |
| Manchester Planner | EGCC_P_GND | PLN (See Note) | 128.180 |

Note: Manchester Planner is opened only during events and requires a [Temporary Instruction](#) to be posted by the Operations Department.

Approach Control (APC)

| Callsign | Logon Callsign | Abbreviation | Frequency (MHz) |
|---------------------|----------------|--------------|-----------------|
| Manchester Radar | EGCC_S_APP | INT South | 118.580 |
| Manchester Radar | EGCC_N_APP | INT North | 135.005 |
| Manchester Director | EGCC_F_APP | FIN | 121.355 |

Note: The combined APC units may be referred to in coordination as 'Manchester Approach'.

4.3 Radio Navigation and Landing Aids

| Type | Identifier | Frequency | Remarks |
|------|------------|------------|---------------|
| 05L | I-MM | 109.50 MHz | LOC/DME 3° GP |
| 05R | I-MC | 111.55 MHz | LOC/DME 3° GP |
| 23R | I-NN | 109.50 MHz | LOC/DME 3° GP |

Chapter 5 Use of Runways

5.1 Preferential Runway

Runways 23L and 23R are preferred when the tailwind component is 5 knots or less and the runway surface conditions are dry. Where possible, the wind at surface and 2000 ft should be considered when selecting the duty runway(s).

5.2 Runway Configuration

Manchester operates a single or dual runway configuration. AIR 1 is responsible for determining the duty runway(s). The following criteria are used to determine the active configuration.

5.2.1 Dual Runway Operations

A dual runway configuration is operated during:

- The published times for Manchester to be operating dual runways (see below)
- VATSIM UK events at Manchester Airport
- Periods of heavy traffic where single runway operations would result in undue delay – for example, during busier evenings, weekends.

During easterly dual runway operations, the following configuration is operated:

| Runway | Traffic | Controller |
|--------|------------|------------|
| 05L | Departures | AIR 1 |
| 05R | Arrivals | AIR 2 |

During westerly dual runway operations, the following configuration is operated:

| Runway | Traffic | Controller |
|--------|------------|------------|
| 23L | Departures | AIR 2 |
| 23R | Arrivals | AIR 1 |

Note: GMC does not have control over the movement areas between the two runways. As such, aircraft should be instructed to monitor UNICOM before crossing Runway 05L/23R when the AIR 1 function is not online.

Manchester operates dual runways during the following periods in the summer months (between 1st May and 31st October):

- Mon-Fri (0615-2000L)
- Sat (0615-1600L)
- Sun (0615-0930L) (1300-2000L)

And the following periods in the winter months (between 1st November and 30th April):

- Mon-Fri (0630-1100L) (1600-2000L)
- Sat (0630-1100L)
- Sun (1600-2000L)

In the real-world, the Runway 05R/23L is **not** available between the hours of 2200-0600L due to local planning constraints. Manchester controllers are advised **against** allowing dual runway operations in this period.

5.2.2 Single Runway Operations

A single runway configuration is operated when the conditions for dual runway operations are not met.

During single runway operations, the following configuration is normally in use:

| Runway | Traffic | Controller |
|---------|-----------------------|------------|
| 05L/23R | Arrivals & Departures | AIR 1 |

5.2.2.1 Night Closures of Runway 05L/23R

In real-world, Runway 05L/23R is closed according to a variable schedule to allow for maintenance of the runway and connected taxiways. VATSIM controllers may simulate this closure:

- During the published times for Manchester to be closing Runway 05L/23R (see [real-world schedule](#))

And provided that:

- None of the conditions for dual runway operations are met
- The expected traffic levels are low, with minimal (if any) airborne holding. (Minimal holding may be expected/permitted to allow backtracking of arriving/departing aircraft).

During closures of Runway 05L/23R, the following configuration is always in use:

| Runway | Traffic | Controller |
|---------|-----------------------|------------|
| 05R/23L | Arrivals & Departures | AIR 1 |

Note: During closures of Runway 05L/23R, AIR 2 may not be opened.

5.2.3 Exceptions to Standard Configurations

The following exceptions to the standard configurations are permitted:

- During mentoring sessions, a mentor may decide to operate a single or dual runway configuration at any time for training purposes
- An area (CTR) controller that is covering Manchester AIR function “top-down” may elect to operate in a single runway configuration within the published times for dual runway operations if the expected traffic levels are low.

In either case, should traffic begin to experience undue delay as a result of a non-standard configuration, controllers are to resume a normal runway configuration (seeking support to enable this if required).

5.3 Runway Change Procedures

In case of a change to runway direction, AIR 1 shall initiate coordination with INT South to suggest a last arrival and time for the runway change. INT South (AIR 1 if not INT South) will then coordinate with Liverpool Radar and MPC and then coordinate a last arrival time with AIR 1. Based on this time, AIR 1 should then coordinate with GMC/P as to the last departure. GMC/P will re-clear any previously cleared aircraft that will now depart on the new runway.

Manchester should note the impact upon Liverpool of a change in Manchester runway when Liverpool is utilising Runway 27.

AIR 1 must then inform INT South of the intended last three (if appropriate) departures before, and the first departure after, the runway change (callsign and routing). INT South will inform AIR of the first arrival after the runway change at this time.

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

5.3.1 Initiating/Closing Dual Runways

AIR 1 should coordinate with INT South if intending to open/close the second runway. Best practice would be to initiate discussion early and make a joint decision.

A departure release is required for the first departure from a new runway. Once the first departure is released from a new runway, no departures are permitted from the other runway without a release from INT South.

5.4 Opposite Direction Departures/Approaches

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

INT South and AIR 1 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, INT South will notify the relevant MPC sector 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, INT South is responsible for ensuring separation of this traffic with subsequent departures even if traffic is transferred to MPC.

Manchester Approach shall coordinate with AIR 1 when intending to land an aircraft on a runway other than the one in use. AIR 1 shall coordinate with AIR 2 if required.

5.5 Runway Vacation Guidelines

In the event an aircraft vacates, but cannot contact GMC due to RTF congestion, the pilot shall vacate the landing runway completely and taxi onto the first taxiway available. The pilot should then hold position until contact with GMC can be established.

Arriving traffic on Runway 05L/23R is not permitted to vacate onto Taxiways P or F.

Arriving traffic on Runway 05R is not permitted to vacate after VB and Taxiway S is not to be used. This is to protect the 05R localiser critical area.

5.6 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 this 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 23R, 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.

ADC | AERODROME CONTROL

Chapter 1 Ground Movement Planner (GMP)

1.1 Area of Responsibility

Ground Movement Planner (GMP) (“Manchester Delivery”) provides full departure clearance to aircraft departing Manchester 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, assigned squawk, and voice tag are shown. GMP transfers aircraft to GMC once ready for pushback/start-up and, on specified departure routes, coordinates with INT South or MPC. 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. Their stand number
2. Their aircraft type
3. The ATIS information letter they are in receipt of
4. The current Manchester QNH.

GMP 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, SANBA 1 Romeo 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, Manchester QNH 998 hectopascals”

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

Manchester SIDs are conventional navigation departures and all climb to an initial altitude of 5000 ft with no step climbs.

Runway 23L/R SIDs

| Route | 23L SID | 23R SID | Remarks |
|--------------|------------|------------|---|
| EKLAD | 1Y | 1R | SID for Runways 05L/R is ASMIM |
| KUXEM | 1Y | 1R | SID for Runways 05L/R is ASMIM |
| LISTO | 2Y | 2R | Restricted aircraft types (<i>Notes 1 and 2</i>) |
| POL | 1Y | 5R | |
| SANBA | 1Y | 1R | Jet aircraft only (<i>Note 2</i>) All types not permitted to fly must route via LISTO SID for Runways 05L/R is LISTO |
| SONEX | 1Y | 1R | SID for Runways 05L/R is DESIG |

Note 1: LISTO 2Y/R restricted to non-jet aircraft, jet aircraft up to MTOW 35,000kg, and BAe 146/Avro RJ series, E135/E145, CRJ1/2/7/9, Gulfstream 5 and BD-700 Global Express.

Note 2: Jet aircraft permitted to fly LISTO 2Y/R may be re-cleared via SANBA 1Y/R on a tactical basis by AIR 1/2 in order to minimise ATC delay. Non-jet aircraft must fly LISTO 2Y/R departure.

Runway 05L/R SIDs

| Route | 05L SID | 05R SID | Remarks |
|--------------|------------|------------|--|
| ASMIM | 1S | 1Z | SID for Runways 23L/R is EKLAD or KUXEM |
| DESIG | 1S | 1Z | SID for Runways 23L/R is SONEX |
| LISTO | 2S | 2Z | SID for Runways 23L/R is SANBA (jets only) or LISTO (restricted – see <i>Notes 1 and 2</i> above) |
| POL | 4S | 1Z | - |

Pilots unable to conform to 250 knots under FL100 on Standard Instrument Departures are required to inform GMP when requesting start-up clearance. The minimum and maximum speed acceptable should be confirmed. GMP shall then inform the relevant MPC sector controller who may specify a high-speed limitation and/or additional take-off separation as necessary, which GMP shall communicate to the departing AIR controller. AIR is to advise the pilot, before take-off, of any higher speed limitation imposed.

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 GMP with Manchester Approach prior to issuing clearance and the specifics of the after-departure instructions should be communicated by GMP to the AIR Departures controller.

All coordination with Manchester Approach will be initiated with INT South.

1.4.1 Aircraft Unable to Accept a SID

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

GMP shall coordinate the traffic, advising of aircraft type and requested routing, with INT South who may choose to pass after departure instructions to GMP at this point, or else wait until the holding point.

GMP will clear these aircraft to their destination via their first filed airway and with an initial climb of 5000 ft, or as coordinated. GMP must then coordinate the traffic with the AIR Departures 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 should be coordinated with INT South prior to clearance being issued. Clearance shall not typically be permitted above 3500 ft.

GMP shall coordinate the traffic, advising of aircraft type and requested routing, with INT South who may choose to pass after departure instructions to GMP at this point, or else wait until the holding point. INT South **will** issue a local squawk code to GMP.

GMP will clear these aircraft as coordinated. GMP must then coordinate the traffic with the AIR Departures 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 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 Groups | Includes (most popular destinations bold) |
|--------------------|--|
| Belfast Group | EGAA , EGAC, EGAD, EGAE, EGAL |
| Basel Group | LFGA, LFGB, LFSB , LFSM |
| Dublin Group | EIDW , EIDG, EIME, EIWT |
| Dusseldorf Group | EDDG, EDDK, EDDL , EDGS, EDKB, EDKL, EDLA, EDLE, EDLM, EDLN, EDLP, EDLV, EDLW, ETNG, ETNN |
| Paris Group | LFPB, LFPG , LFPN, LFPO, LFPT, LFPV |
| Scottish Group | EGPF , EGPG, EGPH , EGPK, EGPN, EGQL |

| Destination | Maximum FL |
|---|------------|
| EGBB/NX | 90 |
| London TMA (and airfields within), Solent Group | 190 |
| EGGD, EGFF, EGSY, EGTE | 230 |
| Belfast Group | 240 |
| Scottish Group | 240 |
| EHAM/BK/GG/HO/LW/TE via LAMSO | 350 |
| Brussels FIR (EB**) | 290 |
| Dublin Group | 280 |
| Basel Group | 330 |
| Dusseldorf Group via LAMSO | 350 |
| Dusseldorf Group via REDFA | 330 |
| LFSO | 350 |
| Paris Group, LFOB/OP/RG | 290 |

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.

Alternative methods of PDC may be used unless otherwise notified.

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 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.

1.7 Flights to Local Airfields

1.7.1 Delay Absorption

A request for delay (pre-note) should be sent to the receiving MPC departure sector when a clearance to any airport in the list below is issued and the MPC 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 also require a release by AIR before departure:

- MTMA: EGGP, EGNR, EGNM
- Midlands: EGNX, EGBB
- Other: EGNH, EGNO

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

In the event the relevant MPC 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 Flights to Liverpool (EGGP) or Hawarden (EGNR)

Flight Plan (Runways 05L/R): ASMIM DCT TIPOD DCT

Flight Plan (Runways 23L/R): EKLAD DCT TIPOD DCT

Coordination with: PC West

Aircraft are to be cleared on the EKLAD/ASMIM departure as appropriate.

Coordination is with PC West sector, who shall receive coordination according to the delay absorption procedure. If for any reason the pilot cannot climb to 5000 ft, this must be communicated as part of the delay absorption procedure.

In the absence of PC West, coordination should be with Liverpool Radar.

AIR shall obtain a release from PC West prior to departing the traffic.

1.7.2.1 Alternative (Westerly) Procedure to Liverpool (EGGP)

For flights to Liverpool only when Manchester is operating Runways 23L/R and Liverpool is landing Runway 27, traffic may receive more expeditious handling by additional coordination. In this situation, GMP shall first coordinate with INT South to ascertain if they

would be happy to work the traffic to Liverpool at 3000 ft. Where INT South agrees, GMP shall then:

1. Coordinate the delay absorption procedure as above with MPC, specifying traffic to be worked by INT South at 3000 ft,
2. Clear the aircraft via the EKLAD SID, specifying initial climb 3000 ft,
3. Inform the departure AIR controller that this traffic is expected by INT South,
4. Pre-note INT South when the aircraft is starting.

During the alternate (westerly) procedure AIR shall obtain a release from INT South.

1.7.3 Flights to Leeds Bradford (EGNM)

Flight Plan: POL DCT LBA

Coordination with: PC Northeast

Aircraft are to be cleared on the relevant POL departure, with the initial climb of 5000 ft being specified within the clearance if the RFL is less than 5000 ft.

Coordination is with PC Northeast sector, who shall receive coordination according to the delay absorption procedure. If for any reason the pilot cannot climb to 5000 ft, this must be communicated as part of the delay absorption procedure.

In the absence of PC Northeast, coordination should be with Leeds Radar.

AIR shall obtain a release from PC Northeast prior to departing the traffic.

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.

GMP 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.

1.8.2 Airfield Reasonable Departure Spacing (ARDS)

It is as much the responsibility of GMP and GMC 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 and GMC must consider how factors such as the meteorological conditions will affect AIR's ability to maintain a reasonable departure rate.

1.9 VFR and SVFR Clearances

Except for VFR circuits remaining within the ATZ, GMP shall coordinate all VFR or SVFR clearances with INT South, stating the aircraft type and requested routing. INT South will issue a published entry/exit route or an alternative route instructions, plus a local squawk code. GMP shall **not** issue local codes that have not been explicitly stated by Manchester Approach.

All clearances issued should be communicated to the departure AIR controller, along with any additional information passed by INT South.

The following published routes are available, allowing GMP to reduce the amount of information transferred over RTF.

1.9.1 Thelwall 2 Visual

Available only for Runways 05L/R at 1300 ft and below.

Route: Cross M56 Motorway. Route north of M56 to Thelwall Viaduct VRP, then via the Northwest Transit Corridor (aircraft are to avoid overflying the village of Lymm).

1.9.2 Macclesfield 1 Visual

Available only for Runways 23L/R at 2500 ft and below (traffic is to remain below 1500 ft until the northern edge of Macclesfield).

Route: Left turn towards Alderley Edge Hill VRP. Route west then south of Alderley Edge Hill and join the Macclesfield Entry/Exit Lane at Prestbury Station. Keep the railway line on the left and leave the CTR via Macclesfield South VRP.

1.9.3 Visual Circuits

Visual circuit traffic shall be approved by AIR 2 prior to transfer to GMC.

1.10 Transfer to GMC

GMP should use the following phraseology when transferring to GMC:
“(Callsign), hold position. Contact Manchester Ground 121.855”

GMP shall not issue start clearances on stand.

1.11 Stand Allocation

Stand allocation will normally be automated by UKCP.

In the event of a UKCP failure it is the responsibility of the GMP controller to assign stands to aircraft based off published allocation guidance. GMP should avoid amending the assigned stand after the aircraft has landed unless the change is communicated with GMC.

Chapter 2 Ground Movement Control (GMC)

2.1 Area of Responsibility

Ground Movement Control (GMC) (“Manchester Ground”) is responsible for the safe and expeditious movement of aircraft on the aprons and taxiways. GMC shall provide GMP services in their absence.

All taxiways south of Runway 05L/23R are the responsibility of the AIR controllers.

2.2 Pushback Clearance

GMP shall transfer aircraft to GMC on stand, having received the active QNH. Clearance to push should include the stand number, to improve the situational awareness of other aircraft on frequency.

Example: “ABC123, stand 209, push and start approved, face south”

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 1 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.

2.3 Runway Crossings

All aircraft crossing Runway 05L/23R shall do so in contact with the AIR 1 controller. GMC will taxi aircraft to holding points H1, F1 or P1 and transfer to AIR 1.

GMC shall reiterate the instruction to “hold short Runway [05L/23R]” with the instruction to contact AIR 1 for any traffic which is planned to cross Runway 05L/23R.

2.4 Taxiway Restrictions

2.4.1 Code F Ground Movements

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

- 12
- 61
- 62

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

2.4.2 Taxiway Restrictions

The following taxiway restrictions apply:

| Location | Restriction |
|------------------------------|---|
| Taxiway Q/NB | Not to be used in the hours of darkness or during either LVP |
| Taxiway G (east of stand 55) | Maximum wingspan 36 m |
| Taxiway Z | Maximum wingspan 36 m |
| Taxiway L | Not permitted for B777, A340-600 and Code F aircraft |

2.5 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, B, hold short of D, expect stand 24”

2.6 Preferred Taxi Routings

During dual easterly operations BZ1 shall not be used for inbound aircraft crossing Runway 05L without the agreement of both GMC, AIR 1 and AIR 2. Crossing traffic shall be routed to DZ1, FZ1 or HZ1 depending on allocated stand.

2.7 Departure Handoff

Departing IFR traffic for runway 05L/23R should be taxied to full length (A1/J1) unless otherwise coordinated with AIR1.

Aircraft shall be transferred to AIR 1 with reasonable timing to allow AIR 1 to make full use of the runway. GMC should only retain traffic if a potential conflict exists. It is expected that aircraft will have had time to make contact with the AIR controller in advance of their runway holding point.

2.8 VFR and SVFR Traffic

For VFR and SVFR traffic, including circuit traffic, GMC should issue taxi instructions to H1/M1 during Runway 23R single operations, to P1/F1 for Runway 23L/R during dual operations (to cross) or to B1 during any Easterly runway configuration.

Light Aircraft may park in areas TATON and ROMPA (off taxiway B) or should otherwise be taxied to the Business Aviation Apron.

2.9 Helicopter Traffic

Helicopter traffic is required to depart and arrive from an active runway.

Arriving helicopters should be taxied to TATON or the Business Aviation Apron.

Chapter 3 Air Control (AIR)

3.1 Area of Responsibility

3.1.1 AIR 1

Air Control 1 (AIR 1) (*“Manchester Tower”*) is responsible for the safe and expeditious use of Runway 05L/23R and the associated holding points and rapid exit taxiways. This includes aircraft transferred from Manchester Approach on instrument or visual approaches to this runway and aircraft operating in the ATZ with reference to this runway.

During dual westerly operations, AIR 1 is responsible for taxiway V east of T1 and V5.

AIR 1 shall obtain relevant releases and transfer departures to the appropriate radar controllers.

In the absence of AIR 2, AIR 1 assumes all AIR 2 functions.

3.1.2 AIR 2

Air Control 2 (AIR 2) (*“Manchester Tower”*) is responsible for the safe and expeditious use of Runway 05R/23L and the associated holding points and rapid exit taxiways. This includes aircraft transferred from Manchester Approach on instrument or visual approaches to this runway and aircraft operating in the ATZ with reference to this runway.

AIR 2 is responsible for all taxiways south of Runway 05L/23R, except during dual westerly operations where AIR 1 is responsible for taxiway V east of T1 and V5.

AIR 2 shall obtain relevant releases and transfer departures to the appropriate radar controllers.

AIR 2 shall not be opened unless GMC and AIR 1 are already online.

3.1.3 Delegated Responsibilities

AIR is delegated responsibility for traffic operating VFR in the vicinity of the ATZ below 1500 ft, in collaboration with INT South and FIN.

In most runway configurations, all traffic operating within the ATZ will be in contact with the AIR controller in charge of the arrival runway. Manchester Approach will coordinate with this AIR controller for arrivals and transits regardless of the direction of entry to the ATZ.

In the situation of Runway 23L/R dual operations, circuit traffic is retained by AIR 2, controlling the departure runway, where other ATZ traffic may be in contact with AIR 1. In this scenario, or any other situation whereby ATZ traffic may be of relevance to the departure runway controller, relevant traffic in the ATZ needs to be coordinated between AIR 1 and AIR 2. There must be a method of immediate coordination between these controllers when ATZ traffic is on separate frequencies.

3.2 Line Up Procedures

3.2.1 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

Note: Controllers might find it beneficial to issue a holding point designator to hold at once vacated to avoid aircraft stopping on the runway, or to avoid conflicts.

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 as long as there is a sufficient gap. Most combinations of entry points are suitable for this purpose, except for:

- VB and U
- VA and T

3.3 Conditional Clearances

3.3.1 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 J1, line up Runway 23R behind”

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

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, except where a land-after clearance (see [GEN 5.6](#)) is issued, take-off/landing clearances shall not be passed until the preceding (vacating) 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.

3.5 Flights to Local Airfields

GMP will have coordinated initially with the relevant local controllers – see [ADC 1.7](#). A release shall be obtained from the receiving MPC controller by AIR for flights to all the following local airfields:

- MTMA: EGGP, EGNR, EGNM
- Midlands: EGNX, EGBB
- Other: EGNH, EGNO

Note: During the Alternate (Westerly) Procedure to Liverpool ([ADC 1.7.2.1](#) and [ADC 3.5.1.1](#)) the departure release shall be obtained from INT South.

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

3.5.1.1 Alternate (Westerly) Procedure to Liverpool

For flights to Liverpool only when Manchester is operating Runways 23L/R and Liverpool is landing Runway 27, traffic may receive more expeditious handling by additional coordination. GMP will initiate coordination with INT South to confirm if they are able to accept this traffic and communicate this to AIR. Such traffic will be cleared via EKLAD with an initial climb of 3000 ft.

In this situation, traffic is on release from INT South and not MPC. AIR shall re-iterate the initial climb of 3000 ft to this traffic and transfer to INT South after departure.

3.6 Wake Separation

3.6.1 Wake Turbulence Separation

Wake turbulence separation shall be provided in accordance with MATS Part 1 (CAP 493).

3.6.2 Holding Points

The following pairs of runway entry holds are considered to be the same point for the purposes of departure wake turbulence separation:

| Runway 05L | Runway 05R |
|------------|------------|
| A and AG | W and Y |

| Runway 23L | Runway 23R |
|--------------|------------|
| T, VA and VB | J and M |
| VA, VB and U | |

3.7 Speed Limitation on Departure

A speed limit of 250 kts IAS applies to all departures from Manchester while flying below FL100.

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

If before take-off:

- Inform GMP when requesting start-up clearance stating the minimum or maximum speed acceptable. GMP is to inform the appropriate MPC Sector controller who may specify a high-speed limitation and/or additional take-off separation as necessary. GMP shall communicate these additional instructions to the departing AIR controller. 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 MPC 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 MPC Sector controller.

3.8 Departure Separation

All departure separations must be considered as **minima** and should not be reduced by Manchester ADC through the use of RSIVA, or by any other means.

Aircraft not included in these groups are to be the subject of a separation to be agreed between AIR and the appropriate MPC Sector controller.

3.8.1 Route Separation

The following ‘groups’ of SIDs are specified for simplification of the route table.

| | |
|-------------------|-------------------|
| West | EKLAD/KUXEM/ASMIM |
| North/East | POL/SONEX/DESIG |

Route tables below provide the time in minutes required between each departure on the same route and runway, subject to speed table modifications. An interval of 1 minute is to be not less than 60 seconds. An interval of 2 minutes is to be not less than 120 seconds.

| Runway 23L/R | | Route of following aircraft | | | |
|---------------------------|------------|-----------------------------|--------|------------|------|
| | | SANBA | LISTO | North/East | West |
| Route of leading aircraft | SANBA | 2 | Note 2 | 1 | 2 |
| | LISTO | Note 2 | 2 | 1 | 1 |
| | North/East | 1 | 1 | 2 | 1 |
| | West | 2 | 1 | 1 | 2 |

| Runway 05L/R | | Route of following aircraft | | |
|---------------------------|------------|-----------------------------|------------|------|
| | | LISTO | North/East | West |
| Route of leading aircraft | LISTO | 2 | 1 | 1 |
| | North/East | 1 | 2 | 1 |
| | West | 1 | 1 | 2 |

Note 1: The above tables apply to departures off the same runway. Departures from different runways require release from INT South.

Note 2: LISTO and SANBA SIDs cannot be separated from each other by time/speed criteria. The following traffic may depart if the preceding has either climbed above 5000 ft or has proceeded beyond LISTO/SANBA. Departure earlier than this can be requested to/released by PC Southeast.

Note 3: Jet aircraft that are typically cleared via LISTO (aircraft up to MTOW 35,000kg, and BAe 146/Avro RJ series, E135/E145, CRJ1/2/7/9, Gulfstream 5 and BD-700 Global Express) may be re-cleared via SANBA on a tactical basis by AIR 1/2 in order to minimise ATC delay. Non-jet aircraft must fly LISTO departure.

Note 4: Wake turbulence separation requirements override route separation when the wake turbulence separation time interval is greater.

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

3.8.2.1 Table of Aircraft Speed Groups

Manchester uses the VATSIM UK harmonised speed table to categorise aircraft for departure separation. The table at time of writing is shown below – any subsequent updates to the harmonised table published via Procedure Change will apply to Manchester.

| Group 4 | Group 3 | Group 2 | Group 1 |
|----------------------------------|-------------------------|-------------------|---------|
| All jet aircraft except : | BAE146/Avro RJ | ATR variants | BN2P/T |
| - <i>Those in Group 3</i> | CL35/CL60 | DH8A/B/C | C208 |
| - <i>Concorde</i> | CRJ1/2/7/9/X | F50 | DA62 |
| - <i>Military fast jets</i> | 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 | | |

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

3.9 Departures Subject to Radar Approval

AIR is to obtain a **departure release** from **INT South** prior to issuing take-off clearance for:

- Non-airways IFR and SVFR departures including traffic unable to fly a SID
- Departures from the non-departure runway (prior coordination required)
- Any subsequent SID departure after the above categories
- The first departure following a runway change
- The first departure following a missed approach
- VFR departures

AIR is to obtain a **departure release** from **the receiving controller** (i.e. MPC) prior to issuing take-off clearance for:

- Aircraft types not on the speed table plus the subsequent departure
- Whenever AIR intends to depart successive aircraft which would be separated by less than the specified time interval

AIR is to obtain a **departure release** from the relevant MPC **controller** for departures to:

- MTMA: EGGP, EGNR, EGNM
- Midlands: EGNX, EGBB
- Other: EGNH, EGNO

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

AIR will normally clear all other departures for take-off without prior reference to MPC. Such departures will be transferred direct to the appropriate MPC Sector (see [ADC 3.10](#)), unless

otherwise instructed by Manchester Approach. AIR will inform the relevant MPC Sector controller if an aircraft is observed to deviate from the NPR to the extent that departure separation may be eroded.

Non-standard IFR departures will have been coordinated with INT South by GMP. GMP should inform AIR of the coordinated instructions and whether to expect further after departure instructions at the holding point. INT South **may** specify in the release to transfer the traffic to a different controller after departure (e.g. INT North or MPC), however if not specified at the point of release, it shall be transferred to INT South.

3.10 Transfer of Control and Communication

3.10.1 Departures

Departures may only be transferred to the appropriate MPC frequency once all aerodrome conflicts 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 conflict, 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 and re-iteration of the restriction of 5000 ft. This action is to be retrospectively co-ordinated with the appropriate MPC controller.

Non-Standard IFR, VFR and SVFR departures are transferred to INT South once clear of aerodrome traffic.

3.10.2 Departure Handoff Priority

| Departure | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------|-------|------|-----|-----|-----|-------|--------|--------|
| ASMIM | PC W | PC | LNW | LN | L | INT N | INT S* | |
| DESIG | PC NE | PC E | PC | LNE | LN | L | INT N | INT S* |
| EKLAD | PC W | PC | LNW | LN | L | INT N | INT S* | |
| KUXEM | PC W | PC | LNW | LN | L | INT N | INT S* | |
| LISTO | PC SE | PC E | PC | LN | LNW | L | INT S | |
| POL | PC NE | PC E | PC | LNE | LN | L | INT N | INT S* |
| SANBA | PC SE | PC E | PC | LN | LNW | L | INT S | |
| SONEX | PC NE | PC E | PC | LNE | LN | L | INT N | INT S* |

* Top-down of INT S is by PC SE (see LISTO/SANBA priority order)

- PC W – MPC West
- PC NE – MPC Northeast
- PC SE – MPC Southeast
- PC E – MPC East
- PC – MPC Bandbox
- LNW – Lakes
- LNE – North Sea
- LN – LAC North

- L – LAC Bandbox
- INT S – Manchester INT South
- INT N – Manchester INT North

3.10.3 Aircraft on Approach

The transfer of communications of an aircraft from FIN to AIR should occur ideally by 6 NM from touchdown, but no later than 4 NM. This 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 relevant 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.

The minimum spacing approved on final approach is 4 NM. AIR should coordinate the spacing required with FIN to allow outbound traffic. As a guide:

- 4 NM allows for 1 runway crossing
- 6 NM allows for 1 departure
- 9 NM allows for 2 departures.

3.13 Minimum Radar Separation

Minimum radar separation on final approach is 3 NM, however Manchester Approach will not space aircraft by less than 4 NM on final approach.

3.14 Missed Approach Procedures

The standard missed approach procedures are as published on approach charts.

On becoming aware of, or after initiating a missed approach ('go-around'), the relevant AIR controller is to:

1. Activate the UKCP Go-Around Alarm (if in use),
2. When split, initiate urgent coordination with the AIR Departures controller to determine any conflict and to stop departing traffic - the AIR controllers shall jointly take all following actions with each controller coordinating traffic they work,
3. Establish separation between the go-around and departing traffic:
 - a. Go-around traffic shall not be cleared above 3500 ft

- b. Tactical headings may be issued only if necessary to avoid an immediate conflict
 - c. Traffic should be monitored visually or via the ATM,
 4. Coordinate with INT South to agree headings and any other action required for both the go-around and any conflicting departing traffic,
 5. Coordinate with the relevant MPC Sector where changes have been made to departing traffic routing,
 6. Pass traffic information where required or useful.

Coordination with Manchester Approach for go-around traffic shall be with INT South. On occasion, the Manchester Approach controllers may choose to delegate this to INT North or FIN, however this must be explicitly coordinated in advance and must never be coordinated during a go-around.

During dual runway operations, scenarios exist whereby a departure may need to be turned in the incorrect direction for its direction of flight for the purpose of separation (e.g. 05L traffic to LISTO, 23L traffic to SONEX/POL). The AIR controller working this traffic must coordinate with the relevant MPC sector (or INT in the absence of MPC) to re-establish this traffic onto an appropriate track. No further departures are permitted until this MPC controller provides a release.

The next departing aircraft following a missed approach requires a release from INT South. Where the second aircraft in sequence could follow at 1 minute separation against the first, it is suggested to include this in coordination with INT South.

3.15 VFR/SVFR Procedures

3.15.1 Departures

All VFR or SVFR departures are coordinated with INT South prior to clearance. GMP will issue the route (and a local squawk code if required) and communicate this route to the AIR Departures controller.

All VFR and SVFR departures are subject to departure release by INT South.

3.15.2 Circuit Procedures

Visual circuits operate to the south side of the airfield not above height of 1500 ft (or alternately altitude 1800 ft).

GMP will request circuit approval from the departure AIR controller before allowing the pilot to contact GMC for taxi clearance. Circuit instructions are passed at the holding point.

GMC should issue taxi instructions to H1/M1 for 23R single operations, to P1/F1 for dual operations 23L/R to cross. During dual operations all runway use by circuit traffic, except for full stop landings, must occur on Runway 23L. When requesting a full-stop landing, traffic may land on 23L or 23R depending on which is most practical.

During any Runway 05 configuration, traffic shall be issued B1 by GMC. During dual operations, traffic shall depart from the departure runway (05L) and continue any further runway use on 05R. Transfer to AIR 2 should occur when practical; care should be taken to ensure a frequency change is not in progress where a go-around could require urgent traffic information to be passed.

AIR 2 shall be responsible for notifying INT South that the circuit is active. INT South shall communicate this information to FIN. All circuit traffic shall squawk code 7010.

3.15.3 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.

3.15.4 Re-join Procedures

Overhead joins are not permitted. All VFR or SVFR traffic shall be individually coordinated between INT South and AIR. Transfer of VFR traffic shall be with the airfield in sight and only after coordination. Manchester Approach will typically retain SVFR traffic to maintain radar separation until an appropriate gap in the arrival sequence.

3.16 Helicopter Procedures

Helicopters shall land and depart on a suitable runway. Helicopter runway crossings are considered an intermediate point departure for the purpose of wake turbulence separation.

3.17 Use of the Aerodrome Traffic Monitor

An Aerodrome Traffic Monitor 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 is this co-ordinated with the relevant TC 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.

Radar validated controllers may, where appropriate, utilise RSIVA to reduce departure separation between aircraft on diverging tracks provided that 3 NM horizontal radar separation is established before the aircraft are transferred to the next controller.

3.18 Southern Taxiways

3.18.1 Westerly Operations

During westerly dual operations, AIR 1 is responsible for taxiway V east of T1 and V5. AIR 2 is responsible for all other taxiways south of 05L/23R. Departing traffic crossing 23R shall be issued clearance to V5 or T1 and transferred to AIR2 as soon as practical once clear of 23R. AIR 1 shall only retain this traffic where a conflict exists.

Where there are 2 or more aircraft on the southern taxiways awaiting departure, AIR 1 shall typically issue V5 to enable AIR 2 to sequence departures through multiple runway holding points. In this situation, AIR 2 should proactively coordinate traffic to T1 where efficient for the departure sequence.

Where there is only 1 aircraft on the southern taxiways awaiting departure, AIR 1 shall typically issue whichever holding point is not occupied.

3.18.2 Easterly Operations

During easterly dual operations, AIR 2 is responsible for all the taxiways south of 05L/23R.

Inbound aircraft shall be taxied to DZ1, FZ1 or HZ1 depending on their allocated arrival stand. BZ1 is not to be used for aircraft crossing 05L without prior coordination with GMC and AIR1.

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 Manchester Approach sector positions is adopted:

INT North - Intermediate Approach, North (“Manchester Radar”)

INT South - Intermediate Approach, South (“Manchester Radar”)

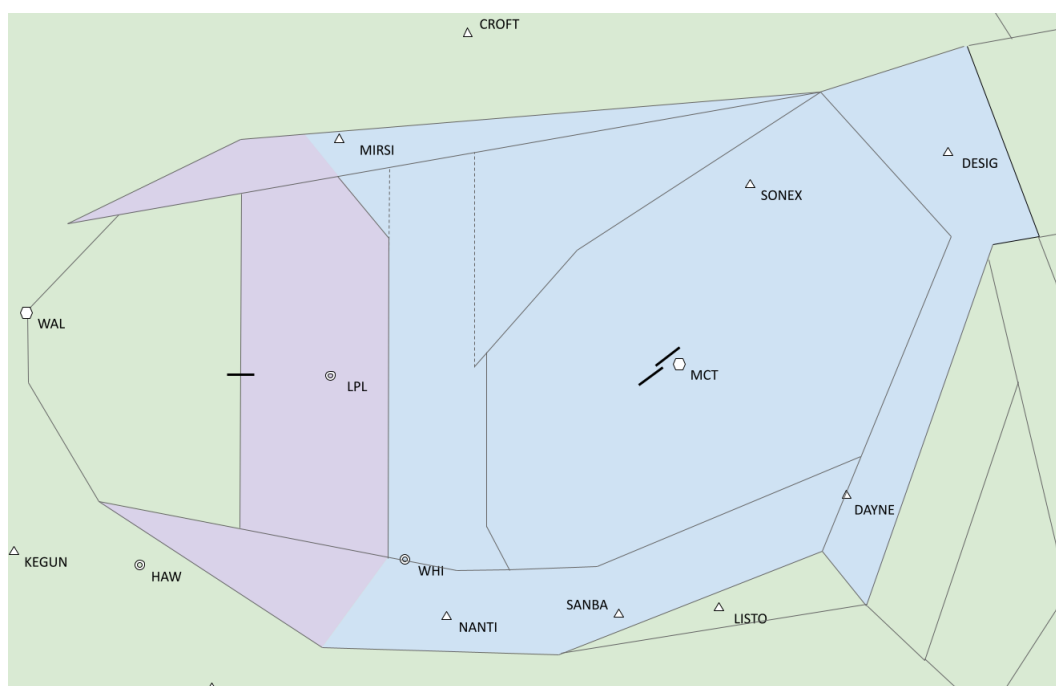
FIN - Final Director (“Manchester Director”)

Manchester Approach - Collective INT and FIN functions

1.2 Area of Responsibility

Manchester Approach is responsible for portions of the Manchester CTR/CTA east of the western edge of the Northwest Transit Corridor up to 3500 ft as outlined in Figure 1 below. Liverpool Approach is responsible for the areas west of the Northwest Transit Corridor.

Figure 1 – Responsibility of Manchester CTA



It is delegated responsibility for parts of the Manchester TMA by Manchester Prestwick Control (MPC) as outlined in [APC 4.1](#). Manchester Approach provides services to:

1. Arriving traffic transferred by MPC until control is transferred to Aerodrome Control,
2. Aircraft approaching from outside of controlled airspace until control is transferred to Aerodrome Control,

3. Non-standard departures transferred by Aerodrome Control until leaving controlled airspace or transfer to Area Control,
4. Overflights of the Manchester CTR/CTA/delegated TMA under the control of Manchester Approach.

INT South may also provide UK FIS services to low level traffic within 40 NM of Manchester.

1.3 Function

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

Specific functions are:

1.3.1 Intermediate Approach South (INT South)

- Accepts releases and provides control and initial sequencing for traffic inbound to Manchester via DAYNE until onward transfer
- Control of traffic in the DAYNE hold transferred by MPC
- Control of overflights of Manchester Approach airspace at or below 3500 ft
- Control of overflights released to Manchester Approach within delegated airspace above 3500 ft, to the south of the Runway 23R/05L centreline
- Control of VFR and SVFR traffic operating in the relevant portions of the Manchester CTA/CTR and coordination of this traffic with ADC
- Coordination with ADC for traffic requiring non-standard IFR departures
- Coordination with AIR for go-around traffic for all runways
- Executive coordination with other units except on a case-by-case delegation to FIN
- Provision of UK Flight Information Services (subject to workload) to aircraft within the vicinity of Manchester airspace
- Assumes responsibility for INT North and FIN in their absence

1.3.2 Intermediate Approach North (INT North)

- Accepts releases and provides control and initial sequencing for traffic inbound to Manchester via ROSUN and MIRSI until onward transfer
- Control of traffic in the ROSUN and MIRSI holds transferred by MPC
- Control of overflights released to Manchester Approach within delegated airspace above 3500 ft, to the north of the Runway 23R/05L centreline

1.3.3 Final Director (FIN)

- Provides control of traffic transferred by INT North and/or South until transfer to Aerodrome Control
- Provides vectoring to final approach and issues approach clearances including visual approach clearances where appropriate
- Liaises with AIR for range checks, final approach spacing, landing clearances and planned go-around clearances
- Monitoring of traffic on final approach to ensure separation is not eroded

1.4 Manchester Approach Bandbox/Splitting Procedures

1.4.1 Opening Order

INT South may be staffed at any time.
AIR must be open before FIN is opened.
FIN must be open before INT North is opened.

1.4.2 Procedure for Bandboxing/Splitting INT South and INT North

1. Inform Manchester AIR (both 1 and 2 when split)
2. Inform MPC West and MPC Northeast of new position/frequency for arrivals

Chapter 2 Radar Director/Controller General Operational Procedures

2.1 General Procedures

INT South is the master director and is responsible for executive coordination and overall flow of traffic through Manchester Approach airspace. When all three positions are opened, the master director shall determine the sequence and landing order of all inbounds. This does not preclude other controllers from coordinating with other agencies as required. All directors will manage their own electronic flight progress strips.

2.2 Inbound Releases

INT positions shall receive inbounds to all release points from MPC. Traffic shall be released in accordance with the abbreviated release procedures.

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.

Except where agreed in a full release or radar release, following transfer of communication Manchester Approach may:

- Apply or remove speed control
- Issue descent to a lower level in accordance with release procedures
- Turn and descend the aircraft after reaching the release point.

Manchester Approach must not climb the aircraft or stop its descent above the release level. Once traffic has entered the Manchester RMA, it shall not be instructed to leave it without coordination with MPC.

2.2.1 Procedures for Abbreviated Releases

An abbreviated release is a method of reducing coordination between APC units and Area Control, as compared to a full release, since only the release point and level is communicated with the rest of the release being implied by standard local procedures.

2.2.1.1 Electronic Abbreviated Releases

Provided the correct cleared level is displayed in the aircraft track data-block, Manchester Prestwick Control is not, on VATSIM, required to coordinate an abbreviated release verbally with Manchester Approach. This procedure is referred to as an electronic abbreviated release.

MPC controllers may opt to use verbal abbreviated releases while holding is taking place - workload permitting - or where it might be deemed useful for clarity.

2.2.1.2 Verbal Abbreviated Releases

If MPC controllers opt to use a verbal abbreviated release, it shall be in the following format:

- Hold Name
- Callsign
- Release Level

Example: "DAYNE release, ABC123 at 9."

Note: The Release Level may be abbreviated to either one or two digits – for example, FL90 may be passed as "9", FL100 as "10" ("ten").

2.2.2 Silent Releases

Given the lack of 'electronic abbreviated releases' in the real world, Manchester Approach receives 'Silent Releases' to each inbound hold at FL80, under similar conditions to the abbreviated releases.

On VATSIM, we instead use the term 'preferred transfer conditions' utilising an electronic abbreviated release, to avoid confusion between near identical procedures. The term 'silent release' is not in use.

2.3 Transfer of Data and Control between APC Controllers

Transfer of data and control between Manchester Approach controllers will be by electronic transfer of the aircraft track data-block coincident with the transfer of communication.

INT South/North 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, controllers should use the phrase:
"Contact Manchester Director 121.355 with callsign only."

2.4 Identification and SSR Validation and Verification Procedures

All aircraft under the control of Manchester 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 Manchester 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 Manchester Barton or any other unit outside controlled airspace, which has been passed a UKCP General SSR code or a Manchester Approach local SSR code 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 Manchester Approach

Manchester Approach 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:** Manchester Prestwick Control, Liverpool Radar and Leeds Radar are all permitted to apply 3 NM separation.*

2.6 Terrain and Obstacle Clearance

Controllers shall ensure allocated levels provide terrain and obstacle clearance as required by MATS Part 1. Levels shall be allocated in accordance with the Manchester ATC Surveillance Minimum Altitude Area (SMAA) chart (**AD 2.EGCC-5-1**) or the 25 NM Minimum Sector Altitudes listed below, as appropriate. Descent may be issued within the designated Final Approach Vectoring Areas (FAVAs) only to aircraft established on an instrument approach or that are cleared to establish at an angle of 40° or less. However, controllers are reminded that noise abatement rules restrict descent to below 2000 ft until established on the final approach track ([GEN 2.2](#)). The 25 NM MSA for Manchester are:

| NW | NE | SW | SE |
|---------|---------|---------|---------|
| 3500 ft | 3500 ft | 2300 ft | 3100 ft |

2.7 Change to MSL Procedure

When a change to the Manchester QNH results in a new MSL, the first controller within the Manchester TMA to notice the change shall notify other units of the change. This controller shall coordinate an agreed effective change time that is at least 5 minutes from the pressure change was noted. Aircraft operating on 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 INT South/North, 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, if not volunteered by pilot
- LVP if in operation, if not already received from the ATIS
- Any delay to be expected.

Except for traffic transferred from INT to FIN “*callsign only*”, all Manchester Approach 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, INT controllers shall confirm aircraft type including type variant.

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 (STARs)

| Designator | Route |
|------------|---|
| AXCIS 1M | AXCIS – MONTY – REXAM – WAL – MIRSI |
| ELVOS 1M | ELVOS – TNT – QUSHI – DAYNE |
| LAKEY 1M | LAKEY – DIZZE – ROSUN |
| LESTA 1M | LESTA – TNT – QUSHI – DAYNE |
| LISBO 1M | LISBO – FIZED – GOLES – POL – BURNI – ROSUN |
| MAKUX 1M | MAKUX – SOSIM – GIGTO – IBRAR – WAL – MIRSI |
| MALUD 1M | MALUD – WAL – MIRSI |
| OTBED 1M | OTBED – GOLES – POL – BURNI – ROSUN |
| PENIL 1M | PENIL – WAL – MIRSI |
| TILNI 2M | TILNI – GASKO – BEGAM – SETEL – ROSUN |

All Manchester STARs are for RNAV1 capable aircraft. If a pilot is simulating a non-RNAV1 capable flight, they should file the routes listed in the UK SRD.

3.2.1 Stack Switching STARs

There are no stack switching STARs available at Manchester.

3.3 Holding Procedures

When holding commences, INT South/North **must notify** the relevant MPC Sector.

The table below indicates the holding areas available for Manchester traffic:

| Hold | Inbound Course | Direction | Holding Levels | Holding Speed | Leg Time |
|-------|----------------|-----------|----------------|---------------|----------|
| DAYNE | 310° | Right | FL70 – FL140 | ICAO | 1 minute |
| MIRSI | 060° | Right | FL60 – FL140 | 230 knots | 1 minute |
| ROSUN | 171° | Right | FL70 – FL140 | 230 knots | 1 minute |

Note: Traffic shall not be instructed to hold below the Manchester MSL – the lowest holding levels in the table above are **overriding minima** for when the MSL is lower.

3.3.1 Holding Pattern Separation

ROSUN, MIRSI and WAL traffic are separated up to and including FL140. DAYNE is **not** separated from enroute traffic holding at MCT.

Holding at ROSUN above FL160 should be avoided due to the protected area extending beyond controlled airspace. **Traffic at FL170 and above must be radar monitored.**

3.3.2 Control and Release of Holding Traffic

During periods of holding, MPC will release inbounds to INT South/North in accordance with the abbreviated release procedures documented below in [APC 3.4.2](#). Manchester Approach controllers must note the lowest holding levels for MIRSI and ROSUN vary according to the runway in use – this enables traffic via MIRSI to be vectored beneath traffic holding at ROSUN during Runways 23L/R operations and vice versa.

MPC will typically retain control of holding traffic at and above FL120.

3.4 Inbound Releases

3.4.1 Preferred Transfer Conditions

During normal traffic conditions, MPC will endeavour to transfer inbound aircraft to all release points cleared to FL80. Release conditions are identical to the electronic abbreviated release. Manchester Approach shall then descend the aircraft as permitted, allowing the next inbound to be cleared to FL80 and transferred level separated from traffic ahead.

Where this is not practical, traffic shall be transferred by abbreviated release, level separated by at least 1000 ft. Transfer shall be in level order and only once clean of traffic unknown to Manchester Approach.

| Hold | From | Preferred Transfer Condition |
|-------|--------------|------------------------------|
| DAYNE | All | FL80 by DAYNE |
| MIRSI | All | FL80 5 NM before MIRSI |
| ROSUN | East via POL | FL80 by BURNI |
| | North | FL80 5 NM before ROSUN |

3.4.2 Release via Abbreviated Release

The following sections define the minimum release level suitable for transfer under the electronic abbreviated release, along with the lowest holding points. Where able, controllers should transfer in accordance with the ‘preferred transfer conditions’ specified previously.

3.4.2.1 DAYNE

| Runway | Via | Minimum Release Level | Lowest Holding | Release Point |
|----------------|-----|-----------------------|----------------|---------------|
| 23L/R 05L/R | All | MSL (≥FL70) | MSL (≥FL70) | TNT (abeam) |

3.4.2.2 MIRSI

| Runway | Via | Minimum Release Level | Lowest Holding | Release Point |
|--------|-----|-----------------------|----------------|---------------|
| 23L/R | All | MSL | MSL | MIRSI |
| 05L/R | All | MSL+1 (≥FL80) | MSL+1 | |

3.4.2.3 ROSUN

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

Note: Traffic is released for left turn only and subject to restrictions based on runway in use – see [APC 4.2.3](#).

3.5 Transfer of Communication Procedures

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

3.6 Expected Approach Times (EATs)

EATs are not issued. The arrival order is derived from the stack arrival time subject to tactical considerations.

Where traffic is holding, INT shall provide an expected **delay** in increments of 5 minutes up to 20 minutes, after which traffic may be informed “*delay not determined*”.

Chapter 4 Procedures for Intermediate and Final Approach

4.1 Radar Manoeuvring Area (RMA)

Figure 2 – Manchester RMA Runways 23L/R

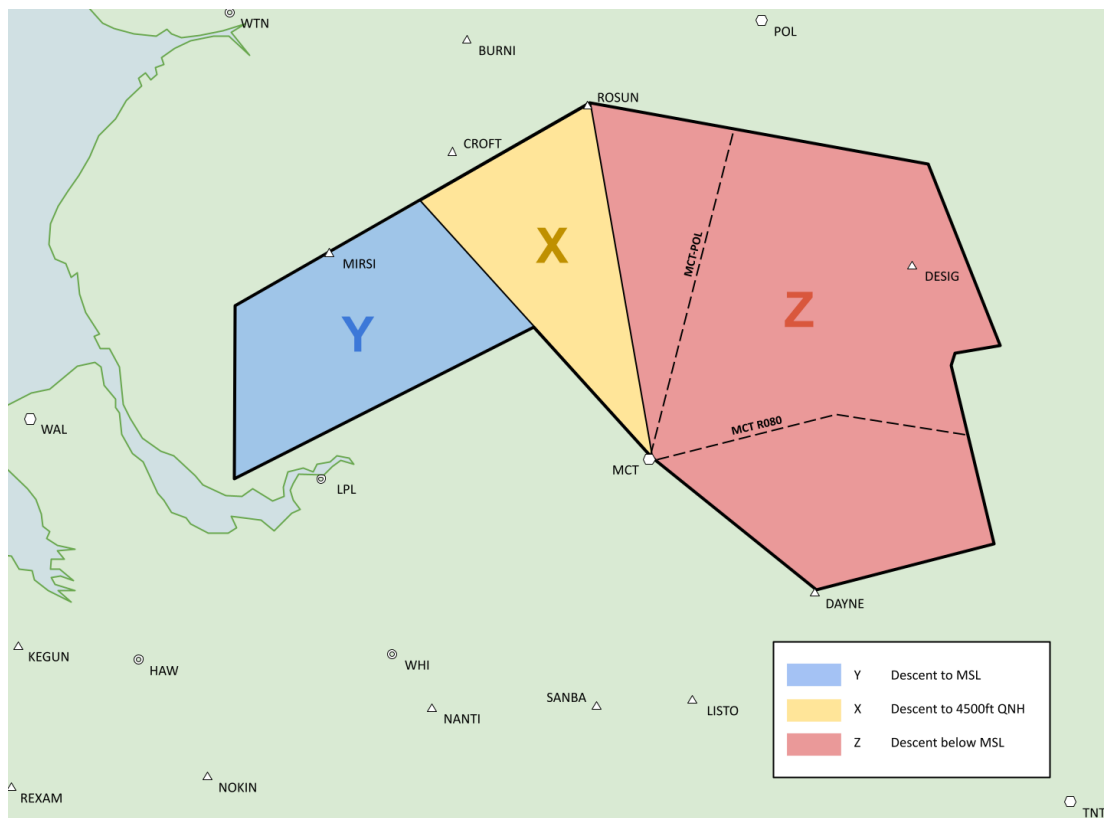


Figure 3 – Manchester RMA Runways 05L/R (with Liverpool delegated airspace overlaid)

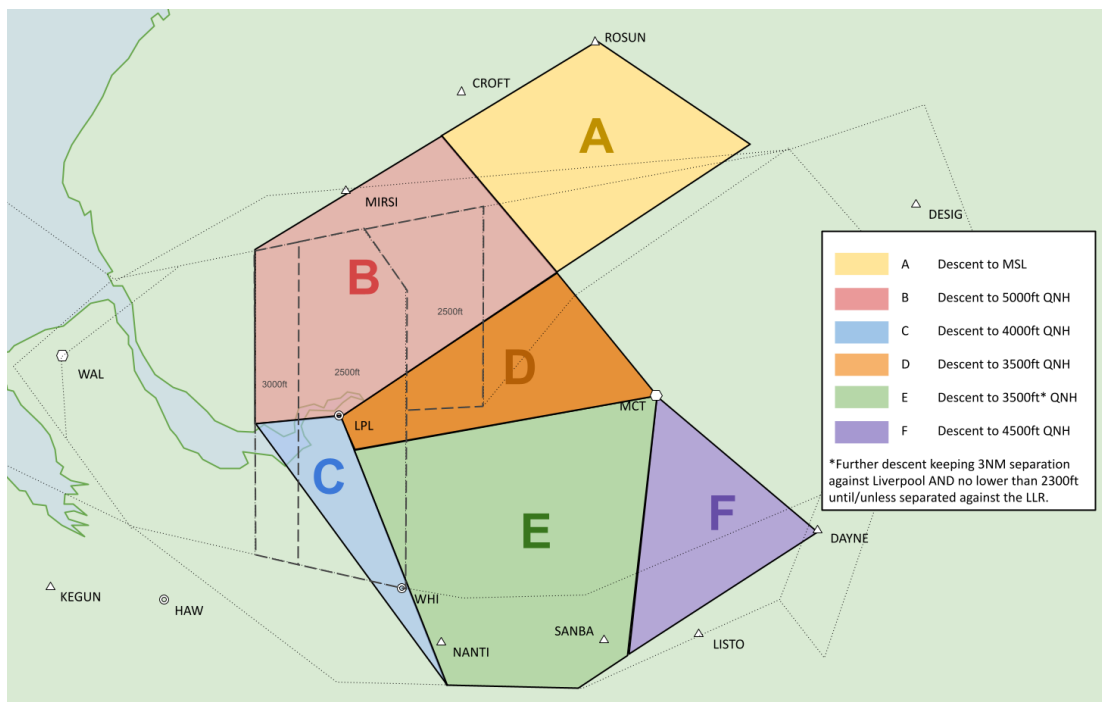
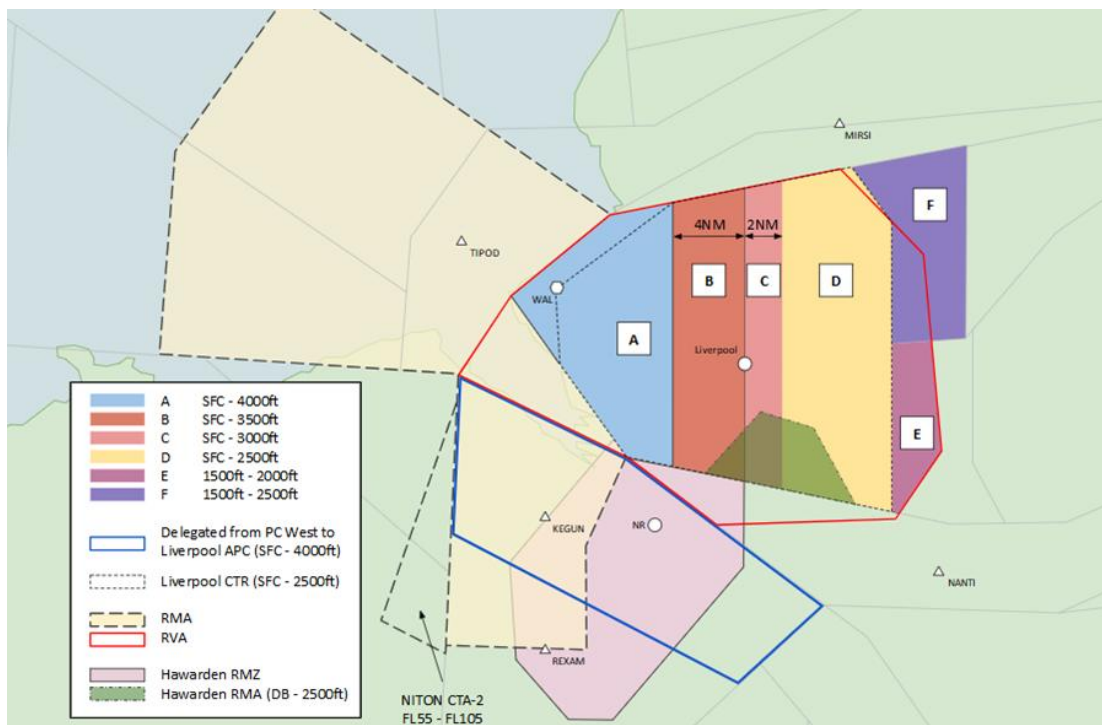


Figure 4 – Liverpool RMA



4.1.1 Restrictions within the Manchester RMAs

4.1.1.1 Runways 23L/R

Area X

Manchester Approach may descend traffic to 4500 ft once clear of outbound traffic. Descent is permitted below 4500 ft if clear of all potential conflict including potential missed approaches.

When assessing against potential missed approaches, traffic further than 4NM from the airport is **not** considered a potential conflict against traffic already in Area X which is operating at a ground speed of 200 knots or greater.

Area Y

Manchester Approach may descend traffic to MSL and must achieve FL80 or below by MCT radial 325° (corresponding to the Area X/Y boundary).

Area Z

Manchester Approach may descend to any safe level subject to outbound traffic. Traffic via DAYNE must achieve MSL or below by the boundary between PC Southeast and Northeast. This is depicted on the RMA lines, initially starting as MCT radial 080°.

4.1.1.2 Runways 05L/R

Area A

Traffic may be descended to MSL and must achieve FL80 or below by the MCT radial 325° (coincident with the Area A/B boundary).

Area B

Traffic is permitted to descend to 5000 ft subject to outbound traffic.
Traffic via MIRSI shall not be vectored east of track 175° from MIRSI until within Area C.

Area C

Traffic may be descended to 4000 ft.

Area D

Traffic may be descended to 3500 ft.

Area E

Traffic may be descended to 3500 ft. It may be descended below 3500 ft, however:

1. Manchester must maintain 3 NM separation against Liverpool airspace (i.e. Liverpool Zones D and F which are delegated to Liverpool APC up to 2500 ft)
2. Manchester must not descend below 2300 ft until clear of the Northwest Transit Corridor

Area F

Traffic may be descended to 4500 ft subject to outbound traffic. PC Southeast is not permitted to climb LISTO departures into potential conflict with traffic in Area F.

4.2 Intermediate Approach Procedures

4.2.1 Inbound Traffic via DAYNE

4.2.1.1 Descent before Release Point

Traffic via DAYNE is released for descent to MSL on transfer of communication. However, as the lowest holding level at DAYNE is FL70, Manchester Approach shall not descend DAYNE traffic below FL70 unless it is instructed to proceed beyond DAYNE (i.e. instructed not to hold).

4.2.1.2 Vectoring restrictions

| Runway | Conditions |
|--------|--|
| 23L/R | Released for turn at TNT or abeam TNT if transferred on a heading. Turns must ensure the aircraft enters RMA Area Z and shall not route the aircraft west of the TNT-DAYNE-MCT line. |
| 05L/R | Traffic must be at MSL or below before crossing the PC Southeast/Northeast boundary. Released for left turn after DAYNE. |

4.2.2 Inbound Traffic via MIRSI

4.2.2.1 Descent before Release Point

Traffic via MIRSI is released for descent to MSL on transfer of communication.

4.2.2.2 Vectoring Restrictions

| Runway | Conditions |
|--------|--|
| 23L/R | Released for turn at MIRSI. Must remain on or north of the track 090° from MIRSI until east of the MCT-ROSUN line (i.e. the boundary between Areas X and Z). This is to ensure separation against departures climbed by MPC. |
| 05L/R | Traffic must be at FL80 or below by MCT R325 (i.e. the boundary between Areas Y and X). Released for right turn at MIRSI. Must remain west of the track 175° from MIRSI while in Area B. |

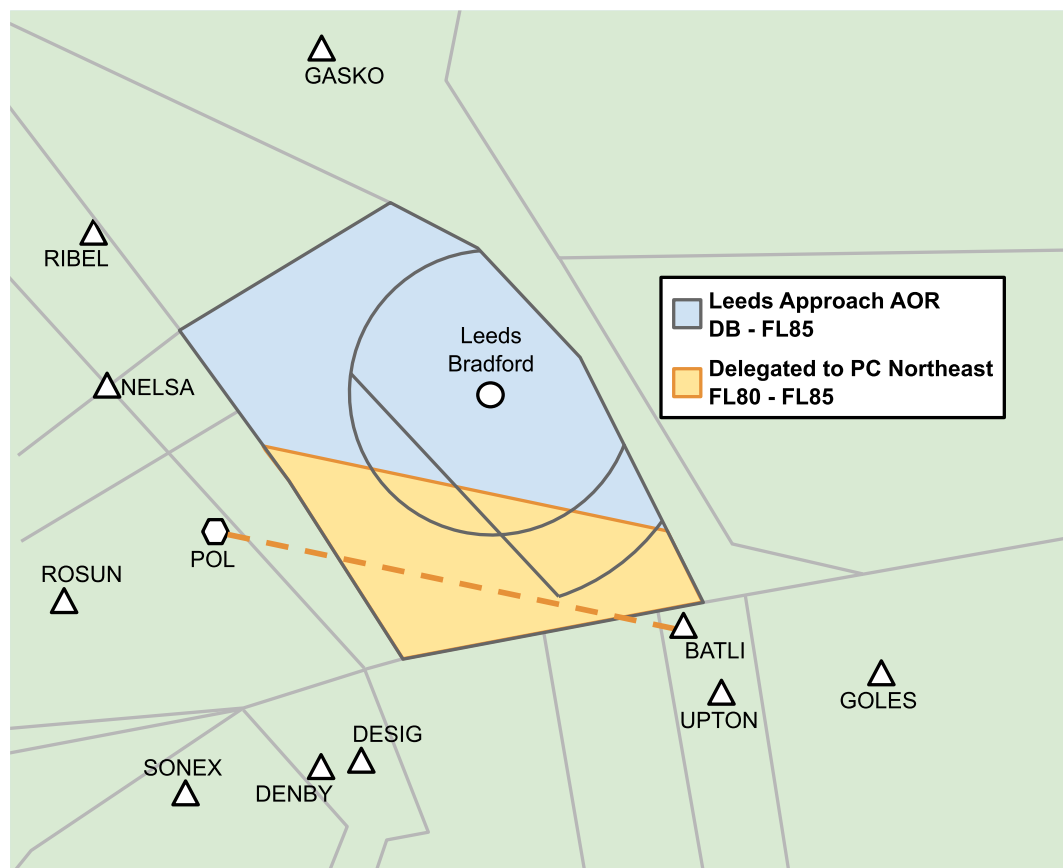
4.2.3 Inbound Traffic via ROSUN

4.2.3.1 Descent before Release Point

Manchester Approach may descend traffic inbound to ROSUN to MSL however, traffic shall **not** be descended below FL80 when over Leeds Bradford airspace except as described below.

The entire Leeds Bradford CTR/CTA complex is controlled by Leeds APC up to FL85. Leeds delegate an area underneath Y70 (i.e. that portion of the CTA south of a line 5 NM north of BATLI-POL) to PC Northeast – this is depicted in Figure 5. Descent is permitted to FL80 in this delegated section.

Figure 5 – Leeds Bradford Airspace



4.2.3.2 Vectoring Restrictions

| Runway | Conditions |
|--------|--|
| 23L/R | Traffic via POL from the east is released for left turn passing FL110. Otherwise, traffic is released for turn at ROSUN. |
| | Traffic leaving ROSUN on a track of 140° or greater must be turned approximately to a 'downwind' before the MIRSI 090° track. |
| 05L/R | Traffic via POL from the east is released for left turn passing FL110. It must be vectored so that it reaches on or north of the track 215° from ROSUN before leaving Area A. |
| | Traffic from the north is released for right turn at ROSUN. It shall be vectored on or north of the track 215° from ROSUN. |
| | Traffic may be turned left from the 215° track after passing the eastern edge of the Northwest Transit Corridor. |

4.2.4 Altitude Control

4.2.4.1 Continuous Descent Approach (CDA) Procedure

The aim of the CDA procedure is to provide pilots with the ATC assistance necessary for them to achieve a continuous descent during intermediate and final approach, at speeds which require minimum use of flap, to minimise noise. The procedure requires ATC to pass adequate 'range from touchdown' information.

The CDA procedure should be used for all arrivals into Manchester. 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.

4.2.5 Speed Control

The standard speeds to be employed are as follows:

- 220 knots or a higher minimum clean speed in the intermediate approach phase
- 180 knots or less in the final approach phase
- On single runway operations, regardless of the traffic situation and unless coordinated with AIR, 160 knots when established on the approach between 2500-3500 ft until 4 NM from touchdown. For aircraft unable to maintain 160 +/- 5 knots FIN shall ascertain the final approach speed and inform AIR.

Where traffic levels are low, speed restrictions may be more appropriate than speed control to allow pilots some flexibility in managing their aircraft. For example, "220 knots or less".

If FIN is split, traffic should be transferred at 220 knots unless agreed otherwise between INT and FIN.

4.2.6 Initial Sequencing

The initial sequencing of both arrival streams shall be performed by the relevant INT controller. INT South shall determine the overall sequence so that both controllers can provide adequate spacing on transfer to FIN.

4.2.7 Avoidance of Noise Sensitive Areas

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

Descent below 3000 ft may only be issued within 10 NM from touchdown.

4.2.8 Transfer of Traffic to FIN

Transfer to FIN should be initiated when there are no conflicts ahead under the control of the INT controller and the aircraft is descending to an altitude. Traffic shall be instructed to contact with 'callsign only' to avoid unnecessary RTF time with FIN:

"Contact Manchester Director 121.355 with callsign only."

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 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.

During **dual** runway operations traffic shall be spaced by a minimum of 4 NM.

During **single** runway operations, FIN shall typically vector assuming one departure per arriving aircraft, unless otherwise agreed with AIR. Typical spacing should therefore be:

- 6 NM – for one departure
- 9 NM – for 2 departures.

Controllers should note that a reduced landing rate and therefore increased spacing is required during LVP – see guidance in [GEN 3.2.5](#).

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

4.3.5 Transfer of Communication

On transfer of control from FIN to AIR, controllers may choose to use the phrase:
“Contact Manchester Tower, callsign only, 119.405”

4.3.6 Final Approach Descent profile

Traffic for all runways receiving a CDA may be established after the final approach fix but no later than 8 NM. Descent below 3000 ft may only be issued within 10 NM from touchdown.

Where possible, traffic for Runway 05L/R shall be established prior to the final approach fix (8.7NM).

For the purpose of noise abatement, aircraft shall not be cleared below 2000 ft until established on the final approach track.

4.4 Missed Approach Procedures

AIR shall notify Manchester Approach of a missed approach through the UKCP Go-Around Alarm wherever possible. They shall then promptly coordinate with INT South regardless of the runway in use. INT South is responsible for issuing tactical headings to ensure separation and to then specify which controller to transfer the aircraft to; this shall typically be INT South for 05L/R and INT North for 23L/R. The next departure following a go-around is subject to release from INT South.

Where there is significant asymmetry of workload between Manchester Approach positions, it may be sensible to re-delegate responsibility for go-arounds to INT North or FIN. If this is decided, it must be communicated to the AIR controller(s) in advance.

Chapter 5 Outbound Procedures

5.1 General

Manchester Approach will only work IFR outbounds which are either non-standard departing traffic or traffic unable to comply with the SID. Manchester Approach will work other IFR traffic when MPC is offline.

In any other situation, Manchester Approach must coordinate with both AIR and MPC if intending to work any other departures.

5.1.1 Identification of Departing Traffic and SSR Validation/Verification

Manchester Approach is responsible for identification, SSR validation and verification of any outbound worked in accordance with [APC 2.4](#).

5.1.2 Departure Speed Limits

To improve departure flow and assist MPC controllers to maintain separation between aircraft a speed limit of 250 knots IAS applies to all outbound aircraft below FL100. Manchester Approach must not remove the 250kt below FL100 speed restriction

5.2 Responsibility for SID departures

Manchester Approach is only responsible for SID departures in the absence of MPC. Departures are transferred to the relevant INT controller depending upon their direction of flight.

5.3 MPC Departure Sectors – Vectoring Outbounds Subject Inbound Traffic

MPC controllers will turn and climb departures inside the vectoring tracks for traffic released to Manchester Approach. This is to enable the climb of outbound traffic over the inbound traffic by vectoring to place the point of conflict at a further distance. The following conflicts are typically resolved with this 'turn and burn' procedure:

- 23L/R: MIRSI/ROSun inbounds vs POL/SONEX outbounds
- 05L/R: ROSUN inbounds vs ASMIM outbounds

Before vectoring departing traffic on the SIDs above, the MPC controller must consider that:

- Vectoring of departures should not occur until they pass the noise abatement altitude of the relevant NPR profile, as defined in the table below.
- Removing the speed restriction may have the adverse effect of widening the turn radius, so controllers are advised not to do so until the required turn has been observed.
- The effects of wind will need to be considered in selecting a suitable heading that ensures separation from inbound traffic.
- Climb above the SID altitude should be given in the turn to ensure that the departure is able to climb above the inbound traffic.
- When Manchester Approach vector close to the southern extremity of the northern RMA Areas, MPC may need to initiate coordination for departures. Manchester Approach are permitted to use the RMA as detailed but should aim to adhere strictly

to vectoring restrictions ([APC 4.2.1](#), [4.2.2](#) and [4.2.3](#)) to prevent unnecessary voice coordination.

Noise Preferential Routes (NPR) apply to all departing jet aircraft. Except when required for safety reasons, deviation from the NPRs is not permitted until aircraft have passed the following altitudes:

| SID | Runway | Altitude |
|-----------------|--------|-----------|
| EKLAD/KUXEM | 23L/R | 3000 feet |
| SONEX/POL | 23L/R | 4000 feet |
| LISTO/SANBA | 23L/R | 5000 feet |
| ASMIM/DESIG/POL | 05L/R | 4000 feet |
| LISTO | 05L/R | 5000 feet |

The use of the phrase “on passing altitude 4,000 feet turn right heading...” is permitted.

5.4 Departures Subject to Radar Approval

AIR is to obtain a **departure release** from **INT South** prior to issuing take-off clearance for:

- Non-airways IFR and SVFR departures
- Airways departures unable to fly or deviating from a SID/NPR
- Departures from the non-departure runway (prior coordination required)
- Any subsequent SID departure after the above categories
- The first departure following a runway change
- The first departure following a missed approach or planned go-around
- VFR departures

AIR is to obtain a **departure release** from **the receiving controller** (i.e. MPC sector) prior to issuing take-off clearance for:

- Aircraft types not on the speed table plus the subsequent departure
- Whenever AIR intends to depart successive aircraft which would be separated by less than the specified time interval
- Aircraft departing to Liverpool ([EGGP](#)), Hawarden ([EGNR](#)), Blackpool ([EGNH](#)), Leeds ([EGNM](#)), Birmingham ([EGBB](#)) or East Midlands ([EGNX](#))

AIR is to obtain a **departure release** from the relevant **MPC controller** for **any other** departures to **airfields within** the Manchester TMA, as detailed in [ADC 3.9](#).

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

AIR will normally clear all other departures for take-off without prior reference to MPC. Such departures will be transferred direct to the appropriate MPC Sector (see [ADC 3.10](#)), unless otherwise coordinated. AIR will inform MPC if an aircraft is observed to deviate from the NPR to the extent that departure separation may be eroded.

5.5 Non-Standard IFR Departures

Non-standard IFR departures include non-airways departures (which typically should not be permitted above 3500 ft) and ATS route network departures unable to accept a SID. Both types of traffic will be coordinated by GMP and AIR with INT South.

All jet aircraft and propeller driven aircraft with a maximum authorised weight of 5700 kg or greater departing on IFR routes not intending to join the ATS route network shall be issued departure instructions that conform to the published Noise Preferential Routings published in the UK AIP.

AIR will request a departure release for both types of traffic at the holding point. After departure this traffic will be transferred to the INT South frequency unless specifically instructed otherwise in the release. Subsequent traffic will require a release. Separation of this non-standard traffic is the responsibility of INT South from all subsequent departures. INT South is therefore cautioned of allowing free-flow after a slow non-standard departure.

5.5.1 Non-ATS Route Network Departures

GMP will initially coordinate all IFR departures that are not joining the ATS route network with INT South, who shall issue a local squawk. INT South may choose to pass after departure instructions now or inform GMP that they will be provided at the holding point with the release.

INT South is responsible for the control of non-ATS route network departures within the Manchester CTR/CTA. This traffic shall not typically be climbed above 3500 ft as coordination is required with MPC to operate above this level. Any traffic operating to the north of the field above 3500 ft must also be coordinated to INT North. Upon leaving controlled airspace, INT South may provide appropriate UK FIS or transfer to another unit.

5.5.2 Aircraft Unable to Accept a SID

Where traffic is unable to comply with the restrictions of a SID, GMP will coordinate a non-standard after departure instruction/routing with INT South but will obtain a squawk code from UKCP (UKCP General Code). INT South may choose to pass after departure instructions now or inform GMP that they will be provided at the holding point. GMP will issue a 5000 ft initial climb if not given alternative instructions.

It is expected that Manchester Approach (INT South unless coordinated) will work this traffic after departure to identify, validate the mode C readout and provide vectoring onto an appropriate route equivalent to the SID track. The receiving MPC sector should be informed of such traffic being worked by Manchester Approach but a release is not required.

Chapter 6 Flights to and from Local Airfields

6.1 Flights to MTMA Airfields

Flights to airfields in the MTMA are not subject to conditions, except:

- Liverpool (EGGP)
- Hawarden (EGNR)
- Leeds (EGNM)
- Warton (EGNO) / Blackpool (EGNH)

IFR Flights to these airfields above 3000 ft will file as per the SRD via Manchester SIDs. Cruise should be expected at MSL or higher. Coordination for these flights is between ADC and MPC. Manchester Approach will not work this traffic unless coordinated by MPC (e.g. where there is significant holding). Departure releases will be requested by ADC to MPC even if the traffic is expected by Manchester Approach.

Flights below 3000 ft may be treated as a non-standard departure and either coordinated to the receiving unit (i.e. Liverpool) or leave controlled airspace.

6.2 Flights to Liverpool (EGGP)

When Manchester is operating 23L/R and Liverpool is landing 27, it is more expeditious for positioning flights to be kept at 3000 ft and transferred between Manchester Approach and Liverpool Radar. In this situation, GMP shall coordinate with INT South in advance of delay absorption procedures to ascertain if INT South is happy to work this traffic. INT South should do their best to accommodate this request.

If agreed, traffic will be cleared to Liverpool by EKLAD with an initial climb of 3000 ft. AIR will request a departure release from INT South, who should coordinate with Liverpool Radar to ensure the traffic can be accepted. GMP will still coordinate delay absorption with MPC, to prevent this traffic having significant impact on airborne arrivals into Liverpool.

In all other scenarios, or when INT South is not able to work this traffic, coordination occurs as per other MTMA flights, detailed in [APC 6.1](#).

6.3 Flights from Liverpool (EGGP) to Manchester (EGCC)

IFR Flights from Liverpool to Manchester are individually coordinated prior to departure. Traffic cruising above 3000 ft is coordinated with MPC (PC West) who will then coordinate with INT North. Typically, traffic will be transferred towards MIRSI at 4000 ft or higher when Runway 23L/R is in use; towards WHI at 3500 ft when Runway 05L/R is in use; or on an otherwise coordinated heading.

Traffic cruising at 3000 ft or below are coordinated between Liverpool APC and Manchester INT North, with Manchester and Liverpool remaining responsible for separation against all inbound/outbound traffic.

6.4 Flights from other MTMA Airfields

Flights from airfields in the MTMA are not subject to conditions, except Liverpool (see above) and Leeds. Coordination for Leeds is between the local ADC and MPC and traffic will be presented to Manchester Approach at ROSUN, unless otherwise coordinated.

LOW | LOW LEVEL OPERATIONS

Chapter 1 General Principles

1.1 Provision of Air Traffic Services

INT South is responsible for all VFR and SVFR aircraft operating within the Manchester CTR/CTA.

INT South may, subject to controller workload, offer UK FIS to aircraft operating outside controlled airspace. INT South should radar monitor VFR traffic operating within the Northwest Transit Corridor wearing the frequency monitor code so as to provide warning if it appears that an airspace infringement is imminent.

ADC is delegated responsibility for VFR aircraft operating within the ATZ below 1500 ft.

1.2 Coordination

1.2.1 Departure Coordination

GMP will coordinate with INT South to obtain VFR/SVFR/non-standard IFR clearances. GMP will inform the appropriate AIR controller of all departure clearances issued.

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

1.2.2 Arrival Coordination

INT South 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 track.

1.2.3 Circuit Traffic

AIR shall inform INT South when the circuit becomes active and again when it is no longer active. INT South is responsible for informing FIN.

1.3 SSR Code Allocations

Manchester is allocated the local SSR code ranges 7350-7363 and 7370-7373. INT South is responsible for code allocation to all VFR/SVFR/non-standard IFR traffic and can issue this to GMP/AIR for departing traffic.

The following special purpose SSR codes are defined:

- 7365 – Manchester Barton Conspicuity
- 7366 – Monitoring Manchester Radar frequency
- 7367 – Student pilot monitoring Manchester Radar frequency

Chapter 2 Airspace

2.1 Classification

The Manchester 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/IFR as appropriate.

2.2 Standard Visual Routes

The following visual routes exist to reduce the amount of RTF for clearance delivery or Manchester Radar.

2.2.1 Departing Routes

Thelwall 2 Visual

Available only for runway 05L/R at 1300 ft and below.

Route: Cross M56 Motorway. Route north of M56 to Thelwall Viaduct VRP, then via the Northwest Transit Corridor. (Avoid overflying Lymm)

Macclesfield 1 Visual

Available only for runway 23L/R at 2500 ft and below. (Traffic is to remain below 1500 ft until the northern edge of Macclesfield)

Route: Left turn towards Alderley Edge Hill VRP. Route west then south of Alderley Edge Hill and join the Macclesfield Entry/Exit Lane at Prestbury Station. Keep the railway line on the left and leave the CTR via Macclesfield South VRP

2.2.2 Arriving Routes

Stretton 1 Visual

Available only for runway 05L/R at 1300 ft or below.

Route: From Stretton (Disused Aerodrome) VRP, route via M56 Motorway, keeping the Motorway on the left. Join left base Runway 05L.

Macclesfield 1 Visual

Available only for runway 23L/R at 2500 ft and below.

Route: From CTR Boundary east of Macclesfield VRP, route via the Macclesfield Entry/Exit Lane (keeping railway line on left) to disused Woodford Aerodrome. Join left base for Runway 23R/23L.

2.3 North West Transit Corridor (NWTC)

Along the western-most portion of the Manchester CTR, immediately adjacent to the Liverpool CTR, is a designated North West Transit Corridor (NWTC) which allows general aviation aircraft to pass through the airspace between Liverpool and Manchester. The NWTC is 4.65 NM wide and has an upper limit of 1500 ft AMSL; there are fillet extensions at the northern end along the Liverpool CTR boundary and the southern end towards the Winsford Flash VRP.

The corridor is designated as a Class G Restricted Area (EGR323) which permits flight by:

- Aircraft with a maximum certified take-off mass of up to 40,000 kg,
- At indicated airspeeds of up to 140 knots,
- In minimum visibility of 5 km*.

* Restriction not applicable to Police, HEMS, Search and Rescue, and Royal Flight Aircraft.

Pilots are advised to monitor Manchester INT 118.580 or Liverpool RAD 119.855 and to select the appropriate frequency monitoring code (listening squawk) of 7366 or 5060, respectively.

Manchester Radar (INT South) may provide UK FIS within the Northwest Transit Corridor.

2.4 Aerodromes in the Vicinity

Manchester Barton (EGCB), located 8.2NM NNW of Manchester (EGCC), is a small aerodrome offering 4 grass runways to primarily fixed wing traffic. It lies under Manchester CTA 5 (class D, base 2000 ft) with an ATZ in class G airspace 2NM around the Aerodrome Reference Point except where it borders the Manchester CTR. AFIS is provided at Barton. The Barton conspicuity squawk is 7365.

Fixed wing circuits operate at height 1000 ft to the north of the field, with overhead joins standard at height 1700 ft.

Helicopter traffic operates a circuit at height 500 ft to the north, with published entry/exit routes from Astley, Worsley, M60 Junction 9 and Irlam. Helicopter aiming points exist on the south of the field in the area termed “Manchester Heliport”.

Manchester Woodford (previously EGCD) is a disused airfield ESE of Manchester (EGCC) which closed in August 2011.

Hawarden (EGNR) is an airport in Wales, 10.4NM SW of Liverpool (EGGP). Full radar services are provided at this airport, with top-down provided by Liverpool Radar on VATSIM.

RAF Woodvale (EGOW) is a military aerodrome 31NM NW of Manchester (EGCC) with 2 asphalt runways. It operates predominantly training flights with fixed wing circuits to the north.

Huddersfield (EGND) also known as Crosland Moor, is a private airfield with a part-asphalt, part-grass runway north east of the Manchester CTR.

2.5 Visual Reference Points (VRPs)

The following VRPs are for use by aircraft operating to and from Manchester. The most up to date version of VRPs can be found via [NATS Digital Datasets](#).

| VRP | Coordinates |
|--------------------------|------------------------|
| Alderley Edge Hill | 531743.00N 0021244.00W |
| Burtonwood Services | 532500.00N 0023817.00W |
| Buxton | 531521.00N 0015446.00W |
| Congleton | 530954.00N 0021051.00W |
| Dovestones Reservoirs | 533215.00N 0015812.00W |
| Glossop | 532626.00N 0015504.00W |
| Heaton Interchange | 533300.00N 0021540.00W |
| Hilltop | 532030.00N 0021027.00W |
| Hulton Industrial Estate | 533206.28N 0022704.56W |
| Irlam Bridge | 532620.00N 0022447.00W |
| Jodrell Bank | 531411.00N 0021833.00W |
| Lamaload Reservoir | 531620.00N 0020233.00W |

| | |
|--------------------------------|------------------------|
| Leigh Flash | 532923.00N 0023335.00W |
| M56 Junction 10 | 532004.00N 0023417.00W |
| M56 Junction 11 | 531938.00N 0023837.00W |
| M6 Sandbach Services | 530822.00N 0022011.00W |
| M60/M62/M66 Heaton Interchange | 533300.00N 0021540.00W |
| Macclesfield South | 531410.00N 0020805.00W |
| Middlebrook Stadium | 533450.00N 0023208.00W |
| Rostherne | 532114.00N 0022307.00W |
| Sale Water Park | 532600.00N 0021810.00W |
| Stretton (Disused) Aerodrome | 532046.00N 0023135.00W |
| Swinton Interchange | 533124.00N 0022136.00W |
| Thelwall Viaduct | 532326.00N 0023021.00W |
| Whaley Bridge | 531935.00N 0015930.00W |
| Wigan Lakes | 533116.81N 0023740.26W |
| Winsford Flash | 531106.00N 0023044.00W |
| Winter Hill Mast | 533732.01N 0023053.74W |

Chapter 3 Helicopter Operations

3.1 Helicopter Routes

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

3.2 Helicopter Departures and Arrivals

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

Chapter 4 UK Flight Information Services (UK 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), INT South may provide UK FIS to traffic flying outside controlled airspace, normally only to traffic flying under the MTMA.

The adjacent units tasked with providing LARS are Warton, Shawbury, East Midlands, Humberside and Waddington. Consideration should be given to transferring UK FIS traffic which is not seeking to transit Manchester airspace 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 Manchester must not be given.

GLOSSARY

| Abbreviation | Section |
|--------------|---|
| AC | Area Control |
| ADC | Aerodrome Control |
| AIR | Air Controller (i.e. Tower Controller) |
| APC | Approach Control |
| CAP | CAA Publication |
| CTA | Control Area |
| CTR | Control Zone |
| DME | Distance Measuring Equipment |
| FIN | Final Director |
| FIS | Flight Information Service |
| FL | Flight Level |
| 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 |
| INT | Intermediate Director |
| Kts | Knots |
| MDI | Minimum Departure Interval |
| MHz | Megahertz |
| MPC | Manchester Prestwick Control (MPC/MTMA Sectors) |
| MSL | Minimum Stack Level |
| MTMA | Manchester TMA |
| NM | Nautical Mile |
| PC | Prestwick Control (MPC/MTMA Sectors) |
| RFC * | Released for Climb |
| RFD * | Released for Descent |
| RFL | Requested Flight Level |
| 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.