



# Aerodrome Manual

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Edition 3



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# Part 1

## Administration & Facilities

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## Section 1 - Introduction

### 1. PREFACE BY LICENSEE

The Manchester Airport Aerodrome Manual clearly and concisely describes the systematic approach to the operation of the aerodrome, demonstrating our commitment to managing the aerodrome safely and effectively.

Whilst accountability starts at the top of any organisation it is essential that all individuals understand their own responsibilities and accountabilities as defined within the manual.

The Aerodrome Manual is distributed to all Manchester Airport departments that have a role in the safe operation of the aerodrome. It is also distributed widely to our Airline Operators and Service Partners with Instructions and guidance to MA policy and procedures on the airfield.



Andrew Cowan  
*Chief Operating Officer, Manchester Airport*

### 2. PURPOSE OF THE AERODROME MANUAL & SAFETY MANAGEMENT MANUAL

The Aerodrome Manual contains details of the characteristics, policies, operational procedures for the safe operation of Manchester Airport in accordance with the Air Navigation Order and the Aerodrome Licence.

Article 211, Schedule 12 of the Air Navigation Order 2010 (ANO) governs the grant of Aerodrome licences by the Civil Aviation Authority (CAA).

Published in conjunction with the Aerodrome Manual is the Safety Management Manual (SMM). The SMM sets out details of the safety accountabilities of key people and the policies and methodology for managing aviation safety risks.

### 3. AERODROME MANUAL STRUCTURE

CAP168, Chapter 2 identifies the required content of the Aerodrome Manual. A large part of the CAP168 requirement is provided in this document, but to avoid duplication of information, where other MA documents provide the required information, then this manual will merely cross-refer to such other documents. These are listed in Bibliography, at paragraph 8.

**Part 1** of the Aerodrome Manual contains:

- Details of the key post holders for managing safety
- Information about the physical characteristics of the airfield

**Part 2** of the Aerodrome Manual contains:

- Airside Standing Instructions

These are more detailed explanations of the procedures used and facilities available.

**Part 3** of the Aerodrome Manual contains:

- The Emergency Orders

**4. AERODROME MANUAL DISTRIBUTION POLICY & PROCEDURE**

The Aerodrome Manual will be published annually in December, to become effective on January 1<sup>st</sup> of the following year, and will be valid for the entire calendar year. It is distributed electronically to a list of recipients representing organisations involved with the operation of aircraft and supporting services. The manual is also be viewable on the 'MAG World' Internet site [www.magworld.co.uk/airfieldoperations](http://www.magworld.co.uk/airfieldoperations) from where it may be downloaded as a PDF file.

Whilst Parts 1 & 2 are freely available to all, Part 3 (Emergency Orders) is available only to authorised parties via a password-protected login. To apply for access to the Emergency Orders, please send an email stating:

**Name, Job Title, Organisation, Reason for access**

To: [airfieldoperations@manairport.co.uk](mailto:airfieldoperations@manairport.co.uk)

Hard copies are not produced by MA for distribution, but may be printed for internal office use. Any hard copies printed by recipients of the electronic distribution are not controlled. Care must be taken to ensure that paper copies are disposed of or fully amended at the expiry date.

In order to guard against 'out of date' information being in circulation, the manual will have an expiry date included at the foot of each page. This will normally be the last day of the calendar year.

Significant changes to text from the preceding edition are highlighted in Yellow which appears light grey when printed in monochrome.

**5. AMENDMENTS**

The Aerodrome Manual is a 'live document' in the sense that it is maintained as a single entity incorporating all up to date information. There are no supplements added during the validity period - any amendments will trigger a re-issue of the entire document as a new version. When this happens an advisory email message will be sent to the distribution addressees, informing that the Aerodrome Manual has received an update, with a new version number, e.g. version 1, version 2, etc. The MAG World site will always carry the current version. The responsibility for noting and acting on such amendments rests with the manual holder.

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**6. GLOSSARY – TERMS & CONDITIONS*****Aerodrome***

Any area of land or water designed, equipped, set apart or commonly used to afford facilities for the landing and departure of aircraft and includes any area or space, whether on the ground, on the roof of a building or elsewhere, which is designed, equipped or set apart to afford facilities for the landing and departure of aircraft capable of descending or climbing vertically, but shall not include any area the use of which for affording facilities for the landing and departure of aircraft has been abandoned and has not been resumed.

***Aerodrome Elevation***

The elevation of the highest point of the landing area.

***Aerodrome Reference Point***

The aerodrome reference point is the geographical location of the aerodrome and the centre of its traffic zone where an ATZ is established.

***Apron***

A defined area on a land aerodrome provided for the stationing of aircraft for the embarkation and disembarkation of passengers, the loading and unloading of cargo and for parking.

***Category 1 (CAT 1) Operation***

A precision Instrument Approach and Landing with a decision height not lower than 200 feet and with either a visibility not less than 800m, or runway visual range (IRVR) not less than 550m.

***Category II (CAT II) Operation***

A precision instrument approach and landing with a decision height lower than 200ft but not lower than 100ft., and a runway visual range not less than 300m.

***Category IIIA (CAT IIIA) Operation***

A precision instrument approach and landing with either, a decision height lower than 100ft, or with no decision height and a runway visual range not less than 175m.

***Category IIIB (CAT IIIB) Operation***

A precision instrument approach and landing with either, a decision height lower than 50ft, or with no decision height and a runway visual range less than 175m but not less than 50m.

***Category IIIC (CAT IIIC) Operation***

A precision instrument approach and landing with no decision height and no runway visual range limitations.

***Cleared and Graded Area***

An area within a runway strip free from obstacles.

***Clearway***

An area at the end of the take-off run available and under the control of the aerodrome licensee, selected or prepared as a suitable area over which an aircraft may make a portion of its initial climb to a specified height.

***Instrument Approach Runway***

A runway intended for the operation of aircraft using non-visual aids providing at least directional guidance in azimuth adequate for a straight-in approach.

***Instrument Strip***

An area of specified dimensions, which encloses an instrument runway.

***Inter-Stand Clearway***

A corridor of apron between two stands, marked by paint markings intended to be kept clear so as to facilitate vehicle movement from the front to the back of a parked aircraft and to enable emergency access / egress.

***Manoeuvring Area***

That part of an aerodrome provided for the take-off and landing of aircraft and for the movement of aircraft on the surface, excluding the apron and any part of the aerodrome provided for the maintenance of aircraft.

***Movement Area***

That part of an aerodrome intended for the surface movement of aircraft including the manoeuvring area, aprons and any part of the aerodrome provided for the maintenance of aircraft.

***Non-Instrument Runway***

A runway intended for the operation of aircraft using visual approach procedures.

***Obstacle***

All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.

***Obstacle Free Zone***

A volume of airspace extending upwards and outwards from an inner portion of the strip to specified upper limits which is kept clear of all obstructions except for minor specified items.

***Precision Approach Runway***

A runway intended for the operation of aircraft using visual and non-visual aids providing guidance in both pitch and azimuth adequate for a straight-in approach. See Category 1, 2 and 3 Operations.

***Rapid Exit Taxiway (RET)***

A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimising runway occupancy times.

***Runway***

A defined rectangular area, on a land aerodrome prepared for the landing and take-off run of aircraft along its length.

***Runway End Safety Area (RESA)***

An area symmetrical about the extended runway centreline and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

***Shoulder***

An area adjacent to the edge of a paved surface so prepared as to provide a transition between the pavement and the adjacent surface for aircraft running off the pavement.

***Stopway***

A defined rectangular area at the end of the take-off run available, prepared and designated as suitable area in which an aircraft can be stopped in the case of a discontinued take-off.

***Strip***

An area of specified dimensions enclosing a runway and taxiway to provide for the safety of aircraft operations.

***Taxiway***

A defined path, usually paved, on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- a) Aircraft Stand Taxi lane - a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only (i.e. in a cul-de-sac).
- b) Apron Taxiway - a portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

***Taxiway Holding Position***

A designated position at which taxiing aircraft and vehicles may be required to hold in order to provide adequate clearance from a runway.

***Taxiway Intersection***

A junction of two more taxiways.

***Threshold***

The beginning of that portion of the runway usable for landing.

***Vehicle Runway Access Point (VRAP)***

Designated positions along the perimeter road in which vehicles are required to hold in order to provide adequate clearance from a runway until clearance is given by ATC.

***Vehicle Taxiway Access Point (VTAP)***

Designated positions along the perimeter road to define access on to the taxiways.

## 7. ABBREVIATIONS

AAIB	Air Accident Investigation Branch
ACL	Airport Co-ordination Ltd
ACN	Aircraft Classification Number
AD	Airside Directive (or may be Aerodrome in aeronautical context)
ADF	Automatic Direction Finder
ADM	Airfield Duty Manager
AFMM	Airfield Facilities and Maintenance Manager
AFS	Airport Fire Service
AGL	Aeronautical Ground Lighting
AIS	Aeronautical Information Service
ALARP	As Low As Reasonably Practicable
AOA	Airport Operators Association
AOC	Airline Operators Committee
AOC	Airfield Operations Centre
AOM	Airfield Operations Manager
AOP	Airfield Operations Procedure
AOR	Airfield Occurrence Report
APPM	Airfield Policy and Planning Manager
APPS	Approach Surface
ASD	Aerodrome Standards Division (CAA)
ASDA	Accelerate Stop Distance Available
ASI	Airside Standing Instruction
ASAM	Airfield Safety Assurance Manager
ASCO	Airfield Safety & Compliance Officer
ASMC	Airport Safety Management Council
ASOO	Airfield Senior Operations Officer
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATZ	Aerodrome Traffic Zone
ATSA	Air Traffic Services Assistant
AVDGS	Advance Visual Docking Guidance System
CAP	Civil Aviation Publication
CDA	Continuous Descent Approach
FSOM	Fire Service Operations Manager
CMC	Crisis Management Centre
CP	Critical Part
CS	Conical Surface
CTR	Control Zone (Air Traffic Control)
DME	Distance Measuring Equipment
DRDF	Digital Read out Direction Finder
EEDM	External Engineering Duty Manager
EMS	External Maintenance Supervisor
EMT	External Maintenance Team
EPM	Emergency Planning Manager
ETB	Engine Test Bay
FOD	Foreign Object Debris
GA	General Aviation
GMC	Ground Movement Control
GMP	Greater Manchester Police

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HSE	Health and Safety Executive
HoAOS&C	Head of Airfield Operation, Safety & Compliance
H24	24 hours a day, every day.
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
IHS	Inner Horizontal Surface
ILS	Instrument Landing System
IRVR	Instrumented Runway Visual Range
LDA	Landing Distance Available
LOP	Local Operating Procedure
LPA	Local Planning Authority
LSA	Localiser Sensitive Area
LVP	Low Visibility Procedures
MA	Manchester Airport plc
MAG CD	MAG Capital Delivery
MAFRS	Manchester Airport Fire and Rescue Service
MAG	Manchester Airports Group
MANTIS	Manchester Airport Noise Tracking Information System
MATS	Manual of Air Traffic Services
MASHCO	Manchester Airport Storage and Handling Company (Aviation Fuel)
MOTNE	Meteorological Observation Telecommunications Network Europe
MT	Motor Transport
NATS	National Air Traffic Services Ltd
NNI	Noise and Number Index
NOTAM	Notice to Airmen
NWAS	North West Ambulance Service
OFZ	Obstacle Free Zone
OHS	Outer Horizontal Surface
OLS	Obstacle Limitation Surface(s)
PAPI	Precision Approach Path Indicator
PCN	Pavement Classification Number
PCV	Passenger Carrying Vehicle
PHI	Preliminary Hazard Identification
PNdB	Perceived Noise Decibels
PPR	Prior Permission Required
PSM	Passenger Services Manager
PSZ	Public Safety Zone
RAP	Runway Access Point
RESA	Runway End Safety Area
RFFS	Rescue and Fire Fighting Services
RIV	Rapid Intervention Vehicle
RoSPA	Royal Society for the Prevention of Accidents
RTF	Radio Telephony
RVP	Rendezvous point
RVR	Runway Visual Range
SID	Standard Instrument Departure
SMM	Safety Management Manual
SMR	Surface Movement Radar
SMS	Safety Management System
SNOWTAM	Snow State Message to Airmen
SRG	Safety Regulation Group (CAA)
SSR	Secondary Surveillance Radar

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STAR	Standard Arrival Route
TAP	Taxiway Access Point
TDZ	Touch Down Zone
TOCS	Take-Off Climb Surface
TODA	Take Off Distance Available
TORA	Take Off Run Available
TS	Transitional Surface
UK AIP	UK Aeronautical Information Publication
ULD	Unit Load Device
VCR	Visual Control Room
VFR	Visual Flight Rules
VOR	VHF Omni Directional Radio Range
WIP	Work-In-Progress (Airside works areas or activities)
WM	Watch Manager (ATC)

**8. BIBLIOGRAPHY**

- CAP 32 UK Aeronautical Information Publication
- CAP 168 Licensing of Aerodromes
- CAP 232 Aerodrome Survey Information
- CAP 382 Mandatory Occurrence Reporting Scheme
- CAP 393 Air Navigation: The Order and the Regulations
- CAP 413 Radiotelephony Manual
- CAP 493 Manual of Air Traffic Services Part 1
- CAP 637 Visual Aids Handbook
- CAP 642 Airside Safety Management
- CAP 670 Air Traffic Services Safety Requirements
- CAP 683 The Assessment of Runway Surface Friction for Maintenance Purposes
- CAP 699 Standards for the Competence of RFFS Personnel
- CAP 700 Operational Safety Competencies
- CAP 726 Guidance for Developing and Auditing a Formal Safety Management System
- CAP 728 The Management of Safety
- CAP 738 Safeguarding of Aerodromes
- CAP 748 Aircraft Fuelling and Fuel Installation Management
- CAP 760 Hazard Identification, Risk Assessment and the Production of Safety Cases
- CAP 772 Birdstrike Risk Management
- CAP 790 Airfield Driver Standards
- CAP 791 On Aerodrome Developments
- Manchester Airport Emergency Orders
- Manchester Airport Safety Management System Manual
- Manchester Airport Fire and Rescue Service Orders
- Manchester Airport Engineering Procedures Manual

## Section 2 – Technical Administration

### 1. NAME AND ADDRESS OF AERODROME

Manchester Airport  
Olympic House  
Manchester Airport  
Manchester  
M90 1QX

### 2. NAME AND ADDRESS OF LICENSEE

Manchester Airport  
Olympic House  
Manchester Airport  
Manchester  
M90 1QX

### 3. LEGAL POSITION REGARDING AERODROME LICENSING

#### 3.1. Licensing Requirement

The Air Navigation Order requires that certain flights, in particular Public Transport Flights and Flying Training take place at a Licensed Aerodrome.

The Aerodrome Licence, granted by the CAA, provides for Public Use of the Aerodrome and shall be available to all persons under equal conditions at all times when the aerodrome is available for the take-off or landing of aircraft.

#### 3.2. Licence Compliance

The Head of Airfield Operations, Safety & Compliance is responsible for ensuring that Manchester Airport complies with the conditions of the Aerodrome Licence.

Specified licence conditions are below:

- Changes cannot be made to the licensed facilities without the prior approval of the Civil Aviation Authority (CAA) and under Condition 3 of the Aerodrome Licence Manchester Airport is responsible for informing the Civil Aviation Authority of any planned changes which may affect the Aerodrome Licence.
- In accordance with Condition 2 of the Aerodrome Licence, no aircraft shall take-off or land at Manchester unless such fire fighting and rescue services and such medical services and equipment as required in respect of such an aircraft in accordance with CAP 168 are provided.
- The Aerodrome is licensed for the take-off and landing of aircraft at night. The lighting system to be maintained to the standard that existed at the time the licence was last granted or renewed or varied to permit night use (whichever is the later). Such lighting, appropriate to the runway in use, shall be in operation at all times when aircraft are taking off or landing at the aerodrome at night, provided that minor temporary unserviceability not of a character likely to affect the safety of operations shall not preclude the take-off or landing of aircraft.

**3.3. Use of the Airport**

Subject to the conditions of the licence nothing shall be taken to confer on any person the right to use the Aerodrome without the consent of the licensee.

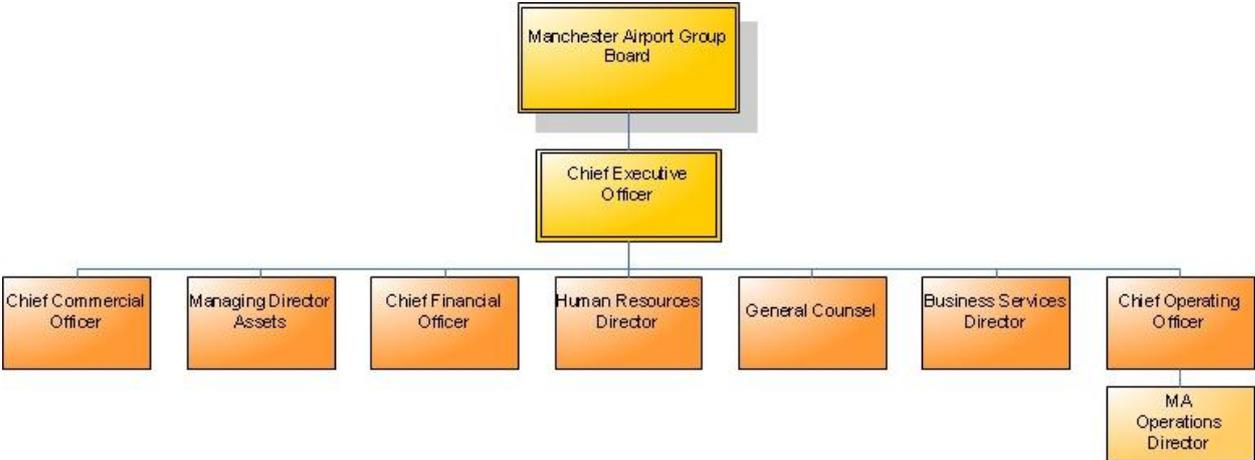
The MA Operations Director shall inform the Authority of the times during which the Aerodrome is to be generally available for the take-off and landing of aircraft, and of any changes in those times.

**4. KEY POST HOLDERS**

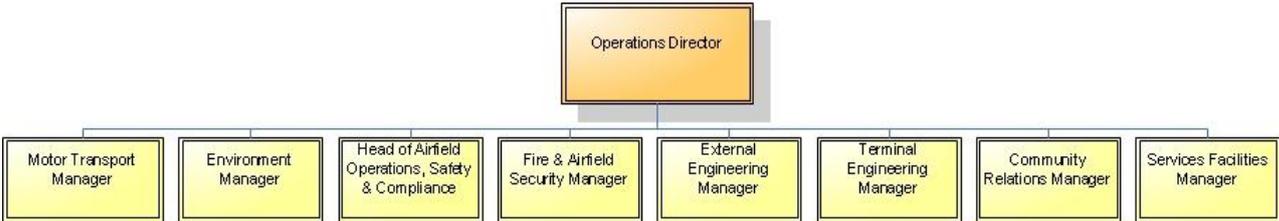
<b>Current Post holder</b>	<b>Position</b>	<b>Position authorised to deputise in the event of absence</b>
Andrew Cowan	Chief Operating Officer	Operations Director
Chris Formby	Operations Director <b>(Accountable Manager)</b>	HoAOS&C
Rad Taylor	Head of Airfield Operations, Safety & Compliance	Airfield Policy & Planning Manager
Steve Metcalfe	Fire & Airfield Security Manager	Fire Service Operations Manager
Rory McLoughlin	Airfield Policy and Planning Manager	HoAOS&C
Mike Harris	Airfield Operations Manager	Airfield Duty Manager
Diane Jack	Airfield Safety Assurance Manager	HoAOS&C
Paul Jones	General Manager ATC (NATS)	Manager Operations & Training (NATS)
Anne McPhie	Emergency Planning Manager	HoFASEPMT
Garry Cookson	Airfield Liaison Manager	HoAOS&C

5. MANAGEMENT REPORTING STRUCTURES

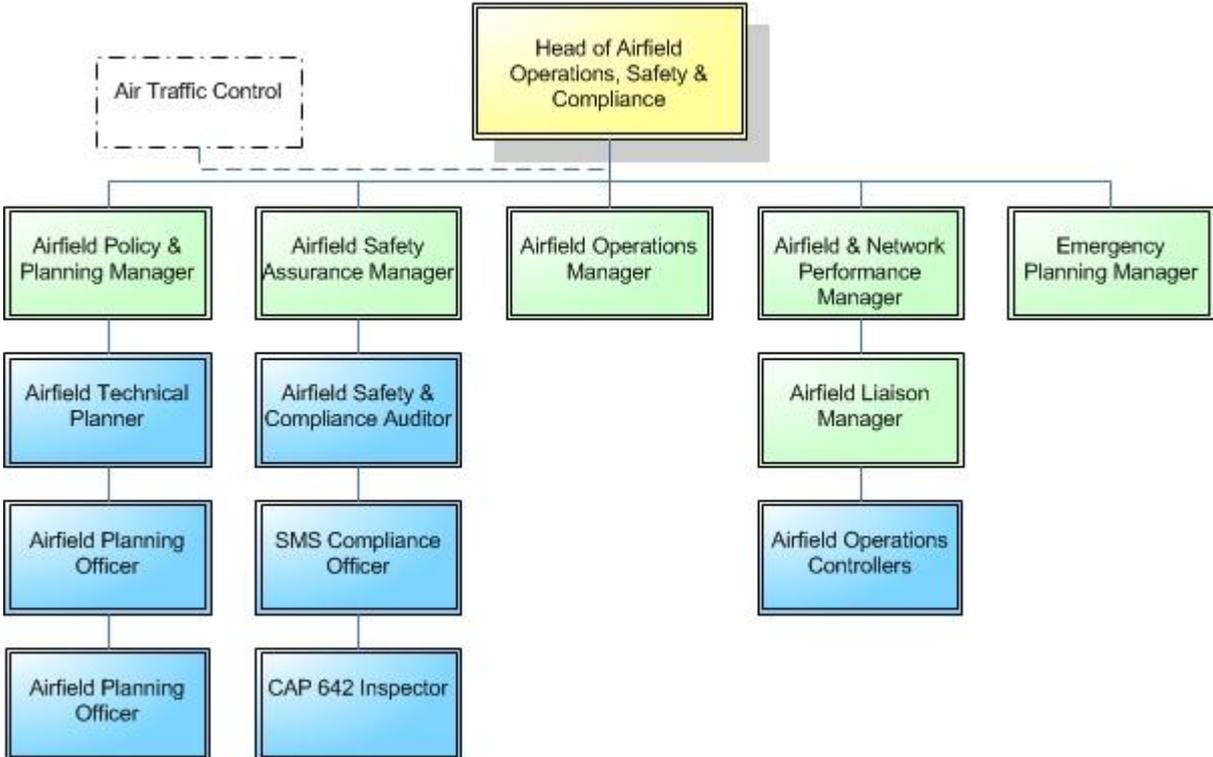
5.1. Manchester Airports Group



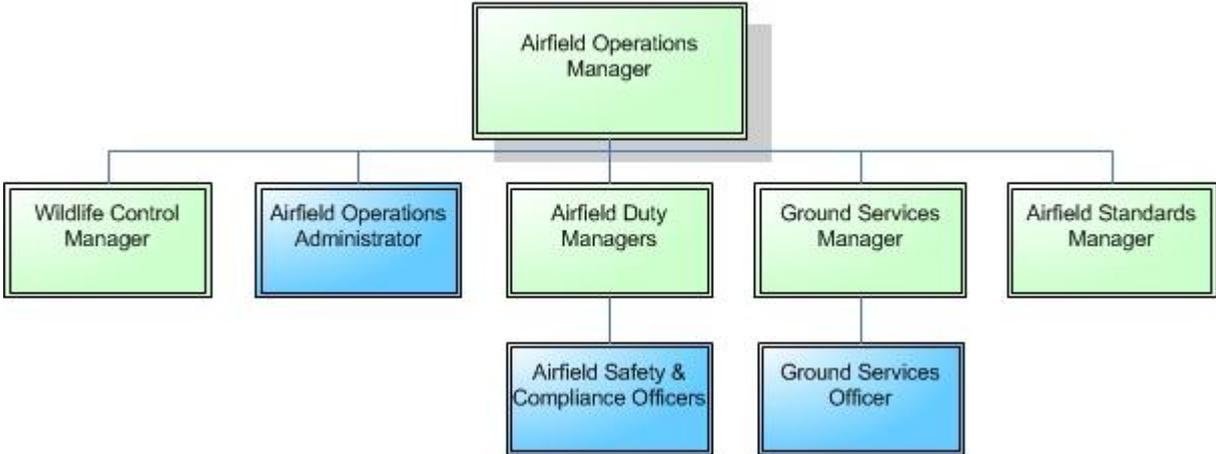
5.2. Manchester Airport Operations



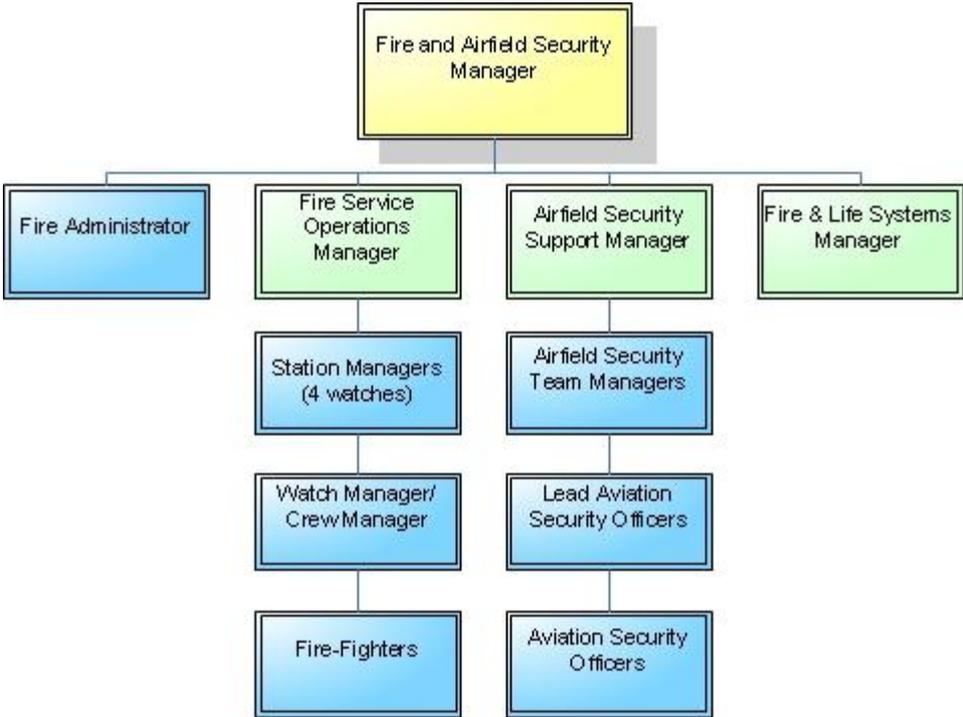
5.3. Airfield Operations, Safety & Compliance



5.4. Airfield Operations



5.5. Fire & Airfield Security



## Section 3 – Aerodrome Characteristics

**NOTE: Information in this Section must not be used for operational of flight planning purposes**

### 1. LOCATION AND ELEVATION

Aerodrome Reference Point                      Lat.     **532113.48N**  
(Mid point Runway 05L/23R)                      Long.    **0021629.82W**

Aerodrome Elevation                                **257ft**  
Apron Elevation                                        **238ft**

### 2. INS CHECKPOINTS

All INS checkpoints have been surveyed in compliance with the WGS84 specification. Comprehensive details are to be found in the UK AIP.

### 3. OBSTACLES INFRINGING STANDARD PROTECTED SURFACES

Obstacle	Location	Co-ordinates & height	Surface penetrated & amount	Where promulgated
Air Traffic Control Tower	Next to North side fire station	53.21.27.89N 002.16.46.33W Height 434 Feet AMSL	Inner Horizontal Surface	To be included in UKAIP/NOTAM
Chimney	On 'Airport Hotel' public house abeam Link Juliet	53.21.50.28N 002.15.28.83W 285 feet	23R Approach 24 feet	UK AIP Aerodrome Chart
Chimney	On terraced house Ringway Road	53.21.52.94N 002.15.02.63W 281 feet	05L Take-Off Climb 13 feet	Type A chart
SMR Antenna	On roof of ATC tower	53.20.27.30N 002.16.59.53W 316 feet	Transitional 4 feet	UK AIP Aerodrome Chart
DRDF antenna	South of Taxiway Alpha, near A4		Transitional 13 feet	UK AIP Aerodrome Chart
ATC Emergency Control Unit	South of Taxiway Alpha, near AE		Transitional 7 feet	UK AIP Aerodrome Chart
Tree (3553)	South of airfield	53.20.56.86N, 002.16.21.94W 255.35 feet	23L Approach 13 foot	UK AIP AD 2.10
Tree (3203)	South of airfield	53.21.05.47N, 002.13.54.38W 344.85 feet	Inner Horizontal 11 foot	UK AIP AD 2.10
National Grid Pylon	South of airfield	531905.19N 0021705.85W 397 feet	Inner Horizontal	UK AIP AD 2.10

## 4. LICENCE VARIATIONS

	Variation	Non-compliance
1	The Airport Hotel public house penetrates the Approach Surface for Runway 23R by 7.21 metres	CAP 168, Chapter 4, paragraph 3.
2	The airport boundary fence adjacent to the Airport Hotel infringes the Instrument Strip for Runway 05L-23R by 44 metres	CAP 168, Chapter 3, paragraph 4.
3	The westernmost chimney of the Airport Hotel penetrates the Runway 23R Transitional Surface by 7.3 metres	CAP 168, Chapter 4, paragraph 4.
4	The ILS Glideslope aerial masts (13 m high) and monitor aerials (6.4 m high) are located within the Runway 05L- 23R Instrument Strip at a distance of 120 metres from the runway centreline.	CAP 168, Chapter 3, paragraph 4.
5	The DRDF aerial and oscillator penetrate the northern side Transitional Surface for Runway 05L-23R by 4.3 and 3.2 metres respectively.	CAP 168, Chapter 4, paragraph 4.
6	The ATC Emergency Control Unit penetrates the northern side Transitional Surface for Runway 05L-23R by 2.3. metres.	CAP 168, Chapter 4, paragraph 4.
7	Parts of the apron roadway system lie within the adjacent taxiway and taxilane strips. Distance from Taxiway/taxilane centreline to edge of roadway varies from 33 to 38.5 metres along taxiways Juliet, Lima, and Mike.	CAP 168, Chapter 3, paragraph 7.6
8	The soft ground arrester bed for Runway 23R lies within the Runway End Safety Area	CAP 168, Chapter 3, paragraph 5
9	The pavement slopes on Stands 100 and 101 have localised gradients of 1.5 % from the centre of the stands towards the adjacent taxiway Delta.	CAP 168, Chapter 3, paragraph 10.3
10	Runway 05L-23R has a convex ‘hump-backed’ profile, the highest point of which is abeam Taxiway Links Golf and Hotel Zulu. Non-compliant related issues are sight distances and distance between slope changes. Details are as follows: <ol style="list-style-type: none"> <li>1. Runway 05L forward sight distance from an eye level 3 metres above the runway surface is less than 1200 metres between 1370m and 1715m from start of TORA.</li> <li>2. Runway 23R forward sight distance from an eye level of 3 metres above the runway surface is less than 1200m between 138m and 478m from start of TORA.</li> <li>3. The requirement for distance between slope changes are not met in two areas: either side of Taxiway Links Golf and Hotel Zulu. (At Taxiway Links Foxtrot and Hotel).</li> </ol> <p>In addition, the last quarter of Runway 23R has a downward longitudinal slope of 0.88%.</p>	CAP 168, Chapter 3, paragraph 4.7.
11	Taxiway Juliet is designated as a Code E taxiway and used by Code E aircraft without restriction. The lateral separation distance between the centreline of Runway 05L-23R and the centreline of Taxiway Juliet reduces to 171 metres from a point abeam Link G (at G2) and continuing to abeam Link Juliet-Alpha. (The required separation distance for Code E is 182.5 metres, and for Code D 176 metres).	CAP 168, Chapter 3, Table 3.4
12	Due to the general topography of the airfield site it is not practicable to make the longitudinal slopes of Runway 05L-23R access taxiways Delta and Foxtrot compliant with the requirements of CAP 168 Chapter 3, paragraph 7.3.1.a). The slopes exceed the minimum standard of 1.5%, the maximum gradient being 2.2% on Foxtrot, and 1.7% on Delta.	CAP 168 Chapter 3, paragraph 7.3.1.a.

## 5. MANOEUVRING AREA SURFACES

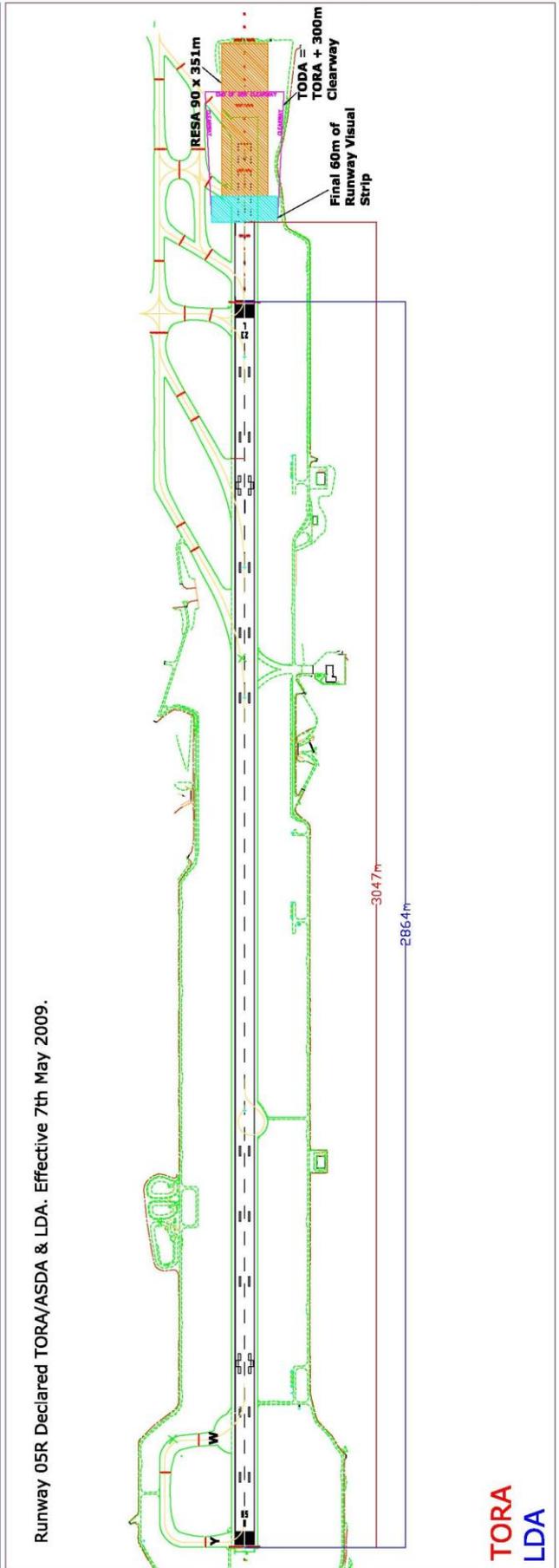
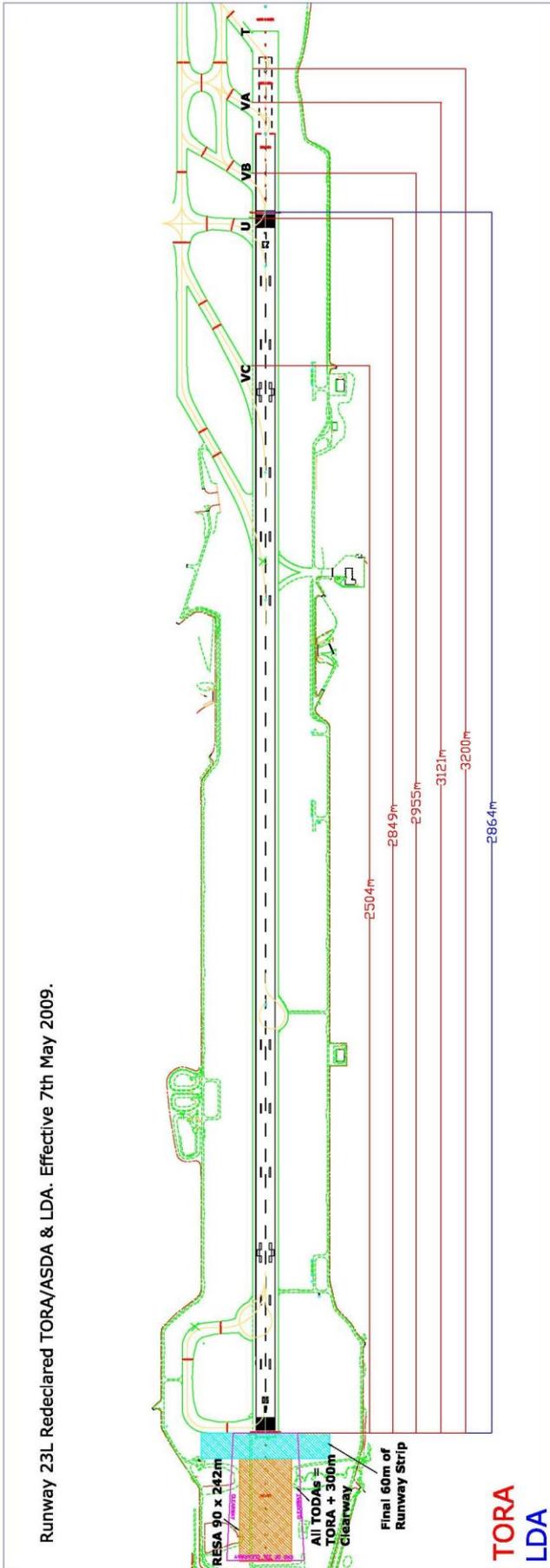
## 5.1. Runways

Runway	05L	23R	05R	23L
Hdg ° (true)	051°	231°	051°	231°
Length (m)	3048	3048	3047	3200
Width (m)	46	46	45	45
Starter Extension	None	None	None	150m x 30m
Surface	Concrete/ Asphalt		Concrete/Grooved Asphalt	
Slope overall	0.49% up	0.49% down	0.46% up	0.48% down
Longitudinal Slopes	Locally less than 0.25% Change between consecutive slopes less than 1.5% Maximum rate of change of gradient over 30m is 0.41%.		Local slopes less than 1.25%. Change between consecutive slopes less than 1.5%. Maximum rate of change of gradient over 30m is 0.1%.	
Sightlines	Owing to the humpbacked profile the full length of the runway may not be visible from the flight deck of an aircraft lined up at the end of the runway. The high point of the runway is abeam link golf.		Full length of the runway is visible from any point.	
Runway PCN	94/F/C/W/T	94/F/C/W/T	79/F/C/W/T	79/F/C/W/T
Shoulders	23m each side		7.5m inner each side (paved), plus 7.5 outer each side (stabilised grass)	
Shoulder PCN	25% of runway strength		42/R/C/W/T	
Stopway	None declared		None declared	
Threshold Elevation	212 feet	249 feet	186 feet	227 feet
TORA	3014m	2897m	3047m	3200m
TODA	3229m	3197m	3347m	3500m
ASDA	3014m	2897m	3047m	3200m
LDA	2587m	2714m	2864m	2864m

RUNWAY END SAFETY AREAS (RESA)				
Runway	05L	23R	05R	23L
Undershoot RESA distance (ref Ch3 Para 5.2, 5.3)	517m	390m	242m	534m
Overrun RESA distance (ref Ch3 Para 5.2, 5.3)	240m	240m	351m	242m
Runway Slope - first quarter (ref Ch3 Para 3.3.3)	Less than 0.8%	0.88%	Less than 0.8%	Less than 0.8%
RESA Slopes (ref Ch3 Para 5.6 5.7 and 5.8)	Less than 5%	Less than 5%	Less than 5%	Less than 5%
Nav aids in RESA (ref Ch3, 5.9 & 6)	No	Small frangible monitor aerial.	Small frangible monitor aerial.	No
Delethalisation in Graded Area (ref Ch3 Para 4.1.3)	Yes	Yes	Yes	Yes
Delethalisation of full RESA (ref Ch3 Para 5.4 implied)	Yes	Yes	Yes	Yes
Notes	Frangible ILS monitor aerial and plinth within declared RESA.	Soft ground arrester bed lies within minimum RESA for 23R. Does not meet CAP 168, Ch3 Para 5.5. Listed as Variation No 8.		
Clearway	230m	303m	300m	300m
Strip Dimensions	300m wide 60m beyond pavement ends.		300m wide 60m beyond pavement ends <b>Note</b> - Strip narrows to 56m on south Side of starter extension.	



5.1.2 Illustration of declared distances and Runway End Safety Areas - Runway 05R-23L



## 5.2 Northside Taxiway System

Designator	ICAO Code	TWY or ASTL	Width	PCN	Centreline to object clearance*	Amplifying Comments
Alpha	E	TWY	23m	95/R/C/W/T (C-D) 82R/C/W/T Between A1 & A2. 66 F/C/W/T between A2 and B), 72/C/X/W/U TWY B to TWY C	49m	
Bravo	E	TWY	23m	95/R/C/W/T (B2-B3) 107/R/C/W/T (B4-B5)	49m 47.5m	
Charlie	E	TWY	23m	95/R/C/W/T	47.5m	
Delta (abeam STD219- 216)	E	ASTL	23m	95/R/C/W/T	47.5m	Strip incorporates Apron Road at the rear of Stand 251-247
Delta (abeam STD209- 215)	E	ASTL	23m		46.5m	Strip incorporates Apron Road
Delta (abeam STD203- 208)	E	ASTL	23m		50.5m	Strip incorporates Apron Road
Delta (R – D4)	E	ASTL	23m	107 R/C/W/T	42.5m	Strip incorporates Apron Road System
Delta (D4 – D1)	F	TWY/ASTL	25m	107 R/C/W/T	55m/50.5m	
Foxtrot	E	TWY	25m	To be confirmed	49m	
Juliet	E	TWY	23m	72/R/C/W/T	49m	Twy J Strip between J5 & J4 incorporates the Apron Road System.
Juliet Echo	C	ASTL	23m	56/R/C/W/T	32m	Strip incorporates Apron Road. Available for aircraft up to and including B757. Strip meets Code C Taxiway Requirements, but not Code D Apron Stand Taxilane requirements.
Juliet Foxtrot	D	ASTL	23m	72/R/C/W/U	38m	Strip incorporates Apron Road System
Golf G1-G5	D	ASTL	23m	95/R/C/W/T	36m	
GolfG4 – abeam SRD 58)	C	ASTL	18m	TBC	26.5m	
Hotel	E	TWY	23m	95/R/C/W/T	47.5m	
Kilo	F	TWY	25m	95/R/C/W/T	55m	
Lima	E	ASTL	23m	95/R/C/W/T	42.5m	Strip incorporates Apron Road System.
Romeo	E	ASTL	23m	107/R/C/W/T	42.5m or more	Strip incorporates Apron Road System.
November (D-N3)	E	ASTL	23m	95/R/C/W/T	46.5m	
November Alpha	E	ASTL	23m	95/R/C/W/T	42.5m	
Papa	E	ASTL	23m	97/R/B/W/T	42.5m	
Quebec	E	TWY	23m	97/R/B/W/T	42.5m	By-pass route across stands 61 to 64 Right
RSS Taxiway	B	TWY	10.5m	TBC	19.5m	

\*Taxiway to object clearance is based upon the nearest non-mobile object including parked aircraft. Airside roadways and vehicles driving on these may exist within this clearance.

## 5.3 Southside Taxiway System

Designator	Code	TWY or ASTL	Pavement Width	PCN	Centreline to object clearance	Amplifying Comments
Bravo Zulu	E	TWY	23m	79/R/C/W/T	47.5m	
Delta Zulu	E	TWY	23m	79/R/C/W/T	47.5m	
Foxtrot Zulu	E	TWY	23m	79/R/C/W/T	47.5m	
Hotel Zulu	E	TWY	23m	79/R/C/W/T	47.5m	
Victor	E	TWY	23m	79/R/C/W/T	49m	A380 capable (V1-V5)
Victor Alpha	E	TWY	23m	79/R/C/W/T	49m	A380 capable
Victor Bravo	E	TWY	23m	79/R/C/W/T	47.5m	
Victor Charlie	E	TWY	23m	79/R/C/W/T	47.5m	
Victor Delta	E	TWY	23m	79/R/C/W/T	47.5m	
Uniform	E	TWY	23m	79/R/C/W/T	47.5m	
Whisky	E	TWY	23m	79/R/C/W/T	47.5m	
Yankee	E	TWY	23m	79/R/C/W/T	47.5m	
Tango	E	TWY	23m	79/R/C/W/T	49m	A380 capable
Sierra	D	TWY	23m	79/R/C/W/T	47.5m	Code D due Runway/Taxiway Centreline Separation.

## 5.4 Runway 05L/23R Links, Exits &amp; Rapid Exit Taxiways

Designator	Code	TWY or ASTL	Pavement Width	PCN	Strip Width	Amplifying Comments
Juliet	E	TWY	23m	82/R/C/W/T	47.5m	
Mike	F	TWY	25m	61/R/B/W/T	55m	
Hotel	E	TWY	23m	95/R/C/W/T	47.5m	
Golf	E	TWY	23m	95/R/C/W/T	47.5m	
Foxtrot	E	TWY	23m	To be confirmed	47.5m	Longitudinal slope is 1.7%
Delta	E	TWY	23m	To be confirmed	47.5m	Longitudinal slope is 2.2%
Bravo Delta	E	TWY	23m	95/R/C/W/T	47.5m	
Bravo	E	TWY	23m	107 R/C/W/T	49m	
Alpha Echo	E	TWY	23m	97/R/B/W/T	49m	Total Pavement Width is 25m, however centreline is not equidistant from pavement edge, therefore not compliant with Code F Pavement Width Requirements.
Alpha Foxtrot	E	TWY	23m	56/R/C/W/T	47.5m	
Alpha Golf	F	TWY	25m	To be confirmed	55m	
Alpha	E	TWY	23m	82/R/C/W/T	47.5m	

## 5.5 Runway and Taxiway Access Points

Vehicle holding points have been established on roadways leading directly onto runways and taxiways from points on the perimeter of the airfield. There are two types of holding position.

### Vehicle Runway Access Point (VRAP)

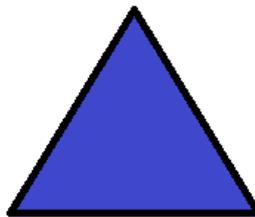
There are five of these, each with a unique designator relating to a nearby landmark such as a crash gate. They are shown as a



Symbol on the Manoeuvring Area Drivers Map. Signage at each of these points will show the unique designator in every case. The ground marking is a 'Pattern A' runway holding point marking, suitably reduced in scale for road use. There are road guard lights ('wig-wags') adjacent to the ground marking.

### Vehicle Taxiway Access Point (VTAP)

There are seven of these, each with a unique designator relating to a nearby landmark such as a crash gate. They are shown as a



Symbol on the Manoeuvring Area Drivers Map. Signage at each of these points will show the unique designator in every case. The ground marking is a double white line. Vehicles holding at the ground marking will be clear of the taxiway strip.

## 5.6 AIRCRAFT STAND PROVISION

Manchester Airport has a complex aircraft parking stand arrangement spread across 3 terminals, with contact and remote stands. There are 95 numbered stands, some with sub-divisions known as Multi-Aircraft Ramp System (or MARS). There are a variety of stand dimensions and configurations, with complex interdependencies between adjacent stands according to the size of aircraft parked. The stands can accommodate a total of 124 aircraft, reducing to 95 aircraft when the maximum number of wide-bodied types are parked.

Stand Number	Terminal Contact or Remote	Stand Entry Guidance provided	Notes	Stand Number	Terminal Contact or Remote	Stand Entry Guidance provided	Notes
1	1	SAFEDOCK		47	3	SAFEDOCK	
2	1	SAFEDOCK		48	3	SAFEDOCK	
4	1	SAFEDOCK		49	3	SAFEDOCK	
5	1	SAFEDOCK		50	3	SAFEDOCK	
6	1	SAFEDOCK		51	3	SAFEDOCK	
7	1	SAFEDOCK		52	3	SAFEDOCK	
8	1	SAFEDOCK		53	3	SAFEDOCK	
9	1	SAFEDOCK		54	3	SAFEDOCK	
10	1	SAFEDOCK		55	3	SAFEDOCK	
11	1	SAFEDOCK		56	R	M †	
12	1	SAFEDOCK		57	R	M †	
12L	1	SAFEDOCK		58	R	M †	
12R	1	SAFEDOCK		61L	R	M †	
15	1	SAFEDOCK		61C	R	M †	Situated on Taxiway QUEBEC
16	3	SAFEDOCK		61R	R	M †	Situated on Taxiway QUEBEC
17	3	SAFEDOCK		62	R	M †	Situated on Taxiway QUEBEC
18	3	SAFEDOCK		62L	R	M †	Situated on Taxiway QUEBEC
21	1	SAFEDOCK		62R	R	M †	Situated on Taxiway QUEBEC
22	1	SAFEDOCK		63	R	M †	Situated on Taxiway QUEBEC
23	1	SAFEDOCK		63L	R	M †	Situated on Taxiway QUEBEC
24	1	SAFEDOCK		63R	R	M †	Situated on Taxiway QUEBEC
25	1	SAFEDOCK		64	R	M †	Situated on Taxiway QUEBEC
26	1	SAFEDOCK		64L	R	M †	Situated on Taxiway QUEBEC
27	1	SAFEDOCK		64R	R	M †	Situated on Taxiway QUEBEC
28	1	SAFEDOCK		65	R	M †	
29	1	SAFEDOCK		65L	R	M †	
31	1	SAFEDOCK		65R	R	M †	
32	1	SAFEDOCK		66	R	M †	
41	3	SAFEDOCK		66L	R	M †	
42	3	SAFEDOCK		66R	R	M †	
43	3	SAFEDOCK		67	R	M †	
44	3	SAFEDOCK		67L	R	M †	
44L	3	SAFEDOCK		67R	R	M †	
44R	3	SAFEDOCK		68	R	M †	

## Section 3– Aerodrome Characteristics

68L	R	M †		101	R	M †	
68R	R	M †		201	2	M †	
69	R	M †		202	2	SAFEDOCK	
69L	R	M †		202L	2	SAFEDOCK	
69R	R	M †		203	2	SAFEDOCK	
70	R	M †		204	2	SAFEDOCK	
70L	R	M †		204L	2	SAFEDOCK	
70R	R	M †		205	2	SAFEDOCK	
71	R	M †		206	2	SAFEDOCK	
71L	R	M †		206L	2	SAFEDOCK	
71R	R	M †		207	2	SAFEDOCK	
72	R	M †	Currently closed	208	2	SAFEDOCK	
72L	R	M †	Currently closed	208L	2	SAFEDOCK	
72R	R	M †	Currently closed	209	2	SAFEDOCK	
73	R	M †	Currently closed	210	2	SAFEDOCK	
73L	R	M †	Currently closed	210L	2	SAFEDOCK	
73R	R	M †	Currently closed	211	2	SAFEDOCK	
74	R	M †	Currently closed	212	2	SAFEDOCK	
74L	R	M †	Currently closed	212L	2	SAFEDOCK	
74R	R	M †	Currently closed	213	2	SAFEDOCK	
80	R	M †	Situated on Taxiway PAPA	214	2	SAFEDOCK	
81	R	M †		214L	2	SAFEDOCK	
81L	R	M †		215	2	SAFEDOCK	
81R	R	M †		216	R	SAFEDOCK	
82	R	M †		216R	R	M †	
82L	R	M †		217	R	M †	Currently closed
82R	R	M †		218	R	M †	Currently closed
83	R	M †		218R	R	M †	Currently closed
83L	R	M †		219	R	M †	Currently closed
83R	R	M †		231	R	M †	Situated on Taxiway PAPA
84	R	M †		233	R	M †	
84L	R	M †		235	R	M †	
84R	R	M †		237	R	M †	
85	R	M †	Currently closed	239	R	M †	
85L	R	M †	Currently closed	241	R	M †	
85R	R	M †	Currently closed	243	R	M †	
86	R	M †	Currently closed	245	R	M †	Currently closed
86L	R	M †	Currently closed	247	R	M †	Currently closed
86R	R	M †	Currently closed	249	R	M †	Currently closed
100	R	M †					

M † = MARSHALLER

## 5.7 STAND DESIGN AND LAYOUT.

The present stand characteristics have evolved over many years of development without any consistent policy or design requirements. In 2005 a new set of requirements for stand configuration was introduced. All stand construction from this date will comply with these requirements. Furthermore, they will be applied whenever existing stands are redeveloped or reconfigured.

### 5.7.1 STAND ALLOCATION

Stand Allocation is undertaken by MA Airfield Control using a software application called CHROMA ASSIGN. The CHROMA ASSIGN database contains information about the capacity and interdependencies of the stand. The schedule of flights is then applied and CHROMA ASSIGN allocates stands according to two sets of parameters:

The principal parameters are:

- The availability of a stand at the expected arrival and /or departure time of a flight
- The capacity of the stand to accommodate the aircraft type

The secondary parameters are:

- The terminal allocated to the airline operator
- Any special border control and security considerations
- Agreed policy on remote vs. contact stands
- Any other parameters included in the Stand Allocation Policy, which is a service–driven agreement between MA and its airline customers.

The allocation may be manually overridden by Airfield Controllers in order to tactically manage capacity. The application will however warn the user of a potential safety conflict between aircraft on adjacent stands with overlapping occupancy times.

In order to minimise the hazards associated with hot brakes and other technical faults, aircraft subject to an emergency response involving the Airport Fire Service will be allocated a remote stand by Airfield Control. The Airport Fire Service will instruct pilots to keep anti-collision lights illuminated until such time they are satisfied the aircraft is safe to be approached by ground personnel. This policy does not apply to aircraft reporting a Medical Emergency.

### 5.7.2 AIRCRAFT PARKING & DOCKING

**Docking guidance of aircraft by Marshalling signals is the sole responsibility of MA Airfield Operations.**

**Docking guidance of aircraft by SAFEDOCK is the responsibility of Handling Agents.**

Docking of an aircraft under tow is the responsibility of the aircraft operator or the party contracted to tow the aircraft.

### 5.7.3 Visual Docking Guidance Systems (A-VDGS)

SAFEDOCK A-VDGS is currently employed to guide aircraft to the correct parking position on most contact stands and some remote stands. **This is a fully automated system which recognises the aircraft type and provides precision docking guidance once activated by ground handling agent staff.**

### 5.7.4 SAFETY INSTRUCTION FOR PILOTS

***PILOTS MUST NOT ENTER ANY PART OF A STAND UNLESS THE A-VDGS HAS BEEN ILLUMINATED OR A MARSHALLER IS PRESENT AT THE HEAD OF THE STAND.***

## 5.8 TABLE OF FACILITIES

Stand No	Manufacturer	Installation	Rated Power Output	Single/Dual	28vdc Converter available?	Can be used on L & R?
1	AXA	Pantograph	90kva	Single	Yes	
2	AXA	Pantograph	90kva	Single	Yes	
4	AXA	Pantograph	90kva	Single	Yes	Centre only
5	AXA	Pantograph	90kva	Single	Yes	
6	AXA	Pantograph	2 x 90kva	Dual	No	
7	AXA	Pantograph	90kva	Single	Yes	
8	AXA	Pantograph	2 x 90kva	Dual	No	
9	AXA	Pantograph	90kva	Single	Yes	
10	AXA	Pantograph	2 x 90kva	Dual	Yes	
11	AXA	Pantograph	90kva	Single	Yes	
12	AXA	Pantograph	4 x 90kva	Quad	No	
12L	AXA	Pop-up	90 Kva	Single	No	
12R	AXA	Pop-up	90 Kva	Single	No	
15	AXA	Pantograph	90kva	Single	No	
16	AXA	Pantograph	90kva	Single	Yes	
17	AXA	Pantograph	90kva	Single	Yes	
18	AXA	Pantograph	90kva	Single	No	
21	AXA	Pantograph	90kva	Single	No	
22	AXA	Pantograph	2 x 90kva	Dual	No	
23	AXA	Pantograph	2 x 90kva	Dual	No	
24	AXA	Pantograph	90kva	Single	No	
25	AXA	Pantograph	90kva	Single	No	
26	AXA	Pantograph	2 x 90kva	Dual	No	
27	AXA	Pantograph	2 x 90kva	Dual	No	
28	AXA	Pantograph	90kva	Single	No	
29	AXA	Pantograph	2 x 90kva	Dual	No	
31	AXA	Pantograph	2 x 90kva	Dual	No	
32	AXA	Pantograph	2 x 90kva	Dual	No	
41	AXA	Pantograph	90kva	Single	No	
42	AXA	Pantograph	2 x 90kva	Dual	No	
43	AXA	Pantograph	2 x 90kva	Dual	Yes	
44	AXA	Airbridge	2 x 90kva	Dual	No	Not 44L and 44R
47	None					
48	AXA	Airbridge	90kva	Single	No	
49	AXA	Airbridge	2 x 90kva	Dual	No	
50	AXA	Pantograph	90kva	Single	Yes	
51	AXA	Pantograph	90kva	Single	Yes	
52	AXA	Pantograph	90kva	Single	Yes	
53	AXA	Pantograph	90kva	Single	Yes	
54	AXA	Airbridge	90kva	Single	No	
55	AXA	Airbridge	2 x 90kva	Dual	No	
56	None					
57	None					
58	None					
61	None					
62	None					
63	None					
64	None					
65	None					
66	AXA	Pantograph	90kva	Single	No	Centre only
67	AXA	Pantograph	90kva	Single	No	Centre only
68	AXA	Pantograph	90kva	Single	No	Centre only
69	AXA	Pantograph	90kva	Single	No	Centre only
70	AXA	Pantograph	90kva	Single	No	Centre only
71	AXA	Pantograph	90kva	Single	No	Centre only
72	AXA	Pantograph	2 x 90kva	Dual	No	Stand not in use

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73	AXA	Pantograph	2 x 90kva	Dual	No	Stand not in use
74	AXA	Pantograph	2 x 90kva	Dual	No	Stand not in use
80	None					
81	AXA	Pantograph	2 x 60kva	Dual	No	Centre only
82	AXA	Pantograph	2 x 90kva	Dual	No	Centre only
83	AXA	Pantograph	2 x 60kva	Dual	No	Centre only
84	AXA	Pantograph	90kva	Single	No	Centre only
85	AXA	Pantograph	2 x 90kva	Dual	No	Stand not in use
86	AXA	Pantograph	2 x 90kva	Dual	No	Stand not in use
100	AXA	Pop Up	90kva	Single	Yes	
101	AXA	Pop Up	90kva	Single	Yes	
200	AXA	Pantograph	90kva	Single	No	
201	AXA	Pantograph	90kva	Single	No	
202	AXA	Pantograph	2 x 90kva	Dual	No	
203	Jetway	Airbridge	90kva	Single	No	
204	Jetway	Pantograph	2 x 90kva	Dual	No	
205	Jetway	Airbridge	90kva	Single	No	
206	AXA	Pantograph	2 x 90kva	Dual	No	
207	Jetway	Pantograph	90kva	Single	No	
208	Jetway	Pantograph	2 x 90kva	Dual	No	
209	Jetway	Pantograph	90kva	Single	No	
210	Jetway	Pantograph	2 x 90kva	Dual	No	
211	Jetway	Airbridge	90kva	Single	No	
212	Jetway	Pantograph	2 x 90kva	Dual	No	
213	Jetway	Airbridge	90kva	Single	No	
214	Jetway	Airbridge	2 x 60kva	Dual	No	
215	Jetway	Airbridge	2 x 60kva	Dual	No	
216	AXA	Pantograph	90kva	Single	No	
217	AXA	Pantograph	90kva	Single	No	Stand not in use
218	AXA	Pantograph	90kva	Single	No	Stand not in use
219	AXA	Pantograph	2 x 60kva	Dual	No	Stand not in use
231	None					
233	AXA	Pantograph	90kva	Single	No	
235	AXA	Pantograph	90kva	Single	No	
237	AXA	Pantograph	90kva	Single	No	
239	AXA	Pantograph	90kva	Single	No	
241	AXA	Pantograph	90kva	Single	No	
243	AXA	Pantograph	90kva	Single	No	
245	AXA	Pantograph	90kva	Single	No	Stand not in use
247	AXA	Pantograph	90kva	Single	No	Stand not in use
249	AXA	Pantograph	90kva	Single	No	Stand not in use

Terminal 1
Terminal 2
Terminal 3
Remote

## 5.9 Taxiway manoeuvring restrictions\*

Taxiway	Manoeuvring Restrictions
<b>A</b>	None
<b>C</b>	Turning C2 to D3 unlit. Max A330.
<b>G</b>	G1 available to B767 and smaller from west, B737 and smaller from east. J to G1 from east unlit.
<b>H</b>	None
<b>J</b>	None
<b>JE</b>	Not available to B757 whilst B767 on JF
<b>JF</b>	Maximum Code C with eastbound traffic holding at B7
<b>K</b>	None
<b>L</b>	Not available to B777 under own power
<b>N</b>	No restrictions
<b>R</b>	No restrictions
<b>S</b>	When V or 23L Starter Extension is in use - Max Code D Max Code D with Code E at VB2
<b>T</b>	Blocked when aircraft holding at S1 westbound
<b>U</b>	None
<b>V</b>	No turn from V onto VB and T.
<b>W/Y</b>	Maximum number of aircraft to be held in loop between W1 and Y1: 3 Code E, 4 Code D or 5 Code C

See also Part 2, ASI 11 for restrictions applying to Very Large Aircraft.

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## Section 4 – Visual Aids

### 1. INTRODUCTION

This section describes the physical characteristics of the Visual Aids provided at Manchester Airport.

### 2. GENERAL

- All visual aids will comply with the requirements of ICAO Annex 14, CAP168 and CAP637.
- Lighting will be operated in accordance with the requirements of CAP168 using control systems that comply with CAP670.
- All visual aids are subject to inspection for damage, deterioration and serviceability requirements as described in this Manual.
- All visual aids are maintained, repaired and replaced in accordance with the requirements of CAP168
- The failure of any visual aid will be promulgated by NOTAM, ATIS, RTF as appropriate. CAA approved temporary visual aids may be used if required
- Comments made by operators and operational staff concerning the location, operation and effectiveness of visual aids will be considered.
- The implication for visual aids will be considered whenever there are new airfield developments.

### 3. SIGNALS

- There is no signals area.
- There are 3 illuminated wind sleeves, visible from all runway thresholds.
- Marshalling signals provided will comply with Rule 62 of the Rules of the Air Regulations with the following exception: the signal given to a pilot of a taxiing aircraft by a marshaller, indicating that there is sufficient wing tip clearance will be 'both arms outstretched horizontally'.

### 4. SURFACE MARKINGS

- Painted surface markings are provided on the Runway and Taxiways in accordance with CAP168 (these being different to ICAO Annex 14 with respect to Touch-Down, Aiming Point and Distance markings).
- "Runway Designation" markings at Runway Crossings Bravo, Bravo Zulu, Delta, Delta Zulu, Foxtrot, Foxtrot Zulu, Golf, Hotel, Hotel Zulu and Tango.
- Surface markings for stand entry guidance markings include a **yellow** painted stand number with arrow indicating the extended stand centreline. The stand centreline itself is painted **yellow** and runs only within the stand area and not the taxiway strip.
- Temporary marking of closed aircraft movement areas is achieved by the use of 5m long mobile barriers painted white with **orange** Day-Glo panels which are lit with **red** obstacle portable lights at night and in LVP conditions

**4.1. Marking of Airfield Work In Progress**

- Inside the Localiser Sensitive Areas WIP is marked using non-metallic and frangible fencing.
- All other WIP utilises 2 metre fencing of a more substantial construction, with high visibility base and obstruction lighting.

**5. SIGNS**

- Illuminated Runway Mandatory Holding Position signs are located at each runway link.
- Illuminated Taxiway information and Mandatory signs are provided at taxiway intersections and holding positions along taxiways. **N.B** Certain Intermediate Taxiway Holding Points have Mandatory Signs (White Lettering On Red Background) and others have Location Signs (Yellow Lettering on Black Background)
- Illuminated Stand identification signs are provided for most aircraft stands whether pier-served or remote, with the exception of stands 61 - 64, 80, 100,101, & 235

**6. VISUAL DOCKING GUIDANCE SYSTEM**

- Apron contact stands are provided with SAFEDOCK AVDGS. A list of the docking guidance arrangements at individual stands is given in section 3 table 5.6

**7. AERONAUTICAL GROUND LIGHTING (AGL)**

**7.1. General**

Aeronautical Ground Lighting (AGL) is a vital part of the airport's operational infrastructure, enabling the continued safe operation of public transport flights at night and during adverse weather conditions.

The AGL installation meets the specification "Scale L1" as required by CAP168, Chapter 6, table 6.1.

Manchester Airport is licensed to operate in Category IIIB weather conditions on Runway 23R / 05L.

**7.1.1. Provision of Lighting – Runways**

Runway	05L	23R	05R	23L
HI App.	Coded centre-line 908m Five cross bars	Coded centre-line 914m Five cross bars	Coded centre-line 900m Five cross bars	Coded centre-line 900m Five cross bars
Supplementary App.	Inner 300m	Inner 300m	None	None
Touchdown Zone	900m LED	900m LED	None	None
PAPIs	RHS 3° 325m from displaced threshold	LHS 3° 357m from displaced threshold	LHS 3° 437m from threshold	LHS 3° 561m from displaced threshold
Threshold	HI <b>green</b> with wing bars			
Runway Edge	Bi-directional flush fitted 60m spacing	Bi-directional flush fitted 60m spacing	Bi-directional flush fitted 61m spacing	Bi-directional flush fitted 61m spacing
Runway Centreline	Coded 15m spacing LED	Coded 15m spacing LED	Coded 30m spacing	Coded 30m spacing
End Lights	HI <b>red</b>	HI <b>red</b>	HI <b>red</b> wingbars	HI <b>red</b>

**7.1.2. Provision of Lighting – Taxiways and Aprons**

Taxiway Lighting conforms to the requirements of CAP 168 Ch6 Table 6.1 Scale L1.

**7.1.3. Provision of Lighting – Obstructions**

External Engineering maintains a comprehensive record of obstacle lighting location.

Obstacles off the Airfield that require **red** obstacle lighting are the responsibility of the owner of the obstacle.

Airfield Systems are responsible for the provision of Obstacle lighting on the airfield, including temporary portable lights.

## Section 5 – Integrated Emergency Planning

### 1. EMERGENCY PLANNING POLICY

In order to uphold the continual safety and security of its passengers, customers and staff, Manchester Airport is committed to ensuring that effective emergency and contingency plans are in place. These plans are contained in the document called Emergency Orders, together with the Emergency Instructions contained therein. The Emergency Orders form Part 3 to the Aerodrome Manual.

Whilst it is accepted that all eventualities may not be predictable, the plans have been developed to cope with foreseeable events. The Emergency Orders will be routinely reviewed and updated on an annual basis each January and all widely distributed to all relevant organisations.

### 2. OBJECTIVES

The primary objectives of the Manchester Airport emergency plans are to anticipate the impact of events that require an emergency response and to ensure that a suitable response is prepared. The plans are aimed at minimising the impact of an emergency and sustaining the protection of life, property, the environment and ultimately the business itself.

### 3. STRATEGY AND ORGANISATION

The Emergency Orders are developed, reviewed and implemented through the Emergency Planning Committee (EPC). The EPC is an integral part of the Manchester Airport SMS structure and performs the function of co-ordinating all activities related to emergency planning. A number of Sub Groups are formed to coordinate specific aspects of the plan and report directly into the EPC. The EPC and the emergency planning structure are described fully in the Emergency Orders.

### 4. COORDINATION AND COMMUNICATION

Overall responsibility for the coordination, communication and development of emergency and contingency plans rests with the Manchester Airport Emergency Planning Manager.

The Emergency Planning Committee (EPC) is responsible for ensuring coordination of the Emergency Orders with the full range of external agencies that are involved. The EPC also ensures that the plan is distributed to all relevant agencies and that changes are discussed, approved and communicated. Terms of reference for the EPC are contained at Section 3 of this Manual.

### **5. DEVELOPMENT AND DOCUMENTATION**

The Emergency Planning Committee (EPC) is responsible for the continued development of the emergency plans. Risk Assessment is applied to the development process, with the brainstorming of scenarios used to broaden the scope of plans and procedures where relevant.

The emergency plans are documented in the Manchester Airport Emergency Orders, which form Part 3 to this Aerodrome Manual. The Emergency Orders contain Instructions for each agency and organisation that has a response or other key role in the plans.

The development of detailed plans and procedures is delegated through the EPC Sub Groups, with members taking responsibility for ensuring that these are in line with the contents of the Emergency Orders. Local instructions and procedures may be developed and refreshed by line managers through agreement at the relevant Sub Group.

### **6. EXERCISES AND TRAINING**

Exercises will be held at intervals to test and evaluate the emergency plans. This will be achieved by the use of practical and tabletop exercises. These exercises will be recorded and any relevant follow-up monitored through an action plan tracked by EPC.

Training is an essential ingredient of emergency preparedness. Training in the emergency plans and procedures will take place at a variety of levels to suit the needs of the organisation and audience. The EPC coordinates the overall training plans through a specific Sub Group. More details are contained in the Emergency Orders.

### **7. REVIEW**

The Emergency Orders are formally reviewed once a year through the Emergency Planning Committee (EPC). In addition, a review will take place at any other time when it is clear that changes to infrastructure, functions or processes will invalidate any part of the existing emergency plans.

Following exercises or training activity, the Emergency Planning Manager will conduct an assessment of relevant aspects of the emergency plans and will recommend any changes to the EPC at the most suitable opportunity.

### **8. BUSINESS CONTINUITY**

In addition to maintaining Emergency Orders, Manchester Airport also has Business Continuity plans. These plans identify the key risks to the business overall and describe the strategic response and recovery plans in the event of a major incident at the airport.

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## Section 6 – Rescue & Firefighting Services

### 1. POLICY

Manchester Airport is equipped and resources its Rescue and Fire Fighting Service (MAFRS) to meet the standard required for ICAO/CAP 168 Category 10. MAFRS availability will often exceed the minimum required standard for the category of Aircraft that use the Airport. This allows a degree of resilience in maintaining minimum required responses. It also allows MAFRS to undertake certain domestic responses without compromising the Airfield Operating Status. Manchester Airport will not permit aircraft movements to take place without the requisite level of fire cover being available at the time, including movements for which no category is required. In the event of a total loss of fire cover, even temporarily, no aircraft movements will be permitted with the exception of emergencies.

### 2. COMPLIANCE WITH REGULATORY REQUIREMENTS

The means whereby compliance with CAP168 requirements is achieved is set out in three principle documents other than this Aerodrome Manual. These are the Manchester Airport Fire and Rescue Service Operational Procedures Manual, the Manchester Airport Emergency Orders, and the Manchester Airport Fire & Rescue Service Maintenance of Competence Manual. Where relevant, cross-references to the appropriate documents are given in the paragraphs below.

### 3. SAFETY ACCOUNTABILITES

The safety accountabilities of senior MAFRS officers are given in section 3 of this Aerodrome Manual. Further details of responsibilities and succession is given at Section 1 of the Manchester Airport Rescue and Fire fighting Service Operational Procedures Manual (MA RFFS OPM)

### 4. DEPLETION OF RFFS

The airport's capability for maintaining single or dual runway operations is affected by depletion of the fire service. It should be noted that a spare fire appliance is available.

In the event of a depletion (Manning) of MAFRS, the fire service will initially maintain full category 10 cover by removing the Incident Support Vehicle off the run and placing one of the crew members on the Domestic Response Vehicle and Major Foam Appliance. If two members of staff are lost the Incident Support Vehicle will be taken of the run and both vacant positions filled using the Incident Support Vehicle crew. At this point GMFRS will be informed "No Domestic Cover Available". If more than two crew members are lost MAFRS will revert to single runway CAT 10 operations and once again provide domestic fire cover.

Beyond this, during any period of depletion, MAFRS provision shall not be less than two categories below the size of aircraft expected to use the aerodrome.

Guidance on levels of fire cover according to resources available during periods of depletion are given in section 2 of the MA RFFS OPM

When depletion occurs, the Duty Station Manager must notify the Operations Duty Manager of the depletion and expected duration. The depletion in MAFRS protection should be for the minimum duration possible with all efforts to restore the promulgated MAFRS provision as a matter of urgency. The Duty Watch Commander will notify the ADM when full fire cover can be reinstated.

### **5. CATEGORY OF COVER PROVIDED**

MAFRS provides continuous Category 10 cover. Details of resources (media staff and vehicles) employed are given at Section 10 of the MA RFFS OPM.

Procedures for the monitoring of aircraft movement areas for the purpose of alerting RFFS personnel.

This function is primarily carried out by ATC, backed up by the North Fire Station Watchroom. Procedures are given in Section 34 of the MA RFFS OPM. Procedures to be employed in the event of a Watchroom closure are given at Section 34 of the MA RFFS OPM.

### **6. ALERTING PROCEDURE**

The primary method for alerting MAFRS is a direct telephone from ATC, backed up by a crash alarm. Specific alerting procedures are given in the Manchester Airport Emergency Orders, Part 2 (1) and (2). Procedures to be employed in the event of a Watchroom closure are given at Section 34 of the MA RFFS OPM.

### **7. PROCEDURES FOR ALERTING MAFRS PERSONNEL ACROSS THE FULL RANGE OF DUTIES (i.e. on training, extraneous duties, maintaining response times etc.)** Relevant sections of the MA RFFS OPM section 9.

Relevant sections of the MA RFFS OPM are Section 9 and Appendix G.

### **8. DEPLETION OF SPECIALIST EQUIPMENT (RESCUE CRAFT, AERIAL APPLIANCES ETC)**

There is no requirement for this equipment at Manchester. MARFFS operate an aerial ladder appliance for CAT 10 operations. Section 52 of OPM details staffing and depletion.

### **9. RELIANCE ON OTHER ORGANISATIONS TO PROVIDE ESSENTIAL EQUIPMENT**

A Memorandum of Understanding exists with Greater Manchester Fire Service for the provision of specialist equipment.

### **10. COMPETENCE OF MAFRS PERSONNEL**

MAFRS employs a full-time Training Manager and benefits from an on-site full-scale mock-up aircraft-training rig. Details of training policy are given in Section 28 of the MA RFFS OPM. Specific instructions and requirements for training are given in the MAFRS Maintenance of Competency Manual, relating to CAP 699.

### 11. 1000M UNDERSHOOT AND OVERTHOOT AREAS

Four such areas exist at Manchester Airport. Procedures for access and operating in these areas are given at Section 26 of the MA RFFS OPM.

### 12. DIFFICULT ENVIRONS

Areas such as the River Bollin and the large drainage lagoons alongside Runway 05R-23L have been identified as difficult environs for fire and rescue purposes. Procedures for access and operating in these areas are given at Section 42 and 49 of the MA RFFS OPM.

### 13. DOMESTIC FIRE RESPONSE

MAFRS provides an appliance and the necessary personnel in order to provide a Domestic Fire Response with minimal impact on the equipment and personnel required to maintain Fire Category 10. Once the Local Authority Fire Service is in attendance at any domestic incident, the airport personnel will hand over to them at the earliest opportunity and return to their normal response duties. In the event of an aircraft incident during a domestic emergency, the Officer in Charge of the domestic incident will release crews to attend the incident as soon as possible as defined in Section 9 of the MA RFFS OPM.

### 14. LANDSIDE INCIDENTS

These are treated the same as for response to domestic incidents, procedures are included at Section 9 of the MA RFFS OPM.

### 15. LOSS OF FIRE COVER

When MAFRS is fully committed and therefore at zero Category, no landings or take-offs will be permitted, no take-off clearances are to be issued, aircraft on final approach are to be instructed to go around and will be re-directed to a holding pattern or to a diversion airfield as required. ATC will give the reason for withheld clearance as 'due to loss of/reduced Fire Service Category'.

This restriction applies to ALL aircraft movements the sole exception being where the Aircraft Commander, of an inbound flight, has declared a 'PAN' or 'MAYDAY' and requests immediate landing at Manchester. The Commander will be advised of the Fire Category.

If the loss of fire cover is expected to be prolonged, outbound aircraft on the ground will be allocated stands and instructed to taxi to these stands by ATC, awaiting further developments. Procedures for a reduction in Category are as follows:

- a) The Station Manager or deputy is responsible for:
  - Notifying the ADM of the loss and expected duration
  - Notifying the ADM when the loss terminates
- b) The ADM is responsible for:
  - Notifying temporary loss and resumption of normal services to the ATC Watch Manager

### 16. ADDITIONAL WATER SUPPLIES

Details of water supplies available to MAFRS are given at Section 24 of the MA RFFS OPM.

**17. LOW VISIBILITY PROCEDURES**

Manchester Airport provides for full RFFS response in all weather conditions. Procedures to be adopted by MAFRS during LVP are given at Section 39 of the MA RFFS OPM.

**18. TRAINING AND COMPETENCE OF FIRST AID PERSONNEL**

MARFFS employ an external training provider to provide the course content and training of instructors for the delivery of Trauma Responder training to all operational personnel.

**19. MEDICAL EQUIPMENT**

MAFRS carry medical equipment as required to supplement that provided by the local authority ambulance and medical response teams. These supplies are kept on the medical trailer and listed in section 19 of the MA RFFS OPM.

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## Section 7 – Air Traffic Services

### 1. THE MANAGEMENT OF AIR TRAFFIC

The Manchester Airport Control Zone (CTR) is declared as Class D airspace by the CAA. The CTR airspace is subject to the separation standards laid down in the UK AIP ENR 1.4, and as notified for the purpose of Article 105 of the ANO. As a 'notified aerodrome' the requirements of rule 36 of the Rules of the Air Regulations 1996 apply to the use of the aerodrome traffic zone. All flights in the CTR are subject to ATC clearance before entry and must maintain radio contact with the controlling authority at all times.

The management of Air Traffic within the Manchester Airport CTR, and Radar control of associated IFR Air Traffic outside the CTR, are contracted to National Air Traffic Services Limited (NATS). NATS carry out their responsibilities in accordance with the standards in CAP 493, The Manual of Air Traffic Services (MATS) Part 1 and CAP 670, ATS Safety Requirements. Details of the Air Traffic Services provided and local procedures are contained in MATS Part 2.

Activities such as gliding, parachuting, hot air ballooning, banner towing and the flying of model aircraft are not normally permitted at Manchester Airport. Any procedures required for such activities will be determined specifically for any special case that may be approved by the Operations Director.

Formal liaison between NATS and Manchester Airport plc on matters of Air Traffic Management take place according to the Safety Management System structure detailed in SMS Manual Chapter 1, section 3.

### 2. SELECTION OF RUNWAY IN USE

The Runway(s) in use are selected in accordance with the procedures detailed in CAP 493 (MATS Part 1) and the instructions governing runway selection in MATS Part 2. The Runway(s) in use are promulgated on ATIS.

The preferred runway direction at Manchester Airport for noise abatement purposes is westerly, which is operated with a tailwind component of up to 5 knots. This is a Planning condition and is operated subject to climatic requirements and situations where use of westerly runways would be contrary to safety.

### 3. AVAILABILITY OF RUNWAYS

Runway 05L-23R is generally available H24 unless maintenance activity precludes, in which case operating hours will be detailed by NOTAM.

Runway 05R-23L is generally available 0630-1030 and 1600-2000 hour's local time, Monday-Friday, 0630-1030 on Saturday, and 1600-2000 on Sunday. Runway 05R-23L may be made available upon request at other times between 0600-2200 hours local time when required for aircraft performance reasons, however some delay may be experienced. **N.B. Runway 05R-23L should not be nominated as a diversionary runway during published hours of closure as it may not be available.**

The responsibility for determining the availability of runways and their suitability for use at an operational level rests with the Airfield Duty Manager. The policies and procedures for making the appropriate evaluation are contained in the Airport Standing Instructions at Part 2 of this Manual. This includes operations using any amended declared runway distances.

#### **4. USE OF RUNWAY 05R/23L**

The Local Authority Planning (Section 106) Agreement in respect of runway 05R/23L states that between 2200 and 0600 hours local, this runway shall not be used for landings and take-offs except in the following circumstances:

- In an emergency, or if it is unsafe to use Runway 05L/23R
- If Runway 05L/23R is undergoing planned maintenance, or
- If Runway 05L/23R is undergoing emergency maintenance.

All planned maintenance is notified by Airside Directive and by NOTAM.

Unplanned activities are coordinated between the MA ADM and the NATS ATC Watch Manager.

#### **5. NOISE ABATEMENT POLICIES**

Manchester Airport requires aircraft operators to assist in lessening the impact of noise on the surrounding areas by following the established practices listed below.

- Noise Preferential Routes.
- Use of Continuous Descent Approach (CDA) profiles during the night hours of 2200 hrs and 0700 hrs (local time).
- To minimise disturbance in areas adjacent to the airport, Captains are requested to avoid the use of reverse thrust after landing, consistent with the safe operation of the aircraft, especially between 2300 hrs and 0700 hrs (local time).
- Policies for engine test running. These are detailed in ASI 1.

#### **6. METEOROLOGICAL INFORMATION**

Procedures for the observation, recording and dissemination of Meteorological Information are contained in MATS Part 2. This activity is carried out by NATS, including promulgation on ATIS.

No facility exists for the human observation of RVR calculation at Manchester Airport.

**7. SCHEDULING AND RECORDING MOVEMENTS**

Manchester Airport is a fully coordinated airport under the European Community Regulations. Airport Coordination Limited (ACL) is responsible for the coordination and scheduling of all Public Transport and ad-hoc aircraft movements operating at Manchester Airport.

Before operating to Manchester Airport, Prior Permission Request (PPR) must be sought. Airline Operators and private aircraft operators are required to gain permission in accordance with the requirements detailed in the UK AIP EGCC AD 2.20.1 paragraphs (c) to (f). Use of a Handling Agent is mandatory.

Records of aircraft movements are generated by the input of data by NATS into the Airport's CHROMA FUSION flight schedule system.

**8. ALERTING THE EMERGENCY SERVICES**

Procedures for alerting the Emergency Services at the instigation of Air Traffic Control are described in MATS Part 2. In addition, the MA Emergency Orders describe the procedures of all agencies involved in alerting the emergency response.

The responsibility for alerting the Emergency Services normally rests with Air Traffic Control. Having established the nature of emergency, the controller will initiate the appropriate level of emergency call direct to the Airport Fire Service (AFS). The AFS will then in turn alert the individual external emergency services.

Responsibility for instigating Search and Rescue for an aircraft in contact with Manchester Area Control Centre lies with the Watch Manager.

## Section 8 - Communication & Nav aids

### 1. COMMUNICATIONS

#### 1.1. ATC VHF Radio

Air Traffic Control (ATC) use Very High Frequency (VHF) radio for use in all ground to air communication. The services and associated VHF frequencies are listed in the UK AIP. The operation of these frequencies by NATS is in accordance with CAP 493 (MATS Part 1) and MATS Part 2.

#### 1.2. Operational UHF Radio

Manchester Airport also operates a trunked Ultra High Frequency (UHF) radio system for communication between operational personnel. This system has access to cross-coupled VHF frequencies used by ATC for control of aircraft movements on the runways and for ground control.

#### 1.3. Recording of communications

All VHF frequencies and UHF cross-coupled UHF frequencies, together with an operational intercom and telephone lines in the ATC Control Tower are recorded in accordance with the requirements of CAP 493 (MATS Part 1).

### 2. NAVIGATIONAL AIDS

#### 2.1. Instrument Landing System (ILS)

ILS equipment is operated on three Runway directions with the capability as follows. Frequencies and procedures are listed in the UK AIP.

Runway 05L	-	Category 3B
Runway 23R	-	Category 3B
Runway 05R	-	Category 1
Runway 23L	-	No ILS installed

#### 2.2. Distance Measuring Equipment (DME)

A DME is installed on both Runways. These are located abeam the mid-point of Runway 05L-23R, and abeam the Glide Path aerial on Runway 05R, zero ranged to the associated runway thresholds to provide aircrew with a measurement of track distance to the threshold points. The DME on both runways are frequency paired with the associated ILS. The frequencies are listed in the UK AIP.

#### 2.3. Instrument Runway Visual Range (IRVR)

RVR measurements are made using Instrumented Runway Visual Range (IRVR) equipment. Both runways consist of 3 sets of transmissometers, referred to as "Touchdown" (TDZ), "Midpoint" (MID) and "Stopend" (END).

### **2.4. VHF Omni-directional Ranging (VOR)**

A combined VOR/DME is provided primarily for use as an en-route navigational aid. It is also used to provide non-precision approach landing guidance for approaches to all Runways, as well as providing a fix for Standard Instrument Departures.

The DME (MCT) is available in combination with the Runway ILS for full ILS/DME approach procedures in the case of the runway DME being unavailable. The operating frequencies, operating capabilities and procedures are published in the UK AIP.

### **2.5. Primary Radar**

A Primary Radar head is located adjacent to the aerodrome for use both as a aerodrome approach radar and an en-route facility. This equipment is owned and operated by National Air Traffic Services Limited.

### **2.6. Secondary Surveillance Radar**

A Secondary Surveillance radar head is co-located with the Primary Radar adjacent to the aerodrome and is used both for aerodrome approach and en-route navigation. This equipment is owned and operated by National Air Traffic Services Limited.

### **2.7. Surface Movement Radar (SMR)**

A Surface Movement Radar (SMR) system is operated to provide ATC with enhanced situational information about movements on the ground. Use of this tool allows ATC to operate a higher movement rate in Low Visibility Conditions than would be possible without the system. Failure of the SMR will result in a decreased movement rate in Low Visibility Conditions.

### **2.8. Operating Procedures**

All the Navigational Aids described in this section are operated in accordance with MATS Part 2, in compliance with CAP 670. The equipment is maintained in accordance with the NATS Management System where NATS has been delegated with Engineering Authority. In the case of the Surface Movement Radar, Manchester Airport plc contract directly with a maintenance provider, who coordinates requirements in consultation with NATS Engineers.

### **2.9. Flight Inspections**

Routine flight inspections of the landing aids are carried out through services contracted to Manchester Airport plc. Flight inspections are carried out to the requirements of CAP 670. Following an inspection, reports are checked by NATS Engineers and any necessary action is taken. Copies of flight inspection reports are held by NATS Engineering and MA Head of Airfield Operations, Safety and Compliance.

In addition, commissioning checks are carried out after any new installation or following any significant modification. Requirements for commissioning checks are confirmed in consultation with the CAA.

**2.10. Equipment Unserviceability**

Service Level Agreements are in place between MA and NATS such that essential aids to navigation will be restored to full working order as quickly as possible in the event of a failure. Any unserviceability of communications and navigational aids will be promulgated by NOTAM. NATS Engineers will generate the NOTAM and advise the MA Airfield Duty Manager.

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## Section 9 - Policies

### 1 – Aircraft Engine Ground Running

**Owner** Airfield Operations Manager

Manchester Airport recognises that the ground running of aircraft engines for maintenance purposes is a necessary activity in the operation of the airport. However, this activity creates noise and jet blast, both of which are potentially hazardous and disruptive to the surrounding community if not carefully controlled. The Airport will operate procedures to allow aircraft ground running to take place under the supervision of competent persons, at times and at locations which take due regard of the need to protect persons working at the airport from noise and jet blast hazard, and the local community from unreasonable and avoidable disturbance. Procedures will also be in accordance with the 'Section 106 agreement' with Cheshire County Council. **Ref ASI 1**

### 2 – Aircraft Compass Calibration

**Owner** Airfield Operations Manager

Although not primarily a maintenance aerodrome, Manchester Airport recognises the need for on-site maintenance activities in support of commercial operations and will provide such engineering support infrastructure as can be reasonably accommodated within the airport site. Presently, this policy extends to provision of a Compass Swing Base for the calibration of aircraft compasses to Class 2 standard. The siting of the facility is within the principal taxiways and its use is therefore restricted to certain times. **Ref ASI 2**

### 3 – Test, Training and Ferry Flights

**Owner** Airfield Operations Manager

Manchester Airport recognises that to conduct continued safe aircraft operations it is necessary to undertake non-revenue flights for the purpose of crew training, aircraft and systems testing, or to reposition ('ferry') aircraft for operational reasons. Manchester Airport is not primarily a training and testing aerodrome, and the capacity for such activities is limited. However, the Airport will accommodate such flights with certain conditions. **Ref ASI 3**

### 4 – Aircraft Maintenance Activity

**Owner** Airfield Operations Manager

Manchester Airport will support the provision of aircraft maintenance activities, both heavy major maintenance and the essential routine checks. Such activities do however present risks to safety and the environment and therefore procedures will be in place to ensure that such activities can be managed safely in accordance with environmental obligations, and balanced against the needs of other operational activities. **Ref ASI 4**

## **5 – Runway Inspection Regime**

**Owner**                      Airfield Operations Manager

Inspections of airfield facilities and infrastructure form a key part of the safety management system. In many cases inspections are required for legal and regulatory reasons and as a 'base line' the minimum requirements will be met. However, in view of the large and complex operation, Manchester Airport will in many cases exceed the minimum regulatory requirements and will seek to introduce improved techniques for carrying out and recording inspections of runways. The inspection regime will aim to ensure that runways and associated infrastructure are safe for use by all types of aircraft using Manchester Airport.

## **6 – Movement Area Inspections**

**Owner**                      Airfield Operations Manager

Inspections of airfield facilities and infrastructure will form a key part of the Safety Management System. In many cases inspections are required for legal and regulatory reasons and as a 'base line' the minimum requirements will be met. However, in view of the large and complex operation, Manchester Airport will in many cases exceed the minimum regulatory requirements and will seek to introduce improved techniques for carrying out and recording inspections.

Inspections often form the final 'link in the safety chain' they provide the opportunity to identify the conditions under which pilots and operators will be operating. The importance of inspections must not be underestimated.

## **7 – Runway Friction Measurement**

**Owner**                      External Engineering Manager

Runway surface friction assessments are essential to ensure the safe operation of aircraft. To ensure that the runway surface friction level does not fall below an acceptable level, Manchester Airport will carry out friction assessments in accordance with the minimum standards set down in CAP 683 (The Assessment of Runway Friction for Maintenance Purposes) The frequency of friction assessments may be increased above the minimum levels set out in CAP683 for a number of reasons, including;

- When results from previous assessments indicate that friction levels have reached Maintenance Planning Level
- To support the ongoing assessment of runway overrun risks
- To gauge the effectiveness of remedial works to the runway surface
- In order to build up a more comprehensive picture of friction trends
- Following pilot reports of perceived poor braking action, if there are visible signs of runway surface wear, or for any other relevant reason.

The frequency of assessments will be decided by the Head of External Engineering in conjunction with the Head of Airfield Safety and Compliance, Airfield Facilities Manager and External Maintenance Team Manager. Airfield Operations may commission a friction assessment following an incident or pilot reports of perceived poor braking action.

## **8 – FOD & Airfield Sweeping**

**Owner** External Engineering Manager

Foreign Object Debris (FOD) is any object, material or liquid that could cause damage to an aircraft. It represents one of the most serious - but avoidable - hazards to aircraft on the ground. Airport activity generates a great deal of waste material and debris. Examples of commonly found FOD include;

- Packaging and wrappings
- Wood, wire, screws and nails
- Vehicle and equipment mechanical components
- Baggage components, such as strapping, wheels, padlocks, handles etc
- Newspapers, baggage labels, boarding cards
- Debris from aircraft cabin 'gash bags'
- Catering waste
- Construction materials
- Equipment and materials left by aircraft engineers
- Natural materials (plant fragments and wildlife)
- Runway and taxiway debris (concrete / asphalt, joint sealant)

If not properly controlled, this debris can end up on the movement area where it can present a significant risk to aircraft and airside workers. Hence, the importance of preventing the occurrence of FOD and removing any that does find its way onto the movement area should never be underestimated. **Ref ASI 33**

## **9– Airside Works (Development, Maintenance and Remedial)**

**Owner** Airfield Policy and Planning Manager

Manchester Airport will use the guidelines set out in CAP 791 (On Aerodrome Developments) as a basis for managing airside development & maintenance projects. The Airfield Policy and Planning Manager, having responsibility for the safety assurance of airside development, will determine the strategy and the extent of operational safety management which will apply to each project in accordance with its scope.

Any proposed new airfield infrastructure will be carefully assessed for its operational feasibility and safety integrity at the concept stage. Only when it is clear that the proposal meets regulatory requirements and an acceptable level of safety will it proceed to detailed planning and implementation. Significant design changes will be assessed against these requirements.

Whether it be a new development or a maintenance project, airside works in progress will be managed such as to minimise the operational impacts but with a bias toward the highest levels of safety which may reasonably be expected. This will be achieved through a partnership approach with the contractor, through good design, risk assessment, a permit system, and active monitoring of safety performance. Manchester Airport will aim to be an industry leader and to demonstrate 'best practice' in the safety management of airside development work. **Ref ASI 5**

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## **10 – Access to Critical Part (CP)**

**Owner** Fire & Airfield Security Manager

Access to operational areas is strictly controlled by legislation and additionally by local procedure in order to maintain security and safety of airport operations. As well as complying with statutory requirements, Manchester Airport will operate procedures to ensure that access to the aircraft movement area and various sub-areas within it are denied to all but those parties specifically requiring to do so in the course of their duties, and to ensure that such parties are adequately trained, briefed, and equipped to enter those areas safely. **Ref ASI 6**

## **11 – Wildlife Control & Habitat Management**

**Owner** Airfield Operations Manager

Aerodromes attract birds and wildlife for a variety of reasons. The large open spaces of grassland and hard standing are ideal for many species as a source of food, and also afford clear views of potential predators. It is therefore essential that the landscape is managed in such a way that a wildlife-attractive habitat is discouraged. Furthermore, the environment in the surrounding locality has an influence on the type and level of wildlife activity in the vicinity of the aerodrome. The requirements to manage the bird hazard are set out in CAP 168 and CAP 772. In complying with these requirements, Manchester Airport will ensure 24 hour active control of the bird hazard on the airfield, together with a longer-term, multi-agency approach to managing the off-airport bird hazard environment. Bird activity and bird strike data will be actively monitored as a key safety performance indicator.

Effective Wildlife Control measures are an important aspect of Airfield Operations. Bird ingestion into aircraft engines and through cockpit glass has caused numerous major aircraft accidents involving loss of life, damage to property, disruption of airport activities and claims for damages against the airport and others. The identification of the local Bird Hazard, development of control procedures and detailed record keeping form the basis of an effective Wildlife Hazard Management Plan developed, reviewed and implemented by Airfield Operations.

The Wildlife Hazard Management Plan is published as a separate document and is available from the Wildlife Control Manager.

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## **12 – Aeronautical Ground Lighting**

**Owner** External Engineering Manager

Aeronautical Ground Lighting (AGL) is a vital part of the airport's operational Infrastructure. It enables the continued safe operation of public transport flights at night and during adverse weather conditions. Manchester Airport is licensed to operate in weather conditions down to Category IIIB on Runway 23R / 05L. MA will provide, wherever possible and commercially viable, an AGL installation meeting the specification "Scale L1" as required by CAP 168. 'Ownership' of the AGL infrastructure, including control systems, will remain with MA, although aspects of design, installation and maintenance will be contracted. Design of systems will comply with CAP 168, CAP 670 and with any additional safety requirements identified during design hazard analysis. Inspections procedure will comply with or exceed the requirements of CAP 168. Robust contingencies for the event of failures in the AGL system will be incorporated, to satisfy both the needs of operational safety and business continuity.

## **13– Reduced Runway Length Operations**

**Owner** Airfield Operations Manager

Operating with reduced runway distances can affect operational safety margins. Having the benefit of two main runways, Manchester Airport is better equipped to maintain a degree of business continuity in the event of a runway blockage than is a single-runway airport. For this reason, and the above consideration, re-declaration and continued use of a blocked runway will not normally be considered unless the anticipated time to clear the runway or strip is unduly lengthy.

Flight operations will not be permitted to continue in a manner requiring aircraft landing and taking-off to overfly active works on a closed section of runway.

When runway distances are reduced, all departing aircraft are to use the maximum RTORA.

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## **14 – Aerodrome Survey Data & Treatment of Obstacles**

**Owner**                      Airfield Policy and Planning Manager

Aerodrome surveys are required to fulfil a number of statutory requirements. CAP 232 sets out the required specification for Aerodrome Licensing topographical and obstacle limitations surveys. Manchester Airport will procure these under a contract with a CAA-approved provider. In addition to meeting the basic requirements of CAP 232, Manchester Airport will use obstacle survey data, in combination with other information, to actively manage and control the obstacle risks and limitations to aircraft operations.

### **CURRENT SURVEY STATUS**

The CAA requires that for an Aerodrome Licence to be issued the aerodrome and its surrounding environment must be surveyed to provide evidence of the physical characteristics and obstacle limitation surfaces.

The most recent full Aerodrome Survey was carried out at Manchester Airport in September 2010, in accordance with CAP 232. Details are submitted to the CAA and also held by the Airfield Policy & Planning Manager

An annual check survey will be carried out to monitor changes to the obstacle environment and to record and new or changed features on the airfield. Check surveys should be programmed so as to allow for the taking of any subsequent action to remove tree growth in good time before the bird-breeding season.

Copies of all survey information are held by the Airfield Policy & Planning Manager and are available for inspection at any reasonable time.

## **15 – Aerodrome Safeguarding**

**Owner**                      Airfield Policy and Planning Manager

The potential impacts of developments on, close to, or under the airspace of Manchester Airport could have significant impacts on operational safety and capability. In common with other licensed aerodromes, Manchester Airport is responsible for its own safeguarding process, and will retain this function within the Planning and Airfield Operations departments of the company. The priority in responding to safeguarding consultations will be to protect the safety and operating interests of Manchester Airport. However, consideration will always be given to allowing appropriate developments to take place for the benefit of the city of Manchester and its region. Manchester Airport will work with local planning authorities and developers to reach mutually satisfactory outcomes. **Ref ASI 7**

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## **16 – Promulgation of Aeronautical Information**

**Owner**                      Airfield Policy and Planning Manager

Aeronautical data, providing accurate and timely information to pilots and aircraft operators, is important to the safe operation of Manchester Airport. The Airport will regularly review the data in the public domain, principally the UK AIP, to ensure that it is up to date and accurate. The Airport will work with providers of aeronautical information to improve both the quality of the data, its timeliness and its presentation, bearing in mind that human factors can have a decisive effect on the effectiveness of published data.

### **SYSTEMS FOR PROMULGATION**

The primary external system for this is the UK Aeronautical Information Publication and its associated publications:

- AIP Supplements
- AIRAC System
- NOTAMS
- SNOWTAM
- ATIS

It is recognised that many airline operators use information derived from the UK AIP although supplied by other information providers such as Jeppesen, AERAD, and EuroControl.

## **17 - Contingency for Excess Traffic**

**Owner**                      Airfield Operations Manager

Being a major international airport, Manchester Airport is an important diversion alternate for many airline operators. Manchester Airport welcomes this role and will seek, along with its service partners, to provide efficient operational support to flights diverting into Manchester, wherever possible. At peak times however, the airport may be experiencing capacity shortfalls and priority must in these circumstances be given to Manchester-programmed flights. Flights requesting to divert into Manchester for a genuine emergency reason where the safety of the aircraft and those on board may be at risk will be given all due assistance.

### **18 – Detention of Aircraft**

**Owner**                      Airfield Operations Manager

Where Airport Charges have not been paid to Manchester Airport Plc (MAPlc), MAPlc may detain the aircraft in respect of which the charges are due, or any other aircraft operated by the person/company in default, by virtue of Section 88 of the Civil Aviation Act 1982.

This power may be exercised whether on the occasion when the charges have been incurred or at any time when the aircraft is on the aerodrome.

However, MAPlc shall not detain or continue to detain an aircraft for unpaid charges if the operator of the aircraft or any other person claiming an interest in the aircraft:

- I. Disputes that the charges, or any of them, are due or that the charges in question were incurred in respect of that; and
- II. Gives to MAPLC, pending determination of the dispute, sufficient security for payment of the charges that are alleged to be due.

### **19 – Recovery of Disabled Aircraft**

**Owner**                      Airfield Operations Manager

Should an aircraft become disabled on a runway, taxiway, or other part of the Manoeuvring Area, the responsibility for the recovery of the aircraft lies with the owner / operator. It is recognised that many operators may not possess the specialist skills and resources to effect such a recovery, however, all airline operators at Manchester are expected to have aircraft recovery plans, and if necessary, appropriate contracts in place to cover the eventuality of an aircraft recovery at Manchester. Manchester Airport will provide on-site a degree of aircraft recovery capability, supplemented by arrangements with specialist contractors to provide heavy lifting support on standby.

### **20 – Aircraft Noise**

**Owner**                      Environment Manager

Manchester Airport has a stated objective to “...limit, and reduce where possible, the number of people affected by noise as a result of the Airport’s operation and development.”

**Ref ASI 8**

### **21 – Accident, Incident and Safety Occurrence Reporting**

**Owner**                      Airfield Safety Assurance Manager

It is a legal requirement that all aircraft accidents and incidents are reported to the Civil Aviation Authority (CAA), the Air Accident Investigation Branch (AAIB) and the Health and Safety Executive (HSE) if deemed appropriate by the Head of Operations and Fire, AOM, APPM, ASM, ADM or ATC. Furthermore prompt and thorough investigations of accidents and occurrences may result in important lessons being learned, helping to avoid a re-occurrence. The following instructions relate to all the reporting systems used at Manchester Airport. **Ref ASI 9**

## **22 – Airside Defect Reporting**

**Owner**                      Airfield Operations Manager & External Engineering Manager

As part of Manchester Airport's Safety Management System, all airside users are encouraged to report defects relating to buildings, services and facilities to the Airport Control Centre (Terminal Control). Such reports are processed via the airport 'Planned Maintenance System' (PMS) and disseminated to the relevant Airport Engineering department or Sub-contractor for remedial action. **Ref ASI 10**

Such defects could include, but are not limited to:

- Damage to buildings or fixed structures
- Apron Lighting Failures
- Airbridge Faults
- Stand Entry Docking Guidance System Failures
- Surface Contamination – e.g. Spillages or FOD
- Fixed Electrical Ground Power Faults
- Damaged or defective surfaces

## **23 – Single Runways Operations Using Runway 05R – 23L**

**Owner**                      Airfield Operations Manager

Occasions arise when Runway 05L-23R is out of service and it is necessary to use Runway 05R-23L in single-runway mode. This may be a planned event such as airfield works, or following an airfield incident.

The airfield infrastructure is designed to accommodate single-runway use of 05R-23L, albeit with limited capacity.

## **24 – Very Large Aircraft**

**Owner**                      Airfield Operations Manager & Airfield Policy and Planning Manager

Very Large Aircraft can be expected to operate at Manchester Airport on an increasingly frequent basis as the airport's business expands. These large types place correspondingly larger demands upon the airfield infrastructure. Manchester Airport will provide infrastructure and procedures to enable such aircraft to use the airport. However, for commercial and logistical reasons it will be necessary to limit the extent of such operations to certain parts of the airport site only. **Ref ASI 11**

## **25 – Airside Audits**

**Owner**                      Airfield Safety Assurance Manager

The auditing of both Service Partners and Internal Departments forms one of the key components of Manchester Airports Safety Management System (SMS).

MA Airfield Safety and Compliance is responsible for undertaking Service Partner and Internal Department Audits, however, where specific expertise or independent verification is required then Airfield Operations will use the services of relevant industry experts to assist in conducting audits.

All audits will be carried out in confidence, the results of Service Partner or Internal Department audits will remain confidential to those companies or departments having been audited, the results of the audit including any non-compliances with agreed actions and time scales will be discussed at the audit out brief.

All reported non-compliances should be dealt with using the best endeavours of the company having been audited; any delay on agreed actions and time scales could however result in the audit being referred to the Airfield Safety Assurance Manager.

All non-compliances resulting from Audit Reports will be included in the monthly Safety Performance Report and subsequently discussed at the Airfield Safety Management Council (ASMC).

Persistent non-compliances by individual Service Partners will be monitored by the Airfield Operations, Safety and Compliance audit team and brought to the attention of the Airfield Safety Assurance Manager.

The remainder of this ASI is a description of the audit types, which are contained within the Safety Management System, and are carried out on a regular basis by the Airfield Safety and Compliance audit team. **Ref ASI 12**

## **26 – Safety Infringements**

**Owner**                      Airfield Safety Assurance Manager

Manchester Airport Airfield Operations is primarily responsible for maintaining safety and operational standards within the Airfield Boundary. The formation, implementation and enforcement of safety policy on the apron is vital for efficient operational procedures, to protect equipment and infrastructure and to ensure the highest achievable levels of health and safety for all individuals.

There are a number of procedures Manchester Airport consider form the very basis of a safe operation such that any infringement is taken seriously and that the event should be recorded on an Airfield Occurrence Report, some of which will involve financial penalties by way of a 'fine' being imposed against an offending company. **Ref ASI 13**

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## **27 – Aeronautical Weather Information**

**Owner** Airfield Operations Manager

Weather has a profound influence upon the safety and expediency of aircraft and airport operations. In addition to the various statutory requirements, Manchester Airport will ensure that accurate and timely weather information is available and promulgated by the most appropriate means to airport users. The airport is principally dependant upon the services of the Meteorological Office and Weather Services International for forecast information. However, wherever possible use will be made of onsite data gathering systems and expertise to enhance this information for Manchester-specific application. This will particularly apply to real-time actual weather data. Manchester Airport is also committed to providing weather reporting systems to support safe aircraft operations in low visibility conditions, and to provide warning bulletins to airport users in the event of adverse weather conditions. **Ref ASI 14**

## **28 – Low Visibility Procedures**

**Owner** Airfield Operations Manager

Manchester Airport is committed to providing facilities and procedures to enable the airport to remain open to operations during low visibility conditions. It must be accepted that such conditions will reduce air traffic capacity to well below that achievable in normal operations, however it is the intention, over time, to increase the low visibility capacity pro-rata with increases in normal operating capacity. Manchester Airport will draw upon experience across the industry to continually review low visibility operations with a view to enhancing safety and capacity. **Ref ASI 15**

## **29 – Winter Operations Plan (Aerodrome Snow Plan)**

**Owner** Airfield Operations Manager

The arrangements for dealing with adverse winter weather (snow and ice as opposed to strong winds and thunderstorms) will be published annually in the form of a stand-alone document '**Winter Operations Plan**'. This plan will be published in the autumn of each year and will cover the forthcoming winter period, typically between November and April, although the plan remains valid throughout the year. The purpose of the Winter Operations Plan is to establish a thorough response for maintaining safe aircraft operations during winter conditions of snow and ice. The Plan contains procedures, methods and responsibilities for all parties involved in the response at Manchester Airport.

The **Winter Operations Plan** is available to view and download from the website [www.magworld.co.uk/airfieldoperations/documentlibrary](http://www.magworld.co.uk/airfieldoperations/documentlibrary)

### **30 – Thunderstorms**

**Owner**                      Airfield Operations Manager

Adverse weather such as strong winds, gales, and thunderstorms can be expected at reasonably frequent intervals. They have the potential to disrupt airport operations and present risks to the safety of aircraft and people working airside. Manchester Airport will ensure that a system is in place for the timely receipt of weather warnings, and the subsequent dissemination of these by competent persons who have a procedure to follow, and actions to take. The potential effects of such weather conditions will also be taken into consideration when risks are assessed for developments on the airfield. **Ref ASI 16**

### **31 – Strong Wind & Gale Plan**

**Owner**                      Airfield Operations Manager

Adverse weather such as strong winds and gales can be expected at reasonably frequent intervals. They have the potential to disrupt airport operations and present risks to the safety of aircraft and people working airside. Manchester Airport will ensure that a system is in place for the timely receipt of weather warnings, and the subsequent dissemination of these by competent persons who have a procedure to follow, and actions to take. The potential effects of such weather conditions will also be taken into consideration when risks are assessed for developments on the airfield. **Ref ASI 17**

### **32 – Aircraft Parking Stands & Allocation**

**Owner**                      Airfield Operations Manager

Manchester Airport retains full authority and control over the allocation of parking stands and the stand entry guidance provided to aircraft. The majority of aircraft parking stands at Manchester Airport are intended for use in the Taxi-In-Push-Out (TIPO) mode. Whilst particular airline operators' flights may be assigned to a specific terminal there are no stands dedicated to the operation of individual services except where security or border control requirements dictate otherwise. A system of stand allocation according to flight type will be agreed between MA Customer Services Director and the Airline Operators Committee, and amended from time to time. This agreement covers service levels and customer expectations and may be overridden if required for reasons of aircraft safety.

### **33 – Aircraft Pushback Procedures**

**Owner**                      Ground Services Manager

Aircraft stands at Manchester Airport are predominantly of a Taxi-In-Push-Out layout, requiring the aircraft to be pushed out by a tractor or tug on departure. For this to happen safely a set of rules and procedures must be understood by all concerned, and followed correctly. The adoption of a common procedure covering all apron stands has been agreed with the formation of the Pushback Working Group. This group consists of ground handlers / Engineering companies / NATS & MA. In the case of WIP on the apron which will interfere with the stands pushback, NATS will issue a non-standard pushback. **Ref ASI 18**

### **34 – Fixed Electrical Ground Power**

**Owner** External Engineering Manager

Fixed electrical ground power (FEGP) is provided at most aircraft stands for connection to aircraft during turnaround and maintenance activities. The table in section 3 5.6 lists the type of equipment and supply available at each stand. FEGP is to be used as a preferred supply in accordance with environmental policy. Other sources of power such as mobile diesel generators or the on-board Auxiliary Power Unit should not be used unless the FEGP is unserviceable or incompatible with the aircraft type. **Ref ASI 19**

### **35 – Aviation Fuel Management**

**Owner** Airfield Safety Assurance Manager

Responsibility for the management of the aviation fuel installation at Manchester Airport including (but not limited to) aviation fuel storage, distribution (both to the installation and from the installation to aircraft), quality and fitness of fuel for use in aircraft and the activity of fuelling to aircraft rests with the respective fuel suppliers as detailed in ASI 20. As aerodrome licensee, MA will continue to monitor and audit the management, quality control and delivery procedures of the fuelling activities.

Fuelling activities at Manchester Airport are undertaken by the fuel suppliers in accordance with CAP 748 (Aircraft Fuelling and Fuel Installation Management), in conjunction with Explosive Atmospheres (ATEX) and Dangerous Substances Explosive Atmosphere Regulations (DSEAR). Guidance material published by the fuel industry Joint Inspection Group (JIG) is also applied. **Ref ASI 20**

### **36 – Spillages**

**Owner** Environment Manager

Spillages of fluids and substances on the airport is an ever-present risk and has the potential to be hazardous. Substances regularly handled at the airport are variously flammable, corrosive, explosive, radioactive, or otherwise harmful to health and to the environment. The handling and storage of these substances must be carefully controlled and robust procedures will be in place to handle spillages. The handling of spillages will address the principal concerns of maintain the safety of aircraft operations, health and safety of staff and passengers, and protection of the environment. **Ref ASI 21**

### **37 – Waste Disposal**

**Owner** Environment Manager

All companies generate waste. Companies are responsible for identifying the waste generated from all parts of their business and ensuring that it is disposed of correctly. This includes identifying waste that is hazardous, and requires separate disposal. Where possible, waste should be segregated for recycling. **Ref ASI 22**

### **38 – Aircraft Washing**

**Owner** Airfield Operations Manager & Environment Manager

Manchester Airport recognises that the washing of airframes is necessary both to ensure the safe condition of the aircraft but also to maintain its appearance. Washing of airframes will be permitted on the airport site, however because of the need to protect the environment from pollutants used in this activity, the locations and the times when washing may take place will be restricted. **Ref ASI 23**

### **39 – Push & Park Procedure**

**Owner** Ground Services Manager

In order to assist on-time departure and to vacate pier-served stands for arriving aircraft, procedures will be in place to allow departure-ready aircraft to be removed to a remote stand or airfield location whilst they await an ATC slot time. At Manchester this procedure is known as 'push and park' but similar procedures at other airports are known by other titles such as 'push and hold', 'push and wait' etc. **Ref ASI 24**

### **40 – Aircraft Towing**

**Owner** Ground Services Manager

It is the responsibility of Companies which undertake aircraft towing to provide sufficient training to all operatives thereby ensuring that they are competent to operate in the relevant airfield areas. A copy of the latest pushback procedures must be located in the tug cab.

It is the responsibility of the tug drivers to ensure that:

- The tow vehicle, tow bar and associated equipment are serviceable for use and that towing is in accordance with the relevant Agreed Company procedures
- Whilst towing in confined areas or around aircraft or other obstacles, the tug driver is responsible for wing tip clearance, in accordance with Rule 42 of the Air Navigation Order.
- When aircraft are to be moved during periods of bad visibility or at night, the aircraft must be adequately illuminated at each extremity, i.e. navigation lights 'on' and the tractor must display headlights and an anti-collision beacon
- ATC permission must be obtained before all aircraft tows.

NB - ATC clearance does not imply wing tip clearance **Ref ASI 25**

### **41 – Airbridge Operation**

**Owner** Airfield Safety Assurance Manager

There are 3 types of Airbridge, which are the property of Manchester Airport. To ensure the safe arrival and departure of an aircraft Manchester Airport will only allow personnel to operate Airbridges who have successfully completed Airbridge training and validation by Manchester Airport Plc authorised Handling Agent or Airline representative. **Ref ASI 26**

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## **42 – Aircraft Turnaround Management**

**Owner**                      Airfield Safety Assurance Manager

Airport activity, and in particular the intense activities surrounding the turnaround servicing of aircraft at apron stands, has the potential to be hazardous. It is during this activity that the majority of accidents and incidents occur, resulting in injuries to personnel or passengers and in damage to aircraft and equipment. Notwithstanding various statutory requirements, the performance of persons and organisations working airside continues to have a profound effect on the level of operational safety at Manchester.

Whilst Manchester Airport has certain responsibilities as the aerodrome licensee, it cannot take sole responsibility for apron activities - the airlines and their contractors must have in place their own arrangements for ensuring that safety is managed effectively, especially during the aircraft turnaround process.

All persons whether passengers, visitors, or employees of any Airport Company must be protected from all airside hazards. **Ref ASI 27**

## **43 – Storage and Handling of Unit Load Devices (ULDs)**

**Owner**                      Ground Services Manager

Airlines operating aircraft types with containerised holds at Manchester Airport require storage facilities for Unit Loading Devices. The Ground Services Manager, in consultation with the Airlines and Handling Agents, will agree the number of ULD's to be available on the appropriate racks to control management of ULD's.

Manchester Airport has provided storage facilities for 591 units in six separate locations across the Airfield. These sites are allocated to specific Handling Agents based on their customer requirements and with consideration for the stands used by their contracted airlines. **Ref ASI 28**

## **44 – Medical Services**

**Owner**                      Emergency Planning Manager

Manchester Airport has 24-hour medical cover provided by the North West Ambulance Service (NWAS) Paramedic team based at the airport. The Paramedics respond to medical assistance calls from within the airport complex and also medical emergencies on inbound aircraft. NWAS respond to aircraft incidents and major emergencies at the Airport In addition the South Manchester Hospitals also have a co-ordinated response to aircraft incidents. The Paramedics will not routinely become involved in a major aircraft emergency.

#### **45 – Aircraft De-Icing**

**Owner**                      Ground Services Manager

During the winter months it will at times be necessary for aircraft to undergo de-icing treatment before departure. This activity is safety-critical, requiring strict adherence to procedures. Manchester Airport does not itself possess the equipment, materials and expertise to carry out this function and it is a matter for aircraft operators to provide de-icing services or to contract out with ground handling agencies. MA will provide, at a cost, areas for the storage of materials and equipment for use in airframe de-icing. There is no suitable area on the airport at present for the provision of a centralised airframe de-icing facility. De-icing materials can be harmful to the environment and need to be managed carefully. MA will operate procedures which ensure that de-icing materials are controlled and contained both in storage and in use, so as to prevent pollution of watercourses. **Ref ASI 29**

#### **46 – Airside Competency & Training**

**Owner**                      Airfield Safety Assurance Manager

Aprons and airside areas are hazardous workplaces and, in order to ensure safe working practices, Manchester Airport requires that all employers who employ workers airside ensure that their employees receive basic competence training that will provide the knowledge, skills and awareness to identify the hazards and to apply the relevant safety measures that are in place. **Ref ASI 30**

#### **47 – Stand Closures & Restrictions**

**Owner**                      Airfield Operations Manager

The requirement to close or restrict an Aircraft Parking Stand will arise for a number of reasons, such as: -

- Major work in progress on or adjacent to a Stand
- Contamination of the apron surface (e.g. FOD or spillages)
- The presence of a temporary obstacle (e.g. equipment or vehicle)
- Airbridge maintenance (external maintenance or internal maintenance necessitating the movement or isolation of the airbridge)
- Routine stand maintenance (e.g. surface painting or degreasing)

Notwithstanding the requirement for internal Maintenance Teams, Contractors and Airfield Planning to consult the Airfield Liaison Manager when planning airside works, the Airfield Duty Manager is accountable for the physical closure and operational reinstatement of Aircraft Parking Stand

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#### **48 – Airside Driving**

**Owner**                      Airfield Safety Assurance Manager

Driving in airside areas presents many specific challenges requiring different knowledge and skills to those required for public roads. Furthermore, poor discipline and lack of competence by airside drivers has one of the greatest potentials for hazard to aircraft operations. Holding a UK driving licence does not in itself make a person competent to be in charge of a vehicle in an airside area.

For these reasons Manchester Airport will require airside drivers to undergo specific training by a competent provider and to regularly refresh these skills. A permit system, code of conduct, and a disciplinary process will underpin the objective of ensuring safe airside driving. This will apply both to driving generally, and to the specifics of operating individual types of vehicles. As well as meeting statutory requirements, procedures for obtaining a permit and operating a vehicle airside will follow the **requirements to CAP790. Ref ASI 31**

#### **49 – Airside Vehicle & Equipment Standards**

**Owner**                      Airfield Safety Assurance Manager

All vehicles and trailed equipment operating airside at Manchester Airport must be maintained and inspected in accordance with CAA CAP 642 Airside Safety Management and VOSA Regulations.

A maintenance system whilst important will not on it's own ensure quality maintenance is obtained. Effective management of the operator's fleet by persons competent to do so will provide the best method of quality control.

A robust maintenance and safety inspection regime must be in place to ensure that vehicles/equipment do not endanger drivers, aircraft, persons or property and are fit for their intended purpose. **Ref ASI 32**

# Part 2

## Airside Standing Instructions

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- ASI 33 – FOD & Airfield Sweeping

## ASI 1 – Aircraft Engine Ground Running

**ASI Owner** Airfield Operations Manager

### 1. GROUND IDLE TESTING

Aircraft engine testing at Ground Idle only is allowed on all pier and remote stands and also on the Western Maintenance (formerly 'Faireys') apron.

Ground idle running may take place at any time subject to certain safety measures being in place. See below:

#### 1.1. Safety measures

- Aircraft on pier or remote stands must obtain approval for start up from ATC on the Ground Frequency stating the aircraft type, stand number and using the phrase '... Request permission to run engine(s) at Ground Idle power for (approximate duration). Aircraft on the Western Maintenance (Formerly 'Faireys') do **not** need to request permission from ATC.
- During all Ground Idle runs a safety person must be located by the rear of stand road (where applicable) to warn traffic, which must be stopped during the engine running. A vehicle parked across or beside the road is not acceptable.
- Aircraft anti-collision lights must be illuminated during engine runs
- Ground Idle testing at stands with a rear-of-stand road (most pier stands) is subject to a maximum of 3 minutes duration - sufficient to carry out most basic engineering checks. Running engines for longer durations can cause unacceptable delays to road traffic waiting to pass behind the aircraft.

#### 1.2. Responsibilities

It is the responsibility of the organisation undertaking the engine run to:

- Control activity on the stand during the test
- Provide personnel to stop movement of traffic behind the aircraft
- Maintain contact between the Ground Engineer and the Flight Deck
- Ensure ATC clearance for start-up is obtained and that ATC are informed when the test is complete.
- Ensuring that ground idle runs on pier served stands are limited to 3 minutes duration.

### 2. TESTING ABOVE GROUND IDLE POWER

All such tests are subject to the approval of Airfield Operations who will consider all the relevant circumstances before approving any test.

A request must be made to Airfield Control in advance by submitting a booking request via the MAGWorld website.

All tests above idle power must be carried out in the Engine Test Bay (ETB).

Any engine test which in the opinion of the aircraft engineer concerned cannot be completed within the Engine Test Bay facility may be permitted at an alternative airfield location. However permission, the time and the location is to be determined by the ADM.

### 3. ENGINE TEST BAY

#### 3.1. Availability of the Engine Test Bay

Engine testing above idle power is only permitted in the ETB facility during the period 0600-2200 local time in accordance with local authority planning agreements and the Manchester Airport Night Noise Policy.

**Airfield Operations has the discretion to allow an Engine Test ' Out of Hours ', that is between the hours of 2200 - 0600 hours (local). However such permission is only given in very special circumstances where the implications of not doing so would cause considerable operational disruption and/or hardship to Manchester Airport passengers. Certain criteria must be met to justify engine testing during the defined night period.**

The case for justification must be sought and confirmed in writing to justify the requirement. The number of 'out of hours' tests are strictly monitored and controlled by the Local Planning Authorities.

##### 3.1.1. Commercial Charges

A charge is levied by MA plc for use of the Engine Test Bay. Details of charges are contained within the booklet ' Manchester Airport Fees and Charges' available from MA Finance department, or the Manchester Airport website.

#### 3.2. General safety Requirements

- The aircraft must be towed to the ETB and reversed into position astride and parallel to the painted yellow centreline. Floodlighting is available for use during the hours of darkness, a switch is located on the northern wall of the bay.
- The aircraft nose wheel must be parked on the correct stop mark for the type as identified on the information board mounted on the sidewall of the bay. If there is any doubt about the correct position, advice should be sought from Airfield Operations. Positioning of the aircraft is critical to the performance of the efflux-baffling screen - use of an incorrect position may result in damage to the baffling, the acoustic walls or the aircraft engines. On no account must an aircraft be parked with the nose protruding beyond the taxiway clearance white line unless express permission has been granted by the ADM and the taxiway has been closed to traffic.
- **Whenever a high power test is in progress, taxiway Alpha is to be closed in front of the Engine Test Bay. This action will be taken by Airfield Operations.**
- ATC clearance on the Ground frequency should be obtained to start engines stating call sign, aircraft type and location in the Engine Test Bay. Once clearance to start is obtained no further ATC clearance is required to change power settings whilst in the ETB. A listening watch must be kept on the Ground frequency and ATC should be advised when the test is complete and engines are being shut down.
- The engineer supervising the test should inspect the surface of the ETB prior to undertaking engine runs to ensure the integrity of the surface is acceptable for high power engine runs and any FOD has been removed.
- Failure to comply with the above safety requirements may result in the issuance of a fine in accordance with the MA Airfield Infringement Scheme.
- A380, AN124, AN225 and B747-8 aircraft are not permitted to use the Engine Test Bay due to wingspan limitations.

### 3.3. Open Field Engine Testing

- Should difficulties be encountered in performing the test in the ETB, a request may be made to Airfield Control on ext. **2384** to continue the test at an open field location. Airfield Control will advise if and when this can be accommodated and will arrange for the aircraft to be escorted undertow to a suitable location. Locations currently approved for open field-testing are the Compass Swing Base (max B737) and Taxiway Alpha abeam Link AG.
- Approval for testing outside the Engine Test Bay is will not be granted when LVPs are in force.
- At the open field location the instructions of Airfield Operations personnel must be followed with respect to the positioning of the aircraft in order to maintain aerodrome safety. It will not always be possible to position the aircraft exactly into the wind.
- The Engineer responsible for conducting the engine test must complete a safety checklist in conjunction with the ADM. The Engineer supervising the test should inspect the pavement surface to ensure the integrity of the surface is acceptable for high power engine runs and any FOD has been removed. The engineer will be required to sign the safety checklist to confirm all safety considerations have been fully assessed.
- ATC clearance to start engines must be obtained on the Ground frequency stating call sign, aircraft type and location. ATC clearance must also be sought before accelerating engines to high power. A listening watch must be kept on the Ground frequency, as the need to reduce power may be necessary for safety reasons.
- Airfield Operations may request copies of Engineer's risk assessment documentation before approving any open field test.
- Charges for open field-testing will be levied in accordance with the Fees & Charges for testing within the ETB. (See 3.1.1.)
- NOTE: Tows to and from the ETB and open field testing locations are subject to the procedures outlined in ASI 25 (Aircraft Towing)
- The 23R Passing Bay is no longer available for open field-testing due to changes in airfield infrastructure in this area.

## ASI 2 – Aircraft Compass Calibration

**ASI Owner** Airfield Operations Manager

### 1. COMPASS SWING PROVISION

A Compass Swing Base (CSB) is provided on the airfield for use by based aircraft and visiting aircraft which require compass re-calibration prior to flying again. The CSB is located at the junction of Taxiways Bravo, Charlie, and Kilo.

Owing to its location at the junction of busy taxiways, use of the CSB is restricted to off-peak times of day. The CSB will not normally be available for use during the hours 0600-1000 and 1600-2000.

Occasions will also arise when the CSB is unavailable due to primary taxiway closures and work-in-progress. Planned outages of the CSB will be promulgated in the relevant Airside Directive.

### 2. FACILITIES

The CSB is certified to Category 2 standards. QinetiQ plc, who are approved by the Government, carries calibration and re-certification out bi-annually. A calibration certificate is held by the Airfield Operations Manager and may be viewed at any reasonable time.

A circle painted on the ground in White marks out the CSB. The cardinal points N, E, S, & W are indicated on this line at their respective magnetic alignments relative to the radius of the circle.

It should be noted that the CSB is located away from the terminal areas and consequently there is limited ambient light during hours of darkness. Furthermore, parts of the circle are located in grassed taxiway strips which may provide uneven footing. These factors should be borne in mind with regard to the health & safety of personnel involved with compass swinging.

### 3. PROCEDURE FOR USE

Engineers wishing to use the CSB must contact Airfield Duty Manager as far as possible in advance, requesting use of the CSB and stating the following particulars:

- Aircraft type
- Registration
- Preferred start time
- Duration of swing
- Whether the aircraft will be manoeuvred by tug or under its own power

Upon receiving a request for use of the CSB, the ADM will consider the operational impacts and consult with the ATC Watch Manager. The ADM will be responsible for notifying RSS and the Police Air Support Unit as movements to and from TATON and the northern entrance to ROMPA will be prohibited when compass swinging is in progress

At the agreed time, the person in charge of the test may tow or taxi the aircraft out to the CSB. N.B. A clearance must be obtained from ATC on the Ground frequency.

ATC will alert the ADM to the movement of the aircraft and the select 'Compass Swing' on the AGL lighting panel.

The ADM will arrange for mobile day-glow barriers and obstacle lights to be placed across taxiways at B3, B4, and K4.

The swing may take place undisturbed by aircraft ground movement. Radio contact between ATC and a person at the swing must be maintained throughout.

The person in charge of the swing must advise ATC when complete so that barriers may be removed to allow the aircraft to vacate the CSB.

The lighting panel 'Compass Swing' setting must not be de-selected by ATC until all barriers are confirmed as removed.

Subject to advanced agreement with Airfield Operations via the AOM, aircraft engineers may be permitted to taxi aircraft within the confines of the CSB, subject to the provision of company risk assessments and evidence relating to training and competencies of approved personnel.

## ASI 3 – Test, Training and Ferry Flights

**ASI Owner** Airfield Operations Manager

### 1. TECHNICAL TEST FLIGHTS

Flights may be conducted from Manchester for the purpose of testing the functionality of the aircraft and its systems following routine maintenance, or if required by a regulator prior to revenue service flying.

Such flights are subject to all other airport operating conditions and restrictions applicable to a normal revenue flight. This includes runway slots, noise abatement, runway charges, and Instrument Flight Procedures.

Such flights must be conducted with all engines operable unless prior written authority has been granted by the ADM. Any requirement for 'engine out' testing must be notified in advance to the Airfield Duty Manager. Any subsequent permission granted would be subject to risk assessment with which the operator may be required to co-operate.

Flights involving repeated 'touch-and-go' manoeuvres at Manchester will not be permitted at any time.

### 2. TAXI-TESTS

'Fast-taxi' tests – where the aircraft will exceed 30 knots groundspeed will only be permitted on runways and are subject to prior permission from the ADM. Requests for taxi-tests should be made in writing to the ADM ([ops3dm@manairport.co.uk](mailto:ops3dm@manairport.co.uk)) and contain the following information;

- Aircraft Type
- Airline
- Registration
- Reasons for Undertaking Test
- Max. Groundspeed
- PoB

NOTE: Any technical failures which may occur during the test must not cause disruption to normal airport operations.

### 3. TRAINING FLIGHTS

Flights will be permitted for the purpose of crew training, subject to all of the above considerations at section 1, above. Flights involving repeated 'touch-and-go' manoeuvres at Manchester will not be permitted at any time.

### 4. POSITIONING (FERRY) FLIGHTS

Flights will be permitted for the purpose of positioning an aircraft empty to or from another airport, subject to all of the considerations at sections 1 and 3, above.

## **ASI 4 – Aircraft Maintenance Activity**

**ASI Owner**                      Airfield Operations Manager

### **1. AIRCRAFT MAINTENANCE ON APRONS**

To meet the increasing demands of air transport requirements and to achieve optimum usage of aircraft stands, especially those nearest to the Terminal, priority for stand usage is given to arriving/departing aircraft.

When aircraft maintenance is undertaken on an apron stand, which may inhibit the ability to remove that aircraft from the stand, the flexibility for allocating that particular stand to an arriving/departing aircraft is lost.

#### **1.1. Procedures**

Only maintenance of a 'minor' nature is permitted on the apron. For the purposes of this instruction 'minor' means routine turn round work such as oil top up.

When maintenance work is carried out, aircraft engineers are responsible for ensuring that:

- Aircraft are not disabled such as they may not be removed from the stand in reasonable time. If this is not feasible due to the nature or particular technical defect, Airfield Control must be informed immediately.
- Spillage's of fuel, oil and other fluids do not occur and that if they do occur, the actions detailed in ASI 21 are followed precisely and without delay
- FOD, in the form of tools, aircraft parts etc. are not left around the apron area
- Aircraft jacks are not used without spreader plates
- Appropriate procedures are in place for occupant evacuation of aircraft which have personnel on board

### **2. AIRCRAFT STORAGE**

All operators requiring long-term storage of aircraft must obtain approval from the Airfield Operations Manager.

In the event that approval is issued, all such stored aircraft must meet the following requirements

- Securely locked
- Chocked at the nose wheel and main undercarriage
- All covers must be adequately secured

### **3. TAXIING OF AIRCRAFT BY ENGINEERING STAFF**

Non-aircrew personnel taxiing aircraft at MA must hold an Aircraft Engineering Qualification/Licence recognised as appropriate by the UK CAA and/or in accord with EU-OPS. Additionally, a local certificate issued by an appropriate type rated pilot must be held, indicating that the engineer has been trained and tested to an adequate standard to safely taxi the specific aircraft type.

Aircraft may be taxied without a Radio Qualified Person aboard by the operator maintaining a listening watch on VHF provided that they are under the direct control of an Airfield Operations vehicle in contact with ATC.

**4. TAXI TEST**

Refer to ASI 3 (Para 2)

## **ASI 5 – Airside Works (Development, Maintenance and Remedial)**

**ASI Owner**                      Airfield Policy and Planning Manager

### **1. MANAGEMENT OF AIRSIDE WORKS – THE STARTING POINT**

All airside works must be co-ordinated through Manchester Airports Group processes. This applies not only to major construction projects but also to minor works, maintenance, fixed installations, and remedial works including painting and branding of structures. Any external organisation, (tenant, service partner, contractor etc) or MAG internal department wishing to carry out any such works on the aprons or airfield areas must inform MAG Capital Delivery in the first instance so that the project may be properly co-ordinated. The processes required to assure all safety and legal requirements are met may be lengthy and multi-faceted, depending on the nature and scope of the task. No one department has jurisdiction over all of these aspects and so it is vital that MAG Capital Delivery are contacted in the first instance, so that the correct process and consultation can be mapped from the outset.

Airside development projects will be managed and procured through MAG Capital Delivery, who will appoint a Project Manager. A project team will be formed, which must include representation from Airfield Operations Planning. Minor routine works and maintenance schemes may be managed internally through the External Engineering Manager but are subject to the same consultation processes outlined in paragraph 2 below. The requirements of this Instruction are also contained or referred to in another document, published by MAG Capital Delivery, titled 'General Requirements for Contractors working at Manchester Airport'

### **2. NEXT STEPS - OPERATIONAL PLANNING AND APPROVAL REQUIREMENTS**

The MAG Project Manager must inform Airfield Operations Planning of the proposed works or development well in advance in order that the due process may be followed. Where the project management role has been contracted out, the contractor must ensure such consultation takes place. However MAG Capital Delivery is ultimately accountable for the safe management of these processes – safety accountability under the Aerodrome Licence may not be delegated to contractors. Failure to properly consult may result in works being undertaken without authorisation and in violation of the Aerodrome Licence. Unauthorised works are liable to immediate cessation by Airfield Operations personnel until the due consultation, planning and approvals are in place.

All airside development and maintenance work requires prior consultation so that the aerodrome safety and regulatory requirements can be assessed and managed. Airfield Operations Planning, via the Airfield Policy & Planning Manager, is responsible for the operational planning and notification of all airside development works. It is a requirement of the Aerodrome Licence, Condition 3, that Manchester Airport plc must consult the CAA Aerodrome Inspector before commencing any development which may change the licensed facilities, and obtain the necessary approvals. The principles set out in CAP 791 will be followed and Safety Assurance Documentation produced. The APPM will advise project teams of the likely planning and approval timescales in order that these can be programmed.

The scope of the consultation and planning will be commensurate with the nature and scale of the project. The works planning and approval process is included at 2.1 below. The period of notice required will similarly be dependent upon the scope and impact of the works, and

the availability of Airfield Operations Planning resources to undertake the necessary work. The APPM maintains an agreement with the CAA Aerodrome Inspector for Manchester as to the level of consultation required in respect of specific airside works. This agreement may be reviewed from time to time.

### **2.1. Airside Works Planning and Approval**

Airfield Operations Planning will ensure that the following actions and issues are covered:

- Compliance with aerodrome licensing requirements
- Compliance with MA operational policy and specifications
- Assessment and management of operational safety risks
- Continuity of operations
- Minimum disruption
- Stakeholder liaison (aircraft operations-related only)
- Production of Safety Assurance Documentation for CAA approval
- Promulgation of Information

### **2.2. Major Projects**

A major project will involve works such as:

- Construction of a taxiway
- Runway maintenance works other than routine activities
- A new building with an airside frontage

The above list is not exhaustive but is indicative of what is considered to be a major project and will require substantial operational planning. The APPM will provide representation at works planning meetings and will invite representation from NATS as considered appropriate.

Sufficient design data and works methodology must be provided by the project team in order that safety and operational assessments can be made by Airfield Operations Planning. Design and operating philosophy cannot be approved until all necessary assessments and consultations have been completed.

Timescales for such consultation and approvals will vary according to the scope of the project. Airfield Operations Planning will co-ordinate the appropriate level of Development Risk Assessment (DRA) and will feed the results back to the project team. Changes to design and methodology may be required as a result of the DRA. Safety Assurance Documentation will be produced, this will comprise of an Airside Directive, DRA records, and, where the scope of the works requires, an Operational Requirement and Safety Statement.

Design of any new infrastructure to form part of the licensed aerodrome must be signed off by the APPM prior to start of construction.

Once design and methodology has been approved, and DRA completed, the project can proceed to construction and implementation in accordance with the notification programme. Minimum notification periods apply with respect to NATS and promulgations via UK AIP.

### **2.3. Minor projects**

A minor project will involve work such as:

- Limited scale pavement reconstruction and repair
- Changes to road layouts
- A small airside building construction
- Other works which requires closure or restriction in use of an airside facility such as a stand, an airbridge, or a roadway.

Planning and approval of minor projects will follow the same principles as for major projects but the scope and level of consultation will be smaller. CAA SRG will not normally be consulted via a formal development meeting and the level of consultation will be determined by the APPM.

Minor works may also be the subject an Airside Directive, or where deemed appropriate, a Minor Works Brief.

### **2.4. Cranes**

Works involving the use of cranes are of particular concern. Cranes can represent hazardous obstacles to aircraft on or in the vicinity of the airport. Planning and notification is essential, and a separate permit system is in operation. Procedures for the use of cranes at the airport are contained in ASI 7, paragraph 6.

## **3. PROMULGATION OF INFORMATION**

Airfield Operations Planning will issue notifications which will include one or more of the following:

- UK AIP Supplement (public domain)
- NOTAM (Public domain)
- Airside Directive (Airport subscribers)
- Minor Works Brief
- ATIS broadcast (public domain)

Particular consideration will be given to the notice periods required by the UK AIP (up to 90 days) and NATS Manchester (14 days).

## **4. PERMITS TO WORK**

In addition to the over-riding MAG work permit scheme, all airside development works require the issue of an Airfield Operations Works Permit. Permits will be issued by the Airfield Duty Manager. To complete the permit issue the ADM will require copies of safety assurance documentation produced by Airfield Operations Planning for major / minor planned works.

## 5. ROUTINE MAINTENANCE WORKS

### 5.1. General

Routine maintenance work covers surface markings, signage, lighting, strip surfaces and grass cutting.

The routine nature of many maintenance functions can lead to complacency and consequent incidents and occurrences. It is of paramount importance that the planning, promulgation and execution of such works is detailed and carried out in a manner which attends meticulously to all relevant airside procedures.

Some of the maintenance and repair tasks can be accomplished during aircraft operations. Other tasks can only be undertaken when the area is closed to aircraft activity or when aircraft activity is light e.g. at night or during the winter season.

Work may be carried out within an active runway strip in accordance with the relevant policy. However planned maintenance of the runways will be undertaken wherever possible during a runway closure. In the case of Runway 05R / 23L this can be achieved during the daily published closure periods. In the case of Runway 05L / 23R, specific night closure programmes are planned each year in order to undertake routine maintenance such as rubber removal, painting, surface repairs, etc.

### 5.2. Procedures and Permits for routine works

Regular, routine airfield maintenance work will be carried out in accordance with the local operating procedures produced by the relevant section manager. Generic, open-ended Airfield Operations Works Permits will be issued for such works, thereby eliminating the requirement to issue permits on each occasion.

## 6. WORKS WITHIN RUNWAY STRIPS

An Airfield Operations Works Permit must approve all works within runway strips. Works which are of a regular, on-going routine nature (e.g. grass-cutting) may have a 'standing' approval and will not require the issue of a permit on each occasion. All other works requires the issue of a time specific permit. Permits are issued by the ADM, who will in turn notify the ATC Watch Manager of approved work.

**Table 1 - Works carried out on foot with hand held tools only**

Area	UHF Channel	Clearance required	Weather minima	Other conditions
Grass areas within CGA up to edge of runway shoulder	5 (R1) 3 (R2)	Own lookout	>safeguards.	Grass areas only.
Grass areas within LSA up to edge of CGA (burn line)	1(R1 North) 3 (R1 South/R2)	Free-ranging	>safeguards	Prior notification to ADM/ATC
On runway pavement inc. shoulder	5 (R1) 3 (R2)	Positive	.safeguards	Between a/c movements
Paved links outside LSA	1 (n/side) 3 (s/side)	Positive	Nil	ATC co-ordination required.
On paved links within LSA up to edge of shoulder	5 (R1) 3 (R2)	Own lookout	Visible from tower, or >safeguards	Stopbar OFF. Frangible barrier placed at boundary of works. No closer than edge of shoulder.

**Definitions**

- Instrument Strip (IS) 150m each side of centreline – not marked out on ground
- Localiser Sensitive Area (LSA) 137m each side of centreline (R1 stopbars / R2 CAT III stopbars)
- Cleared & Graded Area (CGA) 105m each side of centreline (Burn Line)
- Obstacle Free Zone (OFZ) 77.5m each side of centreline – not marked
- Visual Strip (VS) 75m each side of centreline –not marked

**Table 2 - Works carried out with vehicles/plant**

Area	UHF position	Clearance required	Weather minima	Other conditions
Within CGA up to edge of runway shoulder	5 (R1) 3 (R2)	Positive	Visible from VCR, or >safeguards	Between movements
Within LSA up to edge of CGA	5 (R1) 3 (R2)	Positive	Visible from VCR, or >safeguards	N/R
On runway shoulder	5 (R1) 3 (R2)	Positive	>safeguards	Ops suspended
Paved links outside LSA	1 (n/side) 3 (s/side)	Positive	>safeguards	Prior notice to ATC. Infringes taxiway strip
On paved links within LSA up to edge of shoulder	5 (R1) 3 (R2)	Own lookout	Visible from tower, or >safeguards	Stopbar OFF. Frangible barrier placed at boundary of works. No closer than edge of shoulder.

**Definitions**

- Instrument Strip (IS) 150m each side of centreline – not marked out on ground
- Localiser Sensitive Area (LSA) 137m each side of centreline (R1 stopbars / R2 CAT III stopbars)
- Cleared & Graded Area (CGA) 105m each side of centreline (Burn Line)
- Obstacle Free Zone (OFZ) 77.5m each side of centreline – not marked
- Visual Strip (VS) 75m each side of centreline –not marked

**6.1. Accountabilities**

When works are taking place under positive clearance, ATC are responsible for ensuring the safety of aircraft and personnel.

In these cases, the runway is ‘occupied’ and ATC will give a positive clearance for vehicles/personnel to pull back for aircraft movements.

When works are taking place without positive ATC clearance responsibility for aircraft and personal safety lies with the person(s) carrying out the works, on the basis that:

- A policy is in place, agreed between MA and NATS
- Prior permission must be obtained from the relevant Tower Controller to enter the ‘strip’
- The terms of the Airside Works Permit have been accepted by signature of the person or their employer
- The understanding that work within runway strips has associated hazards and when operating without positive ATC clearance, the person(s) themselves must determine when it is safe to remain within the strip

**7. EMERGENCY WORK IN PROGRESS**

Occasions may arise whereby a failure of a Taxiway or Runway Surface requires immediate action in order to make the area safe for operations.

In this case, the ADM is to liaise directly with the ATC Watch Manager and undertake a Joint HAZOPS, Level 3 ('Green Strip' procedure).

The headings in the HAZOPS Level 3 act as an aide memoir for both parties to ensure that nothing is overlooked.

The ADM will issue an Airfield Operations Works Permit which will set out the necessary conditions and procedures applying.

**8. SUSPENSION OF WORK**

Airfield Operations may suspend any work on the Airfield at any time. This may be due to poor weather, an incident, lack of authorisation, or as a result of poor working practice which is deemed a safety hazard to operations.

Any member of staff who is concerned about the safety aspects of any works is to contact the ADM immediately on 0161 489 **3331**.

## ASI 6 – Access to Critical Part (CP)

**ASI Owner** Fire & Airfield Security Manager

### 1. CRITICAL PART (CP) ACCESS POINTS

Access to the Airfield is via a number of security posts

- North Gate
- West Site (H24)
- Southside security access point
- Terminal Service Yards (Pedestrian access only)
- RRS Jet Centre

Full security procedures will be undertaken for staff and vehicles, this includes access control and search. Airside vehicle permits are checked by Aviation Security Officers.

#### 1.1 RSS Jet Centre is not within the MA Critical Part. A white painted line on the apron and a burn line in the grass mark the Critical Part boundary. A security cabin is located on site and an Aviation Security Officer will ensure full MA security procedures are undertaken for staff and vehicles if:

- Any person from RSS Jet Centre apron wishes to gain access the Critical Part.
- Any Person currently on the airfield who enters the RSS Jet Centre apron and wants to return to the critical part. (Security Procedures apply each time the critical part boundary is crossed).

Security Procedures do not apply to persons on-board an aircraft. This security measure is in addition to any security procedures within the RSS Jet Centre.

### 2. DIRECT ACCESS TO THE 'AIRSIDE'

Airfield Operations have responsibility for authorising and controlling access to the Critical Part via a Crash Gate. Access through these locations should be limited to infrastructure projects. Access will be controlled by Airfield Security.

#### 2.1. Procedures

- The company requiring access contacts the Airfield Duty Manager (ADM).
- The ADM is to ensure that the contractors' access is properly authorised. Arrangements for the provision of security are the responsibility of the Project Coordinator and should be incorporated in the contractors work methodology and/or Airside Directive.
- The ADM (or his nominated deputy) is to attend the Crash Gate and ensure security are in attendance.
- Airfield Security must maintain a log of all staff, vehicles and equipment entering the Critical Part.
- All personnel on site must produce a form of identification; any persons not having formal identification will not be permitted access onto the airfield. Examples of identification are as follows:
  - Valid Passport
  - UK/EU Photo Driving Licence
  - CAA Identification Pass/DFT Identity Card
- At the end of each working day, the ADM must attend the Crash Gate and check all persons who entered have left the area.
- Airfield Security must ensure the Crash Gate lock is properly re-secured.

## ASI 7 – Aerodrome Safeguarding

**ASI Owner** Airfield Policy and Planning Manager

### 1. CONTEXT

There are several aspects to the safeguarding function:

- Physical – preserving the integrity of the Obstacle Limitation Surfaces (OLS) surrounding the Aerodrome.
- Technical – the effects of new development on Nav aids and technical equipment
- Bird Hazard Control – minimises the hazard to aircraft posed by developments whose design may increase bird numbers in the vicinity of an aerodrome
- Lighting in the Area of Aerodromes
- Use of cranes during construction within 6km of an Aerodrome
- Wind turbines within 30km of an Aerodrome

Under the Joint Circular issued by the Office of the Deputy Prime Minister (1/2003) on the Safeguarding Aerodromes Technical Sites and Military Explosives Storage Areas, MA is responsible for the Safeguarding of Manchester Airport. In this role MA is the statutory consultee to the Planning process and must provide Local Planning Authorities (LPA's) with safeguarding assessments for proposed developments.

LPA's are issued with a Safeguarding Map by the CAA specific to Manchester Airport which enables them to identify those applications that could potentially impact upon the Airports operational safety and on which consultation is required. The map currently in use is dated February 2003.

### 2. RESPONSIBILITIES

The **Head of Airfield Operations, Safety and Compliance** is ultimately responsible for:

- Maintaining the integrity of the OLS

**MA Group Planning** Section will:

- Maintain records and undertake the external administrative function for safeguarding at Manchester
- Monitor the progress of the application, particularly where external consultation is necessary, in order to ensure that permitted consultation periods are not exceeded
- Log details of any Local Planning Authority decision obtained into the 'Manchester Airport Safeguarding Filing Index' and place any decision notice in the case-file
- Interrogate the database and plotting sheets to identify any previous application which could relate to the current case, either in location, applicant or subject
- **The Airfield Policy and Planning Manager** is responsible for the overall management of Physical Safeguarding

### 3. PROCEDURES

#### 3.1. Legislative and Administrative

In the case of formal consultations, the LPA will consult the Airport giving 21 days for a response. Each planning application received is given a Manchester Airport safeguarding reference (e.g. MAN05 - 2004 / 05).

**NB** - Other codes will be used as appropriate taking the first three letters of the relevant authority.

<b>MAN05</b>	Local Authority and Digital File
<b>2004</b>	Year
<b>05</b>	Safeguarding Case Number

Local Authority/Private Applicant	Code
Manchester	MAN
Stockport	STO
East Cheshire	
Trafford	TRA
Manchester Airport development under Part 18 of GPDO 1995	GDO

**NB** - If necessary the LPA (or other party) should be contacted to inform them of any difficulties that could require an extension to the twenty-one day time limit for consultation. If the LPA will not permit an extension to the time limit a letter of objection must be lodged on the grounds that MA is not satisfied that the proposal will have no harmful effect on the safety of operations at Manchester Airport.

The Airport may also be approached directly by the developer, or LPA, during pre-application negotiations. In these circumstances an assessment will be made in the normal way however it is to be made clear that any advice is provided in an informal capacity and will not prejudice detailed assessment of any formal planning application at a later date. Details of such assessments should be recorded but will not receive an MA safeguarding reference.

The application is given a digital file to include all created documents. In addition a paper file is to be created, containing the application details, a copy of the proforma and other documents as appropriate.

**3.2. MA Consultative Procedure**

Safeguarding consultation letters, along with copies of the application information, are to be sent to the following parties (giving 10 working days for a response):

- Physical Safeguarding - Assessed by Airfield Operations Planning
- Technical Safeguarding - Assessed by National Air Traffic Service (Tels)
- Bird Hazard Safeguarding - Airfield Wildlife Management (the Airports appointed Bird Hazard Consultant)

**3.3. Safeguarding Pro-forma**

A Safeguarding proforma titled Safeguarding Assessment Form, is to be filled out for the development, ensuring all the necessary information, prescribed in the Joint Circular, is included:

- A copy of the application for the development in question
- Copies of any submitted plans
- The location of the proposal with a grid reference to at least 6 figures each of Eastings and Northings
- The height of the site to an accuracy of 0.25 metres above OS Datum

- Details of the layout, dimensions and heights of buildings and works to which the application applies
- Such further information as is necessary to consider the application
- Types of planting and landscape works associated with a particular development
- Details of materials used in construction

If any vital information is missing, a request should be sent to the LPA to obtain the relevant information, explaining that the twenty-one day consultation period will not begin until it has been received. When all required information has been received by MA, the LPA or other party should be notified, by email or letter that the 21-day consultation period has now begun.

#### **3.4. Response to Local Authority**

The safeguarding proforma is to be completed with a safeguarding response written based on advice received. The response should then be checked and countersigned by the Head of Planning and Environment or the Planning Manager. All assessments and calculations received from the consultants are to be stored in the application file.

The response is sent to the LPA either by e-mail or in paper form with a copy stored in the digital and paper files.

#### **3.5. Case Follow Up**

The case officer should track the applications progress through to a decision being made by the Local Planning Authority.

#### **3.6. Local Authority Contrary Decision**

If an LPA proposes to grant planning permission:

- Contrary to advice submitted by MA
- Without conditions that have been requested
- Including specifications/features that have been advised against, the LPA must notify the Airport (as the official safe guarding consultee) and the CAA (as the safety regulator).

The CAA will then assess the application and may determine it in two ways:

- Firstly the CAA may consider the application and conclude that the Airport has been wrongful in its decision to object to or condition the proposal. In such cases the Airport is to obtain details of the CAA decision and update files accordingly
- Secondly the CAA could agree with the Airports decision and may refer it to the Secretary of State to be considered for 'call-in'. MA maybe required by the CAA to submit additional justification for its view as part of this process If the views of MA (or the CAA) lead to an appeal against the LPA decision then the Airport may be required to defend its view, either informally to LPA /applicant or formally by appearing as an expert witness at planning appeals. Arrangements to cater for such demands will be made as and when they are required

### 3.7. Methodology

In order to assess whether the implications of any proposed development, it will be necessary to understand and apply the relevant parts of CAP168. Two methods are in use and may be used singly, or together to provide means of cross-checking:

- A software application 'GDMS' supplied by SLC Associates.
- A 'manual' CAD based OS map with contour data, for heights AOD or AMSL and also showing the extent of all OLS surrounding Manchester Airport is available in the Airfield Operations Planning Department.

The Eastings and Northings, site plan and location plan, provided with any application will allow the location of the development to be identified. The CAD system will identify any penetration of Obstacle Limitation Surfaces.

#### 3.7.1. Potential Penetration of OLS

This assessment is undertaken by Airfield Operations Planning. Post holders within Airfield Operations Planning are trained and authorised by the APPM to undertake the safeguarding function, they are:

- Airfield Technical Planner
- Airfield Planning Officer

The post holders named above have been trained and certificated via the CAA Safeguarding course.

The assessor will check the details of the proposal for penetration of any of the Obstacle Limitations Surfaces.

If a penetration of an OLS is identified, the proposal should be assessed as to whether it can be eliminated or mitigated

The assessor will exercise discretion to have another competent person check and sign-off the calculations in cases where the potential impact of the development is significant.

The local CAA ASD Inspector will be consulted concerning any development considered to be unacceptable as a consequence of OLS penetration

Details of any calculations undertaken and conclusions will be forwarded to the MA Planning Section for submission to the LPA or other party as appropriate

Any obstacles which penetrate an OLS will require an appropriate **red**. It is important that ASD are consulted concerning any penetration of an OLS. It should be noted that the construction of the second runway lowered Manchester's surfaces as the threshold of Runway) 05R is considerably lower than that of 05L. This has resulted in some buildings within the locality of the airport penetrating the IHS. However, all of these have been declared to ASD and accepted.

The assessor will also consider any possible impacts of a development upon the Instrument Approach procedures. Where there is any concern the proposal will be referred to the Directorate of Airspace Policy for comment.

### **3.7.2. Technical Safeguarding Assessments**

MA Planning Department are to forward any planning applications which may have an impact upon Nav aids at or around the Aerodrome to NATS (Tels) for assessment. The local engineers will undertake a preliminary assessment of the development and may then submit the application to NATS HQ for further detailed analysis. This process may take longer than the normal 10 days allowed and where this is the case NATS will be required to contact the Planning and Environment Section immediately. If the delay is likely to result in a need to extend the consultation period granted by the LPA the Planning and Environment Section are to take the necessary steps to request an extension from the LPA.

### **3.7.3. Wind Turbines**

Any planning application to erect a Wind Turbine within 30km of an Aerodrome will be the subject of safeguarding. Not only are they very tall structures which will require Physical safeguarding, but they also may have a significant impact upon Nav aids and Radars. They are to be referred to NATS for Technical Safeguarding.

### **3.7.4. Bird Hazard Safeguarding**

The following developments can have an impact on bird activity on and in the vicinity of MA

- Tree and shrub planting
- Creation or enhancement of water features
- Landfill sites
- Sewage works
- Reservoirs

With regard to developments in the near vicinity of the airport, details of plantings, if not provided as part of an application are to be requested. Information regarding species to be avoided altogether and minimum acceptable plantings are listed at the Manchester Airport Group Planning Department. Comments concerning planting are to be made as part of the application response. Further information on the likely impact of such developments is contained in CAP772. Such developments should be referred to Airfield Wildlife Management (AWM), who are contracted to MA in order to provide expertise on Bird Hazard Assessment

### **3.7.5. Lighting**

At night and in periods of poor visibility, pilots rely on the pattern of the Aeronautical Ground Lighting, principally Approach and Runway Lighting to assist with aligning the aircraft with the runway and touching down at the correct point. Therefore it is important that other lights which could distract or confuse are not permitted.

It is therefore essential that proposed new street or other lighting is taken into account in the vicinity of an Aerodrome.

Lighting can cause problems where:

- The intensity of the lights, whether steady or flashing (i.e. strobe lighting), could cause glare in the direction of an aircraft approaching to land or taking off
- The colour of the light could cause it to be mistaken for an Aeronautical Ground Light

- When viewed from the air, the lights make a pattern, (e.g. a row of street lights) similar to an approach or runway lighting system
- The overall amount of illumination detracts from the effectiveness of the approach and runway lighting, particularly during periods of low visibility
- The aeronautical ground lights are obscured from the pilot's view

Although all lighting proposals in the vicinity of an aerodrome may be of concern, particular attention should be paid to lights within a rectangular area 750 metres each side of the centreline and extended centreline of the runway to a distance of 4500 metres from the threshold (for an instrument runway).

In addition guidance is provided in the British Standard Institution's BS 5489 Road Lighting, Part 8: Code of Practice for lighting that may affect 'the safe use of aerodromes, railways, harbours and navigable inland waterways on the characteristics of street lighting suitable for use in the vicinity of an aerodrome and the need for consultation'.

To avoid confusion with AGL, it is recommended to use flat glass full cut-off (FCO) lanterns mounted horizontally, so that no light is emitted above the horizontal. Other solutions may be considered, depending on the particulars of the lighting proposed and its location in relation to the aerodrome.

It should be noted that there are provisions under the Air Navigation Order (ANO) directing that lights shall not be exhibited which are liable to endanger aircraft taking-off or landing, or which are liable to be mistaken for an aeronautical light.

#### **4. OUTLINE APPLICATIONS**

Outline Applications, by their very nature, are likely to have insufficient information for a full assessment. In these circumstances, there are three options:

- Firstly, the Planning and Environment Section may send a letter to the LPA recommending that the application be deferred until further information is available under Article 3(2) of the General Development Procedure Order 1995 or Article 4 of the Town and Country Planning (Applications) Regulations 1988
- Secondly, send a response, which encompasses all planning conditions that could be appropriate to ensure the proposed development is suitably restricted
- Thirdly, lodge an objection on the grounds that insufficient information is available to satisfy the airport that the proposal is acceptable.

The application is to be plotted on the "Manchester Airport Safeguarding Plotting Sheets" and is logged into the 'Manchester Airport Safeguarding Filing Index ' of which there are both digital and paper forms.

#### **5. TREATMENT OF TEMPORARY OBSTACLES**

Wherever possible, MA will seek to remove obstacles which may be a hazard in accordance with the requirements of CAP 168. Where this is not possible, such obstacles will be marked appropriately, notified to pilots, and suitable operating procedures introduced.

### 5.1. Obstacles within the Runway Strip

Temporary obstacles within the runway strip may take the form of works areas, vehicles and plant, or a disabled aircraft. Planned obstacles such as a works area are taken account of during planning process – see ASI 5.

Each obstacle is to be treated according to its nature and position. The guiding principles are that:

- Operations on a particular runway are to be suspended if there is an obstacle within the paved area of the runway; unless and until revised declared distances have been calculated and promulgated
- ILS approach procedures are to be suspended whenever there is an obstacle within the instrument runway Cleared and Graded Area. All such obstacles are to be notified to pilots by the most appropriate method for the situation i.e. NOTAM, ATIS or RTF

## 6. CRANE OPERATIONS

### 6.1. Introduction

The operation of cranes in the vicinity of an aerodrome may have a direct impact on the safety of aircraft and aviation. The legislation that controls such activities is the Air Navigation Order 2005 (ANO) and Civil Aviation Publication (CAP) 168 entitled 'Licensing of Aerodromes'. The operators of cranes must refer to British Standard Institute Code of Practice for the Safe Use of Cranes (BS 7121).

BS 7121 refers to Crane Control in the Vicinity of Aerodromes. In addition the Airport Operators Association (AOA) in partnership with the Health and Safety Executive (HSE) have issued a guidance leaflet entitled 'Cranes and Planes, A Guide to Procedures for Operation of Cranes in Vicinity of Aerodromes'.

### 6.2. Safety Requirements

In order to co-ordinate the safe operation of cranes in the vicinity of aerodromes any proposed crane operation within 6 kilometres of an aerodrome, at heights of 10 metres above ground level or that of the surrounding structures or trees, must receive prior permission from the Aerodrome Operator.

### 6.3. Location and Permission

Crane operators and/or developers have been advised to contact the Aerodrome Operator at least one month in advance of any proposed crane operations to find out if there are any limitations or regulatory procedures that may apply to the proposed crane operation. In a minority of circumstances it may be necessary to approach the Civil Aviation Authority (CAA). In these cases it may be necessary for the applicant to develop and co-ordinate a suitable safety case for the proposed operation.

To obtain permission to operate a crane within 6 kms of the aerodrome, the crane operator must apply for the issue of a Manchester Airport **Tall Equipment Permit**. Applications may be made to Airfield Planning not less than **21** working days from the planned crane operation.

Contact information:

**Airfield Planning Officer**

**Telephone number**            **0161 489 5614/5086**

**FAX**                                **0161 489 3306**

The following information will be required:

- The precise location of the crane operation provided as an eight figure Ordnance Survey grid reference together with the elevation of the ground in metres "Above Ordnance Datum" (AOD) at that location. NB - On some Ordnance Survey maps AOD is displayed as "Above Mean Sea Level" (AMSL)
- The maximum elevation of the crane "Above Ground Level" (AGL) in metres
- The type of crane or construction equipment to be used e.g. Tower, Mobile, etc
- The radius in metres of the jib or boom of a fixed crane
- The area of operation of a mobile crane
- The dates and times of the operation
- The applicants name, address and contact details (including telephone, fax number and email address where available)
- Contact details for the crane whilst operating (e.g. mobile telephone number for the crane driver or 'on site' foreman)

Once these details have been considered by Airfield Planning it will be determined whether the crane operation can proceed and whether any restrictions need to be applied. The APPM will determine whether CAA Directorate of Airspace Policy or Safety Regulation Group need to be consulted.

Following identification of all constraints, Airfield Planning will issue a **Tall Equipment Permit**. The permit will list all the relevant details supplied by the operator and any restrictions applied. Restrictions may include items such as:

- The fitting of **red** obstacle lights
- Restrictions on operating times
- Restrictions on operations dependant upon the runway that is in use
- Restrictions on crane operating height
- Restrictions during poor weather e.g. fog or low cloud
- It should be noted that it may be necessary to lower the crane immediately in the event of an aircraft emergency or similar

Airfield Planning will enter the **Tall Equipment Permit** on the **Tall Equipment Permit** database and a copy will be sent to the ADM for information and action.

**6.4. Responsibilities**

Person (s)	Responsible for:
<b>APPM</b>	Ensuring obstacles are taken into account and treated during the planning of airside works.  Planned re-declaring of runway distances. Consulting and promulgating redeclared distances.
<b>ADM</b>	Ensuring that crane operations are monitored and controlled according to the applicable permit.  Urgent unplanned re-declaring of runway distances and promulgation in accordance with this instruction.
<b>Crane Operators</b>	Ensuring that a <b>Tall Equipment Permit</b> has been obtained and that crane operations are conducted in accordance with the permit.

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## ASI 8 – Aircraft Noise

**ASI Owner**                      Environment Manager

### 1.        **RUNWAY USE**

During the period 06:30 – 10:30 and 16:00-20:00hrs (local) dual runways will normally operate in segregated mode. This period may vary depending upon the level of traffic demand on a given day. Operations revert to single runway (23R/05L) at all other times.

Under normal circumstances, where the tail wind component remains less than 5knts, a system of preferential westerly runway use is operated. Under circumstances where the preferential wind promotes the use of Runway 23L, this will continue unless it is contrary to safety requirements (e.g. Pan or Mayday call), or until climatic conditions require use of Runway 05R with the ILS (CAT 1).

### 2.        **NIGHT FLYING**

Aircraft Movements taking place between 23:30 and 05:59 are not permitted to exceed 7% of the Airport's total movements. Such night time movements are limited to 10150 and 3895 for the summer and winter seasons respectively, up to summer 2012.

Manchester Airport further restricts the types of aircraft permitted to operate at night by means of the CAA's Noise Quota Count (QC) system.

The QC system categorises aircraft according to noise levels recorded at the time of noise certification. Details of the QC system and aircraft categories are available on request from Airport Operations or can be downloaded from the MA extranet site.

The point's budget for each season up to Summer 2012 is fixed at 8,750 points for Summer and 3,900 points for Winter.

Between 23:00 and 06:59 (local) no QC16 or QC8 aircraft are allowed to arrive or depart. In order to comply with these flying restrictions, the ADM will usually prohibit the flight from taking place if the aircraft has not pushed back at least 30 minutes prior to the curfew time (2300L)

Between 23:30 and 05:59 no QC4 aircraft may be scheduled to depart.

Under certain circumstances exemptions to these restrictions may be permitted; namely:

- Off scheduled movements during emergency situations;
- Off scheduled movements as a result of major disruption to air traffic;
- Off scheduled movements where significant distress may be caused to humans and animals;
- Relief flights where urgent needs exist;
- Military and support aircraft at time of war;
- Aircraft of British or foreign Royal Families and aircraft carrying Heads of State.

Any such dispensations must be approved by the AOM.

### 3. NOISE PENALTIES

Financial penalties are applied to departing aircraft which exceed the limits below:  
90 dB (A) between the hours of 07:00 and 22:59 (local) or  
83 dB (A) between the hours 23:00 and 06:59 (local).

As recorded at 6.5 km from start of take-off roll. Details of exact noise monitoring locations are available in the UK AIP AD 2-EGCC-3-2. Specific noise performance information is available from the MA Environment Department.

Details of the financial penalties are contained within the booklet 'Manchester Airport Fees and Charges' available from MA revenue department.

### 4. TRACK ADHERENCE

After departure Noise Preferential Routes as specified in UK AIP AD 2-EGCC-1-13 are to be flown by all departing aircraft until the level defined in the table is reached except:

- Aircraft whose MTWA does not exceed 5700 kg;
- Those aircraft instructed by ATC to make Early Turns In order to expedite traffic flow
- Unless otherwise instructed by ATC or deviations are required in the interests of safety.

The use of these routes is supplementary to noise abatement take-off techniques. After take-off, pilots should ensure that they are at a minimum height of 500 ft AAL before commencing any turn.

For performance reporting purposes, aircraft shall be deemed to be "off track" where their track (as recorded by the MA monitoring systems) passes outside the relevant 1.5 km departure corridor before achieving the required level. Further information regarding tracking performance can be obtained either via the MA Extranet site or by contacting the MA Environment Department directly (ext. **3566/3504**).

Details of the financial penalties are contained within the booklet 'Manchester Airport Fees and Charges' available from MA revenue department.

### 5. CONTINUOUS DESCENT APPROACH (CDA)

During the period 22:00 to 05:59 (local) all aircraft using the Standard Terminal Arrival Routes (STAR) via ROSUN, DALEY, MIRSI and DAYNE are required to carry out a Continuous Descent Approach (CDA) as detailed in AIC 51/2006.

### 6. ENGINE TESTING

Engine Testing up to and above Ground Idle Power is strictly controlled and is the subject of a separate Standing Instruction (ASI 1).

### 7. INFORMATION AVAILABILITY

All aircraft noise and track background and performance data is available either via the MA extranet facility or by contacting the Airport Environment Department.

**Tel: 0161 489 3566**

**Email: [environment@manairport.co.uk](mailto:environment@manairport.co.uk)**

**Enquiries of an operational nature should be directed to the ADM +44 161 489 3331.**

## ASI 9 – Accident, Incident and Safety Occurrence Reporting

**ASI Owner**                      Airfield Safety Assurance Manager

### 1.            **PURPOSE OF REPORTS**

Reports are made primarily for three reasons as follows:

- Regulatory requirement
- Manchester Airport requirement
- So that Management and staff can learn how to prevent re-occurrences

### 2.            **GENERAL REPORTING REQUIREMENTS**

The responsibilities for using the various types of reports together with the relevant procedures are detailed below:

Article 142 of the Air Navigation Order (ANO) 2010 requires all Ground Handling Agencies to report specified safety related occurrences. This must be done using the Civil Aviation Authority's (CAA's) Mandatory Occurrence Reporting (MOR) Scheme.

Further guidance is contained within the CAA's Civil Aviation Publication (CAP) 382 titled Mandatory Occurrence Reporting Scheme; available in electronic form from the CAA website at [www.caa.co.uk](http://www.caa.co.uk)

**It is imperative that Airfield Operations is made aware of any safety occurrences, safety hazards or unsafe working practices as soon as reasonably possible to allow the necessary action to be taken.**

Such information should be passed to the Airfield Duty Manager on telephone number +44 (0)161 489 **3331**.

All report forms are to be completed fully, providing as much detail as is available and submitted to the AOM, excluding AOR's which are not affiliated to an Accident Investigation Form or Mandatory Occurrence Report.

All Airside Operating personnel are to make every endeavour to learn from accidents, incidents and occurrences to prevent recurrences.

#### 2.1.        **No Blame**

Manchester Airport operates a 'no blame' culture except where there is proven Gross Negligence or Wilful Damage.

Airfield Operations will promote a safety culture whereby employers and employees alike work together in an environment that creates the confidence to report all incidents without the threat of censure, disciplinary action or subsequent loss of employment.

### 3. MANDATORY OCCURRENCE REPORTS

Mandatory Occurrence Reports (MORs) are filed in compliance with the Air Navigation Order and the procedures contained in CAP 670 and CAP 382.

#### 3.1. Definition

A reportable occurrence in relation to an aircraft, means any incident which endangers or which, if not connected would endanger an aircraft, its occupants or any other person.

#### 3.2. Responsibility for Reporting

The following personnel are required to make reports in accordance with the ANO:

- Air Traffic Control Officers
- Air Traffic Engineers
- Operational Managers
- Aircrew
- Aircraft Engineers
- Handling Agents

**NB** - Whilst the legislation defines those who must report, anyone may make a report should they consider it necessary.

**NB** - There is no legal requirement to notify MA Operations Department or ATC that an MOR has been filed even though the occurrence may involve MA Equipment, procedures or personnel. However, due to the time lapse between reports and investigations, it will assist in any subsequent investigation if this action is taken.

#### 3.3. Reporting Procedures

- The CAA requires that MOR reports be filed within 96hrs of the occurrence.
- All reports are to be made using the appropriate CAA form.
- The person completing the form is responsible for ensuring that it is despatched to the CAA SIDD.

#### **4. AIRCRAFT ACCIDENT AND SERIOUS INCIDENT REPORTS**

All such accidents/serious incidents are to be reported to the AAIB.

##### **4.1. Definition**

###### **4.1.1. Aircraft Accident**

An occurrence associated with the operation of an aircraft which might take place between the time any person boards the aircraft with the intention of flight and such time as all persons have disembarked, in which:

- A person suffers a fatal or serious injury
- The aircraft sustains damage or structural failure which adversely affects its strength, performance or flight characteristics requiring a major repair or replacement
- The aircraft is missing or is completely inaccessible

NB - "Serious injury" means an injury, which is sustained by a person in a reportable accident and which:

- Requires hospitalisation for more than 48 hours commencing within seven days from the date on which the injury was received, or
- Results in a fracture of any bone (except simple fractures of fingers, toes, or nose), or
- Involves lacerations which cause nerve, muscle or tendon damage or severe haemorrhage, or
- Involves injury to any internal organ, or
- Involves second or third degree burns or any burns affecting more than five percent of the body surface, or
- Involves verified exposure to infectious substances or injurious radiation

###### **4.1.2. Serious Incident**

An incident involving circumstances indicating that an accident nearly occurred. The incidents listed below, although not exhaustive, are typical examples of serious incidents:

- A near collision requiring an avoidance manoeuvre or when an avoiding manoeuvre would have been appropriate to avoid a collision or an unsafe situation
- An aborted take-off on a closed or engaged runway, or a take-off from such a runway with marginal separation from obstacle(s)
- A landing or attempted landing on a closed or engaged runway
- Gross failure to achieve predicted performance during take-off or initial climb
- All fires and smoke in the passenger compartment or in cargo compartments, or engine fires, even though such fires are extinguished with extinguishing agents
- Any events which require the emergency use of oxygen by the flight crew
- Aircraft structural failure or engine disintegration which is not classified as an accident
- Any case of flight crew incapacitation in flight
- Any fuel state which would require the declaration of an emergency by the pilot
- Take-off or landing incidents, such as undershooting overrunning or running off the sides of runways
- System failures, weather phenomena, operation outside the approved flight envelope or other occurrences which could have caused difficulties controlling the aircraft

For further information contact the AAIB:

Air Accidents Investigation Branch  
Farnborough House  
Berkshire Copse Road  
Aldershot  
Hampshire  
GU11 2HH

**Tel:** 01252 510300  
**Fax:** 01252 376999  
**Email:** [enquiries@www.aaib.gov.uk](mailto:enquiries@www.aaib.gov.uk)

#### 4.2. Reporting Procedures

All reportable accidents are required to be notified to the Department for Transport (in effect the AAIB) with the minimum of delay.

Aircraft Commanders have a legal responsibility for reporting accidents and incidents to their aircraft. However this may not always be possible. The initial responsibility for reporting an accident will rest with Air Traffic Control (ATC).

The Airfield Duty Manager (ADM) will ensure that the AAIB have been informed and have received all the relevant details, using the AAIB Notification Form.

As far as possible, the following information is to be provided:

- In the case of an accident the identifying abbreviation "ACCID" or, in the case of a serious incident, the identifying abbreviation "INCID"
- Type, model, nationality and registration marks of the aircraft
- Names of the owner, operator and hirer (if any) of the aircraft
- Name of the commander of the aircraft
- Date and time (UTC) of the accident/Incident
- Last point of departure and the next point of intended landing of the aircraft involved
- Position of the accident in relation to some easily defined geographical location
- Number of crew on board and the number killed or seriously injured
- Number of passengers on board and the number killed or seriously injured
- Number of other persons killed or seriously injured as a result of the accident
- Nature of the accident as far as is known

**4.3. Contact Name/Numbers**

The address and contact numbers are:  
**Air Accident Investigation Branch (AAIB)**  
**Air Accidents Investigation Branch**  
**Farnborough House**  
**Berkshire Copse Road**  
**Aldershot**  
**Hampshire**  
**GU11 2HH**

**24 hour Accident Reporting Line: 01252 512299**

The person reporting the accident to the AAIB is also required to inform the local Police of the accident and the place where it occurred, using the contact number below.

**Greater Manchester Police**  
**Airport Sub-Division**  
**Tel: 786 0250**

**5. OTHER ACCIDENTS AND INCIDENTS**

These are accidents and incidents involving vehicles, equipment, airbridges and persons etc where no aircraft is involved. Included are collisions, trips, falls etc.

All airside accidents and safety related incidents must be reported to MA Airfield Operations.

Such accidents and incidents are to be reported in order that an appropriate investigation can take place. The purpose is to discover causes so that remedial actions can be taken to prevent recurrence of the incident.

It is not the intention of MA to allocate blame except where there has been blatant disregard of procedures intended to provide a safe airside environment.

**5.1. Procedures and Follow Up**

**Managers and/or Supervisors** of personnel involved in airside accidents or incidents are responsible for:

- Requesting medical assistance on emergency ext **2222** if injuries are evident
- Reporting all such events as soon as practical to MA Airfield Operations on **3331** providing details of location and brief information about the event
- Conducting an investigation in the event that an Airfield Occurrence Report (AOR) is issued to an employer or employee and responding to Airfield Operations in writing within 21 days, stating their findings and any action taken to prevent a recurrence

**6. AIRFIELD OCCURRENCE REPORT**

The Airfield Operations Team is primarily responsible for maintaining safety and operational standards within the Airfield Boundary.

All Accidents, incidents and safety occurrences within the Airfield boundary will be recorded in the first instance on an Airfield Occurrence Report (AOR).

Airfield Operations will issue a copy of the AOR to the employee or employer of a company involved in an Accident, incident or Safety occurrence. The employer then has 21 days to respond formally in writing to Airfield Operations stating the actions taken.

In the case of more serious breaches of rules a fine will be imposed of £50 or £100. Any monies collected will be utilised to enhance Apron Safety on the Airfield (See ASI 13 Airfield Infringements).

Details of the AOR will be recorded on the Airfield Incident and Infringement database within 24 hrs of the AOR being issued. An automatic email will then be generated to the company contact informing them of the AOR details. If the company has not replied within the 21-day period of the AOR being issued a reminder will be generated every 2 weeks by email using the same electronic process for a period of 2 months. If a response is not received within 2 months, individual cases will then be addressed by the Airfield Operations Administrator.

**7. INCIDENT / ACCIDENT INVESTIGATION**

After each Accident or MOR, the ASM may open an 'Occurrence Folder'. An investigation will then take place, the ASM may undertake the investigation directly, or an ADM may be asked to take on this responsibility. The investigation will be fully documented and witness statements and accounts taken as appropriate. Other organisations may need to be involved such as Airlines, Handling Agents, ATC and Internal MA departments. Once completed, results and recommendations will be made and the completed document presented to the Head of Airfield Safety and Compliance for consideration.

Dependent upon the nature of the incident and results of the investigation, a review of procedures or training may be required in order to prevent a re-occurrence.

It should be noted that an Occurrence folder might be opened in response to a non-reportable accident and that an investigation and review will still be undertaken.

**8. FOLLOW UP ACTIONS**

Following an investigation, appropriate to the severity of the incident, any or all of the following actions may be taken:

- MA may require additional training for personnel concerned
- An infringement notice may be served
- Procedures may be modified

A monthly 'Safety Performance Report' of all airside accidents/incidents is produced and discussed at the Safety Performance Committee.

## ASI 10 – Airside Defect Reporting

**ASI Owner** Airfield Operations Manager & External Engineering Manager

### 1. PREVENTATIVE MAINTENANCE

All defect reports and the details of remedial action taken are recorded on a computerised 'Planned Maintenance System'. The information recorded is used to audit and review airport wide maintenance standards, contributing to the overall development of a 'Preventative Maintenance Programme'. This programme aims to limit the frequency of unplanned outages, operational restrictions and any degradation in airfield safety standards.

### 2. SAFETY CRITICAL DEFECTS

Safety critical defects which have the potential to compromise the safety of aircraft, passengers and/or personnel should, in the first instance, be reported to Airfield Operations (**Tel. 0161 489 3331**). Airfield Operations are responsible for ensuring all airside operational areas remain safe. This may necessitate the closure of operational areas in consultation with Air Traffic Control and Apron Control until such time remedial action has been taken and the area declared safe for continued operations by the Airfield Duty Manager.

### 3. AUDIT & INSPECTION REGIME

Manchester Airport (Operations) operates a programme of daily Movement Area Safety Inspections. Any defects identified should be reported to the Airport Control Centre (Terminal Control) and recorded via the airport 'Planned Maintenance System'.

Furthermore, schedules of airside audits are undertaken by Airfield Operations & Engineering personnel. Any defects identified are recorded on a Weekly Maintenance Action List circulated by Airfield Operations at the beginning of each week.

### 4. ACCIDENTS, INCIDENTS & EMERGENCIES

Defects arising from accidents, incidents or emergencies should be reported to Airfield Operations. The Airfield Duty Manager or his/her nominated deputy is responsible for inspecting the scene of an incident and reporting any known defects to the Airport Control Centre for remedial action.

### 5. RESPONSIBILITIES

#### 5.1. All Airside Users

- Reporting known defects to the Airport Control Centre (Terminal Control)
- Reporting 'safety critical' defects to Airfield Operations.

#### 5.2. Airport Control Centre (Terminal Control)

- Recording and processing reported defects via the PMS (Idhammer) System.
- Appointing appropriately qualified engineers to undertake remedial action.
- Updating records with details of any remedial action taken

- Informing Airfield Operations of any defects that have the potential to compromise the safety of aircraft, passengers and/or personnel.

**5.3. Airfield Duty Manager & Airfield Operations**

- Attending the scene of an incident/accident, reporting known defects to the Airport Control Centre for remedial action.
- Assessing operational safety following notification of a 'safety critical' defect.
- Delivering a daily airfield inspection regime.
- Conducting 3 Tier Audits (Level 2 & 3) in accordance with planned inspection schedules.
- Reporting defects via the Airport Control Centre and Weekly Maintenance Action List.

**5.4. Airfield Maintenance Unit**

- Conducting 3 Tier Audits (Level 1), undertaking routine maintenance 'on-site'
- Rectifying defects recorded on the Weekly Maintenance Action List.

**6. CONTACT TELEPHONE NUMBERS**

Airport Control Centre (Terminal Control)  
Airfield Operations

Ext. **3776**  
Ext.**3331/3339**

## ASI 11– Very Large Aircraft

**ASI Owner** Airfield Operations Manager & Airfield Policy and Planning Manager

### 1. AVAILABILITY OF THE AIRPORT TO VERY LARGE AIRCRAFT

#### 1.1. Context

For the purpose of this instruction, a Very Large Aircraft is defined as one falling within the ICAO designation Code F, (wingspan 65-80 metres and a main wheel span of 14-16 metres), or larger. Certain considerations also apply to aircraft within the ICAO designation E but having a very long wheelbase (see paragraph 5).

The airfield infrastructure at Manchester Airport is designed primarily to comply with the requirements for ICAO Code E aircraft, with certain areas meeting ICAO Code F or an interim standard. Details of runway and taxiway characteristics are given at Part 1, Section 3 of this manual.

Pavement widths and taxiway to obstacle clearances do not in many cases meet the requirements for Code F aircraft. Furthermore, there are certain ultra-large types in service for which there are no internationally agreed airfield design requirements. Whilst movements of these types through the airport are not frequent, they can be expected to visit from time to time on an ad hoc basis and therefore procedures to ensure their safe handling are required.

Examples of the aircraft types in question are:

Aircraft type	Length	Wingspan	ICAO Code
Antonov AN124	69.1 m	73.3 m	F
Airbus A380	72.8 m	79.8 m	F
Boeing 747-8	76.4 m	68.5 m	F
Antonov AN225	84.0 m	88.4 m	Unclassified – exceeds Code F

#### 1.2. Availability

Very Large Aircraft types will be subject to the same airport availability procedures as all other types except that the Airport Authority (through the AOM) reserves the right to refuse permission for a Very Large Aircraft to land or take-off, or to otherwise place constraints on the timing of such movements. Such refusal or constraint may be necessary in order to avoid causing unacceptable disruption to scheduled airport operations.

Airlines Operators wishing to use these types on services into Manchester Airport must be aware that the airfield infrastructure does not in many cases meet the ICAO requirements for Code F and larger types. Whilst the specific procedures set out in this instruction are intended to facilitate limited frequency of movement by these types, it is a matter for airline operators to consider the operating and safety implications and to ensure they have approval for such operations from their respective regulatory body.

Airport Co-ordination Ltd must refer any slot requests for the aircraft types listed in the table at 1.1 to the AOM for approval.

**2. RUNWAYS**

Both runways at Manchester meet ICAO Code E requirements. Paved shoulders are provided and offer protection against jet blast erosion and ingestion by the outboard engines of very large aircraft. The use of these runways by Code F and larger aircraft is acceptable provided that the aircraft operator has certification from their respective regulatory body to operate the type from such runways. There are no specific aerodrome or ATC procedures applying to the use of runways by very large aircraft other than restrictions on the exit and entry points, which may be used.

NB - AN225 departure on Runway 23R and arrival on Runway 05L should be avoided whenever possible due to limited wingtip clearance and jet blast risk to 'The Airport' public house garden abeam Link Juliet.

**3. TAXIWAYS**

In order to minimise the risk of aircraft wheels straying off pavement or wingtip collision with a fixed obstacle, the taxiway routings available to Very Large Aircraft are restricted as set out below, with the exception of the A380 for which procedures are given at paragraph 6.

<b>Movement</b>	<b>Routing</b>	<b>Comments</b>
Arrival Runway 05L	Vacate runway via Link M & J only. Taxiway J - K - C - A - D	B747-8 and Code E types may use any runway exit
Arrival Runway 05R	Vacate runway at any exit. Cross 05L at DZ then route via D, or K - C - A - D	
Arrival Runway 23L	Must use W/Y loop and backtrack to vacate runway at any exit. Cross at DZ then route as for 05R arrival.	
Arrival Runway 23R	Vacate runway at AE or A. Route A - B - C - A - D	
Depart Runway 05L	Route D - A - C - B - A Enter runway for departure at A1	
Depart Runway 05R	Route D - A - C - B (cross 05L) BZ - V - VD (backtrack 05R) W. Enter runway for departure at Y1	
Depart Runway 23L	Route D, (cross 23R) DZ. Enter runway for departure at T1	
Depart Runway 23R	Route D - A - C - K - J Enter runway for departure at J1	AN225–avoid 23R departure wherever possible.

#### **4. FURTHER CONSIDERATIONS**

##### **4.1. Contingencies**

Should any of the above routings not be available, alternative routings are to be agreed between the ADM and the ATC Watch Manager, using the Level 3 HAZOPS (See Safety Management Manual).

##### **4.2. Constraints**

The standard routings given in the table above have been derived by consideration of the constraints on pavement widths, taxiway intersections and obstacles. The majority of potential obstacles exist around the apron and terminal areas. Of particular concern are the apron roadways, many of which lie within the Code E taxiway/ taxilane strip. With the aircraft on the taxiway centreline, wingtips of Code F or larger aircraft will overhang roadways. To ensure clearance from fixed obstacles, all aircraft must stay on the taxiway centreline, and therefore to ensure the safety of vehicles on the roadways traffic will need to be temporarily halted as a Very Large Aircraft passes abeam. The ADM will ensure that Airfield Operations staff are positioned to warn and control road traffic accordingly. This may involve an Operations vehicle driving alongside the wingtip as an 'outrider' - clearing traffic off the roadway ahead.

Once clear of the apron areas there are few obstacles which present a hazard to Code F aircraft. The AN225 is a special consideration and there is limited experience with this type at Manchester. Whilst wingtip clearance exists from all fixed obstacles along the designated routes the clearance margins are significantly reduced as compared with ICAO standards. In many cases, aircraft stands adjoining the apron taxilanes must either be vacant or be occupied only by small aircraft types whose tail lies outside the swept path of the AN225 wing. The clearance requirement to be applied is half-span + 20% of full span (44 + 9 metres = 53 metres). Careful measurement of the available clearance must be made. A particular concern also is the clearance from the perimeter fence abeam holding point J1, which is just 49 metres. For this reason, and to guard against jet blast hazard to the garden of the 'The Airport' public house, use of Runway 23R for departure by AN225 types is best avoided.

##### **4.3. Special Actions**

The ADM must ensure that the movement of Very Large Aircraft around the airport is planned in conjunction with ATC and Airfield Operations staff.

Prior to arrival and departure of the aircraft the ADM is to discuss to procedure with the ATC Watch Manager. This discussion will cover:

- The runway to be used, the planned entry / exit link, taxiway routing, escorting of the aircraft, parking stand and docking guidance.
- The impact upon other airport operations whilst the movement takes place.
- Any hazard analysis required (Level 3 HAZOPS).

The ADM will then brief the Airfield Operations staff on duty regarding the arrangements, with particular emphasis on:

- The requirement for a Follow-Me vehicle.
- The requirement to warn or control traffic on the apron roadways, including use of an 'outrider'.
- Parking and docking procedures.

The ADM, having measured or calculated the available clearance from taxilane to parked aircraft, will brief Apron Control regarding any impacts the aircraft movement and parking will have on the normal availability and capacity of aircraft stands.

The ADM will brief the OiC Fire Service on the planned arrangements for any particular movement.

#### **5. GROUND MANOEUVRING BY LONG-WHEELBASE CODE E AIRCRAFT**

In the case of long-wheelbase Code E types such as the B777-300 and A340-600, pavement widths at certain taxiway intersections and curves do not ensure adequate main wheel to pavement edge clearance when normal cockpit-over-centreline steering techniques are employed. This constraint can be mitigated by the use of 'judgemental over-steering', a technique authorised by aircraft manufacturers and aided by the use of on-board cameras to monitor the position of the aircraft landing gear. This technique is recommended to be used by pilots of long-wheelbase Code E aircraft when manoeuvring on all taxiways of less than Code F category.

#### **6. OPERATIONS BY AIRBUS A380 AIRCRAFT**

Manchester Airport is available to scheduled passenger operations using Airbus A380 aircraft. It is stressed that the airfield infrastructure currently at Manchester Airport does not in all respects comply with ICAO requirements for aircraft designated as Code F, although parts of the airfield are undergoing progressive upgrading to these standards. Where this is the case, facilities are provided on the basis of the 'Common Agreement Document 2002' produced by the A380 Airport Compatibility Group. In most respects the facilities offered for use by A380 are compliant with these. A full schedule of airfield characteristics assessed against Code F and AACG requirements is included in the 'Operational Safety Case for A380 Scheduled Services', and approved by the UK CAA.

Owing to the present limitations in the aerodrome infrastructure, the operation of an A380 through Manchester Airport will be subject to certain restrictions and special procedures. Delays to A380s and other airport traffic are possible during ground movement between runway and parking stand.

##### **6.1. Aerodrome availability and procedure overview**

Facilities currently available for the A380 are limited and only two A380s may be accommodated on the ground at any one time.

An airline operator intending to divert an A380 into Manchester must notify the ATC Watch Manager and/or the Airfield Duty Manager either directly or via their handling agent. Notification at the earliest opportunity of the intention to divert will be beneficial in enabling advanced planning and will help to ensure that the aircraft is not unduly delayed upon arrival. Arrangements should be in place with a nominated Handling Agent to provide all required ground support. In particular it is essential that a serviceable tow-bar and tug is available in order that the aircraft can be pushed back from the parking stand.

## 6.2. Runways available

Runway 05L-23R has a total paved width of 90 metres, comprising 45 metres full bearing strength between edge-lights, plus 2 x partially load-bearing shoulder of 23 metres width.

Runway 05R-23L has a total paved width of 60 metres, comprising 45 metres full bearing strength between edge-lights, plus 2 x partially load-bearing shoulder of 7.5 metres width. Outside of the paved shoulder is a further unpaved shoulder of stabilised grassland. A380 operations are certified to land on this type of runway.

A380s will generally operate through Manchester under the same segregated runway manner as other aircraft. The exception will be that in most cases A380s will depart from the Runway 23L in preference to 23R. When this happens during single-runway 23R operations, the A380 departure off 23L will be a 'dependent' operation. Dependant operations may be subject to short delays to enable traffic sequencing.

## 6.3. Taxiway routings available

Taxiway routings for the A380 are strictly limited by the requirements of main-wheel to edge of pavement clearance, wingtip obstacle clearance, pavement loading and jet blast considerations. Only the routings listed below are to be used. An Airfield Operations Follow-Me vehicle will escort all A380 aircraft between runway and stand on all routings to the north of Runway 05L-23R, except during LVP when sequential (progressive) taxiway centreline lighting will guide the pilot along the authorised route.

Primary A380 routings are designed to ensure compliant adequate main-wheel to pavement edge clearance on the basis of cockpit-over-centreline steering. On secondary A380 routings pilots are advised that 'judgemental over steering' techniques may be required at certain taxiway intersections in order to ensure main-wheel to edge of pavement clearance is maintained at 4.5 metres. A chart indicating the A380 routings is published in the UK AIP.

Movement	Primary Routing	Remarks
Arrival Runway 23R	Exit runway via Bravo, RET AE, AG, or Alpha. Then via Taxiways Alpha, Bravo, Kilo, and Delta to Stand 12 / 62.	If required to wait for stand to become available the aircraft should be held at A3.
Arrival Runway 05L	Exit runway at <b>M</b> or Juliet to be met by Follow-Me vehicle. Route via Taxiway Juliet, Kilo, and to Stand 12 / 62	
Arrival Runway 05R	Exit runway at VA or Tango. Route via DZ (or FZ) to cross Runway 05L. Route via Delta (or Kilo/Delta) to Stand 12 / 62	No Follow-Me required from D1 to stand 12.
Departure 23R	Pushback from Stand 12/62 to face south, then taxi via Delta, Kilo, and Juliet with Follow-Me to J1 for departure.	
Departure Runway 23L	Route via Delta (or Kilo/Foxtrot) to cross 23R, to hold at Tango 1.	No Follow-Me required from Stand 12 to stand D1.
Departure 05L	Pushback from Stand 12/62 to face south, then taxi via Delta, Kilo, Bravo, and Alpha to hold at A2.	
All, during LVP	CAT II/III holding point is D3, then A2	

#### **6.4. Parking Stands**

The parking stands to be allocated to A380s are Stand 12, 61 or 62.

Scheduled passenger A380 flights will be parked at Stand 12, Terminal 1. Stand 12 has a 'MARS' (multiple-choice centreline) layout. A380s will always park on the main centreline '12' using the Safedock VDGS. Stands 12L and 12R are unavailable when Stand 12 centre is occupied by any type.

Stand 62 will be used on occasions when Stand 12 is not available.

The aircraft must be parked under marshaller's instructions, nose-in on the centreline of the stand using the stop mark 'A380'. When using Stand 62, Stand 61 is unaffected, whilst Stand 63L is closed and Stand 63 Centre is restricted to aircraft with a wingspan of 60 metres or less (B747-200/300 or B777-200 or A330-300). See Figure 1 for illustration.

#### **6.5. Turnaround arrangements**

There is adequate space around the aircraft at Stand 12,61 or 62 for all turnaround activities to be performed and the clearances available comply with the latest MA stand design characteristics, with the exception at Stand 62 only of the clearance between the port wingtip and the adjacent airside road. This is 1.5 metres rather than the normal 4.5 metres but is considered acceptable due to the height of the wingtip from the ground and the very low frequency of the event.

Fuel hydrants are located in the pavement beneath both inboard engines. Stand 12 is equipped with 4 x 90kVA Fixed Electrical Ground Power units at the head of stand. There is no FEGP at Stand 62 and therefore handling agents must provide mobile ground power units as required and/or the aircrafts' Auxiliary Power Unit must be kept running. 2x 180kVA or 4 x 90kVA may be required to power all on-board services. If sufficient mobile units are not available, the aircraft's APU may be run during the turnaround.

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## ASI 12 – Airside Audits

**ASI Owner** Airfield Safety Assurance Manager

### 1. FUEL AUDIT

A Fuel Audit will be carried out on those companies who store aviation fuel or who have responsibilities or “into plane fuelling” at Manchester Airport, and will be checked for compliance with CAP 748.

Those companies to be audited are as follows;

- North Air - Air BP - Q8
- MASHCO
- RSS Jet centre
- ASIG - Shell
- Police Support Unit

As part of Manchester Airports Safety Management System there is a requirement to carry out Fuel Audits on those companies handling, issuing or carrying out into plane fuelling or de-fuelling.

Audits will be carried out on each company falling into the above category; the audit will be conducted using the best practices of CAP 748 as the standard.

Where specialist knowledge is required to conduct a fuel audit then an accredited industry expert will be appointed to conduct the audit in conjunction with the Airfield Safety and Compliance Auditor.

Any non-compliance found during the audit will be brought to the attention of the company being audited and remedial actions with time scales will be agreed.

### 2. TURNAROUND AUDITS

Turnaround Audits are carried out to assess Service Partners compliance with CAP 642 and Local Airfield Instructions.

Turnaround Audits may be conducted both overt, where the auditor can clearly be seen conducting the audit and covert, where the auditor would only make his/her presence known on conclusion of the audit.

### 3. SELF CERTIFICATION AUDITS (Operators, Vehicle Maintenance Standards)

Self Certification Audits are carried out annually by Manchester Airport Airfield Operations, Safety and Compliance. MA will audit MA Motor Transport and those Service Partners who are certified to apply for Vehicle Permits and carry out their own vehicle Safety Inspections.

Service Partners facilities, practices and procedures along with vehicle safety inspection and maintenance records will be audited.

Information on poor performance may trigger a formal safety management system audit and the Self-certifying stamp being removed.

**4. DRIVER TRAINING AUDITS**

A number of Service Partners are permitted to carry out their own driver training at Manchester. After the employing company has trained a candidate, Manchester Airports centre for Learning & Development must then test him/her and if successful a permit is then issued.

Airfield Operations, Safety and Compliance will carry out audits on those Service Partners who self train, to ensure compliance with MA requirements.

**5. SERVICE PARTNER AUDITS**

Service Partner Audits are conducted on those companies with staff having access airside, in particular staff who have access to the apron area and may come into close proximity to vehicles or aircraft.

The audit will check for compliance with the requirements of Manchester Airports Safety Management System (SMS). Any non-compliance is brought to the attention of the Service Partner and actions with timescales are agreed.

The audit outcomes will be recorded on "ASAA" Audit form, which will then be filed and maintained for a period of 2 years.

**6. RAMP VEHICLE INSPECTIONS (CAP 642)**

Refer to ASI 32.

## ASI 13– Safety Infringements

**ASI Owner** Airfield Safety Assurance Manager

### 1. AUTHORITY

The authority to impose a strict airfield safety regime is derived from the Air Navigation Order, the Health and Safety at Work Act, the Manchester Airport Bylaws and CAP 642, Airfield Safety Management.

Manchester Airport (MA) employee's can only issue a financial penalty.

### 2. PRINCIPLES

- Any fine imposed will be issued against the employee's employer and not the individual involved in the infringement.
- Ignorance of rules is not an acceptable excuse.
- Except where a situation is dangerous, or where there is cause to believe that a serious violation may have occurred, airfield companies will be given a short time to rectify any faults or spillages.
- Any financial penalties will normally be directed at an airline or their nominated handling agent with the expectation that they would wish to be aware of all violations associated with their turnaround, and that they will recover the costs from their contracted companies.
- For individual infringements, Manchester Airport (MA) may recommend a fixed financial penalty. Additionally, a period of further training at the employer's expense may also be imposed.
- Questions arising from individual infringements should be addressed to the Airfield Duty Manager on ext **3331**.
- All grievances will be dealt with through the appeals process.
- Details of the AOR will be recorded on the Airfield Incident and Infringement database within 24 hours of the AOR being issued. An automatic email will then be generated to the company contact informing them of the AOR details. If the company has not replied within the 21-day period of the AOR being issued a reminder will be generated every 2 weeks by email using the same electronic process for a period of 2 months. If a response is not received within 2 months, the Airfield Operations Administrator will then address individual cases.

### 3. THOSE INVOLVED

This policy applies to MAplc employees, airlines, handling agents, and all other airfield companies, including contractors, delivery companies, and to any individual temporarily cleared to proceed onto the airfield.

### 4. ENDORSEMENT

The principle of dealing with airfield infringements by means of a penalty scheme was approved at the Apron Safety Committee on the 18 October 1999 and 24 January 2000.

**5. AREAS COVERED**

- Statutory duty requirements (i.e. Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1992 (Regulation 3) The Provision and Use of Workplace Equipment Regulations (PUWER) 1992.
- Blocked aircraft stands
- Blocked roads, clearways and walkways
- Abandoned equipment
- Failure to keep clean licensed and tenanted areas
- Driving offences and poor driving standards
- Operating unserviceable vehicles and equipment
- Spillages
- Evidence of poor company training standards
- Failure to wear personal protective clothing and equipment
- Unnecessary marshalling of aircraft
- Pedestrian safety
- Smoking in prohibited areas
- Parking violations (vehicles and equipment)
- Airbridge driving offences

The method of handling of the above malpractices, infringements and spillages, is covered at Appendix A.

**6. PARAMETERS**

The method of handling infringements is based upon past experience at Manchester, the need for a deterrent to poor practice, and to have a system, which is fair, robust, and practical, but one that provides a positive outcome in the provision of funding for Airfield Safety Initiatives.

**7. APPEALS**

The MA Safety Performance Committee will be the forum for the appeals process. The minimum number of representatives will be 4 including the chairperson Airfield Operations Manager or deputy Airfield Safety Assurance Manager. A representative of the company appealing an AOR may attend the Safety Performance Committee meeting to present their appeal.

Any appeal must be notified in writing to the Airfield Safety Assurance Manager within 7 days of the penalty being issued. Failure to do so will forfeit the right of appeal. Appeals will be heard at the next meeting of the Safety Performance Committee. The decision of the Safety Performance Committee is final.

**8. DISPOSAL OF FINES**

Money accrued from infringement fines will be held by MAplc in a separate account, for the purpose of enhancing airfield safety.

Manchester Airports Finance Department and Legal Department using existing procedures will recover unpaid fines from companies.

**9. APRON SAFETY INITIATIVES AND ENHANCEMENTS**

Suggestions for Apron Safety enhancements should be made to the Airfield Safety Assurance Manager for inclusion in the agenda for the next Airfield Safety Strategy Group meeting. Manchester Airport encourages all employees working on the airfield to take the initiative and put forward suggestions.

**10. SCHEDULE & HANDLING OF INFRINGEMENTS**

**10.1. Blocked Aircraft Stand**

Any vehicles or equipment that has been incorrectly parked, or is deemed to be blocking an aircraft stand, will be liable to a £50 fine and removal by Manchester Airport.

A deadline for removal will be agreed with the operator of the vehicle / equipment by Airfield Operations.

Should the deadline for removal pass, or the vehicle/equipment is required to be moved in order to make the stand fit for use Airfield Operations will remove the vehicle/equipment and park it in a secure fenced off area on stand 218. The Operator will be informed and issued with an Airfield Occurrence Report (AOR).

To release the vehicle/equipment from the enclosure the Operator will be required to contact Airfield Operations on 0161 489 **3339**.

The release of the vehicle/equipment will be facilitated by Airfield Operations during a period of time that will not impact on the day to day operation of the airfield.

A further charge of £50 for the operator will be incurred, on retrieval of the equipment. This policy has been agreed by the Airfield Safety Strategy Group (ASSG).

**10.2. Blocked Road, Clearway, or Walkway**

As above

**10.3. Abandoned Equipment**

As above

**10.4. FOD**

Manchester Airport will make every effort to identify the owner or organisation responsible for the FOD when considering levying a £100 fine. When a Company has been identified they will be requested by MA personnel to remove the FOD within 20 minutes. Failure to do so will result in a £100 fine being levied.

In the event of MA personnel having to remove FOD posing an immediate threat to aircraft safety then a £100 fine will be levied against the Company responsible.

Airlines are ultimately responsible for activities associated with an aircraft turn round. FOD left on airbridges or stands, which cannot be identified, will be considered the responsibility of the airline last occupying that stand and a £100 fine will be levied against them.

**10.5. Failure to Clean Leased or Tenanted Area**

When Manchester Airport identifies an airfield-cleaning requirement within a leased or tenanted area the Company concerned will be notified and a cleaning deadline agreed. Failure to meet the deadline will result in a £50 fine. If, on safety grounds, Manchester Airport has to effect the cleaning then a fine of £50 and any associated costs in cleaning the area will be levied.

**10.6. Driving Offences and Poor Driving Standards**

Example infringements are listed in Appendix A.

Where a perceived infringement has caused or threatened serious injury, caused or threatened aircraft damage, then the driver must be stopped from airfield driving. A Manchester Airport official and a manager or supervisor from the company concerned should be summoned to attend. The driver's Airfield Driving Permit will normally be confiscated pending an investigation. Where drink or drugs are suspected or where the driver threatens violence, then he or she will be escorted landside and their Security Pass will be confiscated. Further action will be agreed with the Company concerned.

MA will maintain statistics on airfield apron incidents and make information available through the monthly Safety Performance Report.

Airfield Operations will regularly police the speed of vehicles. The employers of any driver caught speeding will be subject to a £50 on the first two occasions within any six-month period. However, if a driver is found to be speeding for a third time in the same period, he/she will be suspended from driving for 7 days. However, the driving license will not be returned until a written formal company response has been received by Airfield Operations.

**10.7. Operating Unserviceable Vehicles and Equipment**

Should the Operator fail to comply with reasonable direction issued by the Company to move vehicles or equipment that is either unfit to operate or defective, within the specified time the Company may remove and store the equipment. The Operator will be charged a removal fee of £50 per item or such other fee as the Company shall from time to time publish.

The owner of any vehicle or equipment that is issued with a prohibition or improvement notice will automatically receive a £50 fine.

**10.8. Spillages**

MA expects a proactive approach to good working practices that encourage all spillages to be reported to Terminal Control ext. **3776**.

All companies are to ensure that the spillage is kept to a minimum and contained.

In the event of a spillage not being reported the airline last occupying the stand will be held responsible and a £50 fine levied against them.

Airfield Operations will investigate spillages from equipment or an aircraft and if found negligent then the Company responsible will be levied a £50 fine.

Any costs associated with the clean up operation will be charged separately and is outside of the Airfield Infringement Scheme.

#### **10.9. Evidence of Poor Company Trading Standards**

When, through investigation, MA suspects the airfield infringements are caused by poor Company training standards, MA will require that the individuals concerned undergo further training. MA will monitor that training against a charge, which will be £50. If MA has to undertake the training then the charge will be £50 plus costs. In the event of CAP 642 audits being undertaken and there is evidence that training has not been completed in response to an airfield incident or infringement, a £50 fine will be levied against that company.

#### **10.10. Failure to Wear Protective Clothing/Equipment**

Any employee found on the apron, not wearing high visibility clothing (hi-vis) will incur a £50 fine which will be payable by their employer.

Exceptions will apply to VIP events or PR promotions etc., which will be permitted under controlled conditions. However, a £50 fine will be levied against the organisers of such occasions if the controlled procedures agreed with Airfield Operations are not adhered to.

**NB** - The requirement to wear hi-vis on the apron at Manchester Airport is mandatory.

The fact that the non use of 'other items of personal protective equipment' is not covered by the infringement scheme in no way indicates that Manchester Airport supports the view that it is acceptable to not use personal protective equipment.

Additionally it does not give employers and employees license to default on their legal responsibilities for the provision and use of appropriate PPE under UK health and safety legislation.

#### **10.11. Marshalling of Aircraft**

A £50 fine will be levied against any company whose employee marshals an aircraft onto stand whether from ground level or an airbridge. Marshalling is the sole responsibility of MA Airfield Safety Marshalls. The exception to this will be the RSS Apron.

#### **10.12. Pedestrian Safety**

A problem exists with employees walking across stands and on occasions, taxiways. When starting or on completion of a shift employees should walk at the edges of the terminals or piers to reach the next appropriate exit off the airfield.

Employees who walk across stands or taxiways in breach of the above will incur a £50 fine against their company.

**10.13. Escorting of Passengers**

Passengers whilst on the apron walking between the aircraft and terminal must be escorted. Every effort must be made to protect passengers from vehicles, walking under aircraft wings, beneath fuel vents, propellers, engines and aircraft under-carriage. The handling agent should employ sufficient personnel or airline to ensure this is achieved.

In the event of the above not being complied with the Handling Agent and/or Airline will be levied a £50 fine.

**10.14. Smoking in Prohibited Areas**

Any employee found smoking in a prohibited area will be subject to the Apron Safety Procedures. A £100 fine will be levied against the employer of any employee found smoking on an aircraft.

**APPENDIX A**

Examples of Driving Infringements:

- Driving a vehicle with excess passenger numbers
- Driving dangerously
- Driving without due care and attention or without reasonable care for others
- Driving whilst drunk or under the influence of drink, drugs, or intoxicating substances
- Speeding
- Ignoring road signs
- Causing an obstruction
- Failure to set the hand brake
- Using a vehicle, which fails to comply with braking, lighting, steering, or electrical and exhaust requirements
- Using a defective trailer
- Insecure load
- Failure to give way to an aircraft
- Incursion on to the taxiway
- Reversing on stand towards an aircraft, without a banksman
- Using aircraft aprons as a road
- Unnecessary crossing of stands
- Blocking fuel vehicle exit route
- Illegal vehicle unattended with engine running
- Leaving vehicle unattended with engine running
- Leaving removable ignition keys in an unattended vehicle (and not on stand for turn-round purposes)
- Failure to display driving lights or obstruction lights
- Vehicle and equipment defects.
- Leaking oil or water
- Broken windows
- Broken or missing rear-view mirrors
- External damage, which could cause injury
- Defective windscreen wipers and washers
- Defective exhaust system

- Tyres fail to meet DOT construction and use standard
- Broken or defective guard rails
- Broken or defective support jacks
- Broken or defective lighting
- Defective hand brake
- Doors do not close properly
- Defective towing mechanism
- Defective load restraint mechanism
- Defective indicators
- Defective horn
- No registration plates or vehicle equipment fleet identification
- Using a mobile phone whilst driving

**NB** - This list is not exhaustive

## ASI 14 – Aeronautical Weather Information

**ASI Owner**                      Airfield Operations Manager

### 1.            **WEATHER OBSERVATIONS**

Weather observations (METARS) at Manchester Airport are made by competent NATS ATC staff in compliance with standard UK Met. Office Procedures and audited by the Met office.

### 2.            **RESPONSIBILITIES**

**NATS** are responsible for:

- The provision of Met Observations using the ‘Semi-Automated Met. Observing System (SAMOS)
- Submitting METARS to the Met. Office at H+20 and H+50 for inclusion in broadcasts including the Volmet service
- Ensuring that the ATIS (Dep & Arr) is broadcasting current information

The **ADM** is responsible for:

- Monitoring actual and forecast weather conditions
- Ensuring that accurate runway surface state reports are promulgated to the relevant ATC Air Controller via RTF
- Initiating the Airport response to Adverse weather

### 3.            **WEATHER FORECASTS**

#### 3.1.        **ATC**

ATC is linked to the Meteorological Information Self Briefing Terminal (MIST). This provides the following information:

- METARS
- TAFS
- Low Level Weather
- Airmets
- Sigmets
- Spot Winds

### 4.            **WEATHER WARNINGS**

ATC and Airfield Operations receive all standard Aviation Weather Warnings from Weather Services International (ASI).

Sigmet messages are received by ATC via the AFTN.

#### 4.1.        **Distribution of airfield weather warnings**

The ADM is responsible for the distribution of all Thunderstorm, Strong Wind and Gale, Snow, Ice, Fog and Frost warnings amongst the wider airport community. Airfield weather warnings will be promulgated to subscribers of the ‘Weather Group’ by SMS text message.

Warnings will also be displayed on the message bar of the airport CHROMA FUSION system.  
See also ASI 16 and ASI 17.

**5. WIND SHEAR**

Wind shear reports will be disseminated by ATC according to the procedures in MATS, Pt.2.

## ASI 15 – Low Visibility Procedures

**ASI Owner** Airfield Operations Manager

### 1. SCOPE

#### 1.1. LVP States

Each LVP state requires specific actions to be taken. 'Airfield Safeguards' initiates these actions whilst LVP Cloud and LVP Vis introduce increased requirements. As a general principle, LVPs for most personnel remain the same regardless of the exact state. However the action of ATC and MA Airfield Operations personnel is governed by the precise state.

#### 1.2. Airfield Safeguards

When the IRVR falls to 800m and the cloud ceiling is 300ft and forecast to deteriorate, ATC will Inform the ADM who will initiate the safeguarding process as outlined in Para 2.4.2. The ADM shall inform ATC when airfields safeguarding is- in place, in accordance with the LVP Process Flow Chart used by Airfield Operations and NATS.

### 2. IMPLICATIONS OF LVPS

#### 2.1. Equipment

##### 2.1.1. Instrument Landing System

In order to provide the requisite additional protection for the ILS signals, the Localiser Sensitive Area (LSA) is activated. The LSA extends 137m either side of the runway centre line commencing at the ILS Localiser and extending the full length of the runway.

The LSA must be clear of aircraft, vehicles and other objects whilst landing traffic is within 4nm of touchdown. In order to achieve the latter requirement, the Category II/III holding points become the closest point to the runway at which aircraft and vehicles can be held. Additionally, certain routes will be closed to aircraft/Vehicles. The process of protecting the LSA from unauthorised entry is known as 'Safeguarding'.

##### 2.1.2. Instrumented RVR

This is a requirement for operations in CAT II/III conditions.

##### 2.1.3. Lighting

Approach and runway lighting appropriate to the conditions must be provided for all operations including during LVPs. The following lighting is particularly important when operating during LVPs and assists both pilots and drivers to know where they are in relation to the runway and LSA.

#### 2.1.3.1. Stopbars

There are three types of stopbar in use. Each one having its own unique alphanumeric or designator:

- Intermediate stopbars used at taxiway intersections and other locations at which ATC may wish to hold aircraft or vehicles
- CAT II/III stopbars located at the outer edge of the LSA. These stopbars are provided to protect the LSA and typically during LVPs will all be illuminated thereby providing a 'ring of red' around the runway (except in Airfield Safeguards).
- CAT 1/Visual Stopbars are those closest to the runway and are not normally utilised during LVPs. In certain circumstances stopbars are used to operate the 'block to block' system in which only one aircraft or vehicle is permitted 'within a block' at any one time.

#### 2.1.3.2. Runway Guard Lights (Wig-Wags)

CAT I/II and III holding point stopbars are supplemented by Wig-Wags (amber flashing lights). During LVP operations, it is practice to illuminate the stopbar at the holding point which borders the LSA. When LVPs are not in force, it is the wig-wags at the holding point closest to the runway which will be illuminated. Intermediate stopbars do not have wig-wags.

#### 2.1.3.3. Taxiway Centre Line and follow-me requirements

This lighting is normally green. However the section between the CATII/III holding point and its termination on the runway centreline is alternately green and amber lighting. This indicates to pilots and vehicle drivers when they are within and when they are clear of the LSA. During periods of Low Visibility Procedure, a follow-me vehicle will be provided over all unlit portions of Manoeuvring Area.

All links leading on/off the runway have amber/green colour coded lighting.

#### 2.1.3.4. Runway Centreline

This is white but colour coded towards the end of the runway. At 900m from the end, the lighting becomes alternate white/red and in the final 300m become red.

#### 2.1.3.5. Aeronautical Ground Lighting

In the majority of cases, a red stop-bar will illuminate at Runway Links and Exits to protect the LSA during periods of LVP Cloud or VIS, i.e. J1, H2, G2, F2, D2, B2, AF/AE\*, A2, BZ1, DZ1, FZ1, HZ1.

#### 2.1.4. Surface Movement Radars (SMR)

During Low Visibility, the SMR assumes particular importance in that it becomes the eyes of the controller enabling ATC to see aircraft and vehicles moving on the manoeuvring area. To assist ATC, vehicle drivers should drive on taxiway centrelines whenever possible.

## **2.2. Power Supplies**

It is essential that there is a continuous power supply whilst aircraft are operating during LVPs. In practice this means that in the event of a power failure, the standby system must be available immediately (within one second), however standby generators cannot meet this requirement.

Therefore during LVPs it is practice to use the standby generators and use the 'mains' supply as the standby facility. This changeover, if required, can meet the time criteria. In the event that standby generators fail and power switches to the mains supply, operations should be drawn to a close until such time as a suitable secondary power supply which can achieve a one second changeover is restored.

## **2.3. RUNWAYS**

Runway 05L/23R is the better equipped runway in terms of ILS and lighting requirements and therefore MA will revert to single runway Operations with the onset of an 'LVP Vis' state. However in an 'LVP Cloud' state, departures from runway 23L will be permitted. When operating in an easterly direction (05), the onset of any LVP state will require single runway operations on runway 05L.

### **2.3.1. Aircraft Movement Restrictions - LVP Vis State**

- Runway 23R - Aircraft are to enter at Link J and may vacate via either Link BD, Link AE, or Link A
- Runway 05L - Aircraft are to enter at Link A and may vacate at Link J only.

### **2.3.2. Aircraft Movement Restrictions - LVP Cloud State**

- Landing aircraft may vacate at any available exit
- Runway 23L Departures - As per normal operations
- Runway 05L Departures - Enter only at Link A
- Runway 23R Departures - Enter only at Link J

### **2.3.3. Movement Rates**

Due to the above requirement to keep the LSA clear during aircraft landings, together with the reduced visibility from the ATC Visual Control Room, it is inevitable that there will be a significant reduction in aircraft movement. Typically the expected movement rate will be around 24 per hour but can be less than this in the worst visibility conditions.

ATC will also experience increased difficulty in the expeditious movement of vehicular traffic.

## **2.4. Responsibilities and Procedures**

A significant number of personnel are involved in a range of actions which must be completed before the airfield can be deemed to be 'safeguarded'. The various actions are listed below. The 'chain of command' is important here and those responsible for cascading information and those personnel to whom specific actions are delegated must report back when actions are completed thereby ultimately enabling the ADM to be assured that the airfield is safeguarded.

The ADM is then in a position to assure the ATC Watch Manager that all arrangements are in place and CAT III approaches may then commence.

#### 2.4.1. ATC Watch Manager

The ATC Watch Manager is responsible for:

- a) Notifying the ADM when Safeguarding action is required
- b) Informing the ADM when the LVP state changes
- c) Ensuring that a general broadcast is made on Channel 1 stating "LVPs imminent, all free ranging vehicles are to vacate the manoeuvring area immediately. All vehicles unable to do so are to advise ATC immediately. ATC are to repeat this message every 10 minutes for 30minutes.
- d) Selecting the appropriate AGL setting on the AGL panel for LVPs.
- e) Determining and communicating appropriate aircraft flow rates to the ADM.
- f) Operating a 'block to block' system on the manoeuvring area when the IRVR falls below 200m
- g) Terminating LVPs
- h) Notifying the ADM when all LVPs are cancelled
- i) Operating in accordance with the MATS Part II LVPs
- j) Communicating LVPs via ATIS.

**NB** - Communication with the ADM may be via telephone or Channel 1.

**NB** - NATS will incorporate these MA requirements into their ATC specific MATS Part II document.

#### 2.4.2. Airfield Duty Manager

When informed by ATC that Safeguarding action is required, the ADM is responsible for taking the following actions:

- a) Completing LVP Standard Safeguarding Checklist and LVP Supplementary Action List
- b) Removing all contractors from the manoeuvring area (unless specific procedures have been agreed between MA and the Contractor enabling continuation of work in a secure area)
- c) Securing all access and crash gates (except west and north gates), with assistance from Airfield Security.
- d) Closing the gates across Perimeter Road at B1C sub-station and unfolding sign
- e) Closing the gates at rear of Airport Hotel and unfolding sign.
- f) Closing the gates across Perimeter Road **after the maintenance shed but before the Airport Hotel Pub**
- g) Activate LVP Signage at:
  - Airside Operations Centre
  - STD **61R** Head of Stand
  - South Side Fire Station (via RFFS Watchroom)
- h) During LVP Vis provide a 'Follow Me' for the areas below:
  - Light Aircraft TATON
  - General Aviation Apron (RSS)
  - STDs 100/101
  - Taxiways Papa and Quebec
  - Any temporarily diverted taxiway centrelines without lighting provision
- i) Notifying the SAOO and EMDM or when conditions determine that two personnel are required in vehicles operating on the manoeuvring area (i.e. LVP VIS)

### 2.4.3. Vehicle Drivers

When informed by the ADM that Airfield Safeguards or LVP are in force, ALL Vehicle Drivers are responsible for:

- a) Restricting manoeuvring area movements to those which are essential for the safe operation of the airport. Line Supervisors/Manager (and in the final analysis the ADM) will determine whether or not vehicle movements are deemed necessary
- b) Exercise particular care at uncontrolled taxiway crossing points
- c) Compliance with the Free Ranging restrictions in accordance with the table below
- d) When in doubt about LVPs or whether they remain in force check with the ADM, and not ATC.
- e) NOT crossing illuminated **RED** stopbars.
- f) Reporting any unserviceability of equipment, signs or lighting to the ADM without delay
- g) Operating with TWO Manchester Airport A Permit holders in the vehicle whenever LVP is in force.

### 2.4.4. RFFS

During all LVP states the RFFS are to standby on the station forecourts, or at Link BZ for appliances responding from the South Fire Station.

## 2.5. Equipment Failures

### 2.5.1. SMR

In the event of an SMR failure, the 'LVP Cloud' state is not permitted, in the event minima meets the requirements for LVP Cloud, LVP Vis procedure will be adopted.

### 2.5.2. IRVR

In the event of a single transmissometer failure, the 'LVP Cloud' state is not permitted. The 'LVP Vis' state is to be used.

In the event of a complete failure of the IRVR system, ATC are to pass the Met. Visibility to pilots. (It is likely that this may be unacceptable in certain conditions).

### 2.5.3. Aerodrome Lighting

In the event of any lighting unserviceability or deficiency, the ADM is to be informed immediately.

The ADM is responsible for:

- Informing/ensuring that Terminal Control is aware of the problem
- Contacting the EMDM to ascertain the exact nature of the lighting deficiency
- Informing the ATC Watch Manager of the deficiency, agreeing the implication for aircraft operations and determining what actions are to be taken
- Taking necessary actions to enable continued operation of the aerodrome in the prevailing conditions
- Promulgating any operational changes without delay via RTF, (ATC), ATIS and NOTAM.

<b>State</b>	<b>Normal Operations</b>	<b>Airfield Safeguards</b>	<b>LVP (Cloud)</b>	<b>LVP (Visibility)</b>
<b>Weather minima</b>	IRVR >800m, and Cloud ceiling >300 feet	IRVR <800m and/or Cloud ceiling <300 feet	IRVR >600m and Cloud ceiling <200 feet	IRVR <600m
<b>Driving privileges</b>	Free-ranging permitted	No free ranging. Point-to-Point clearances only. 'Own-lookout' permitted for OPS/SCARECROW/ CHECKER/LEADER		All call signs Point-To Point only.

## ASI 16 – Thunderstorms

**ASI Owner** Airfield Operations Manager

### 1. OBJECTIVE

To set out the procedures to be followed in the event of Thunderstorm activity.

### 2. WEATHER INFORMATION AND READINESS

The Airfield Duty Manager maintains a general awareness of weather prospects by monitoring the prevailing weather Forecasts.

WSI will issue a Thunderstorm Warning directly to the ADM when forecast weather conditions present a significant risk of thunderstorm activity in the vicinity of Manchester Airport. Such warnings may be valid for up to 24 hours although may give little notice of the arrival of storms. The ADM will issue a warning to the airport community if thunderstorm conditions are apparent in the vicinity of the airport even if no warning has been issued by WSI.

The ADM will promulgate the Thunderstorm Warning via SMS, and the same warning will appear on the message bar of CHROMA FUSION. The Airfield Liaison Manager and Emergency Planning Manager are responsible for maintaining an up to date current list of recipients.

Thunderstorms represent a hazard to airport operations due to the potential for:

- Lightning bolts striking aircraft, vehicles, buildings or persons
- Very heavy rain or hail
- Poor visibility
- Strong gusty winds
- Wind shear
- Airframe and engine icing
- Interference with radio transmissions and compasses
- Electrical outages

### 3. PREVENTATIVE ACTIONS BY AIRPORT STAFF

Owing to the potential hazards prevalent during thunderstorms, certain preventative measures should be taken.

Of particular note is that handling agents will avoid the use headsets during pushback. Essentially this means that ATC will avoid issuing non-standard pushbacks when Thunderstorm Warnings are in force. The ADM will notify the ATC WM when a thunderstorm warning has been issued to the airport community.

Strong/Squally Winds - Measures the same as those outlined in ASI 17, which should be adopted.

All companies operating airside should regularly review the risks arising from thunderstorm activity on their operations and ensure that policies, risk assessments are documented procedures are in place. These should be made available to MA upon request.

## ASI 17 – Strong Wind & Gale Plan

**ASI Owner**                      Airfield Operations Manager

### 1.            **DEFINITION OF WIND CONDITIONS**

- Strong Wind - Mean speed 24+ kts
- Gale Force Wind - Mean speed 34+ kts
- Severe Gale Force Wind - Mean speed 44+ kts
- Storm Force Wind - Mean speed 52+ kts
- Violent Storm Force Wind - Mean speed 60+ kts

### 2.            **NOTIFICATION**

WSI issue Strong Wind and Gale Warnings direct to the ADM.

### 3.            **RESPONSE ACTIONS**

#### **The ADM is responsible for:**

- Implementing the 'internal' notification procedure by issuing an SMS Call Informer Message of all gale and strong wind warnings to key airside users on the controlled distribution list maintained by the Emergency Planning Manager and Airfield Liaison Manager. The same warning will appear on the message bar of CHROMA FUSION.
- Instigating inspections to ensure that the possibility of FOD blowing on the movement areas is minimised
- Instigating inspections to ensure that apron equipment is secured and parked appropriately in order to minimise the possibility of such equipment blowing on to persons, aircraft or vehicles
- Ensuring that any construction contractors in airside areas take appropriate action to secure equipment and materials, as well as lowering cranes etc when appropriate
- Instigating inspections to ensure aircraft are adequately chocked and/or tied down to prevent weathercocking. Particular attention should be paid to aircraft parked in exposed parts of the airfield, i.e. TATON and head of pier stands.

#### **Handling Agents and other ramp staff are responsible for:**

- ULD's to be checked to ensure they are correctly racked with stops' raised. Stowing ULD's on Weldwork Trailers will not normally be acceptable. Where possible towing EMPTY ULD containers should be avoided during strong winds
- Steps must be fully lowered and, where possible, turned into wind with stabilisers down and brakes ON.
- Ensuring that all covers on trucks and trailers are lashed down
- Ensuring that parked steps have stabilisers down and brakes on
- Check that all equipment is correctly parked and secured
- Removing any items of litter or debris that are likely to constitute a FOD Hazard to aircraft.

#### **Aircraft Engineers are responsible for:**

- Ensuring aircraft are fully chocked and the parking brake reset at regular intervals in accordance with company and aircraft manufacturer requirements.

**The EEDM is responsible for:**

- Ensuring that, should the warning also include the possibility of severe rain/flooding, the impact upon water, power, gas supply services and effluent disposal is assessed and likely implications passed to the TDM & ADM.

**Airfield Control is responsible for:**

- Informing Terminal Control on **3776** requesting and ensuring that all out of use airbridges are retracted, lowered to their lower limits and parked correctly with shutters down and doors closed. Follow-up inspections will be undertaken by Airfield Operations personnel.

**4. NON-STANDARD PARKING OF AIRCRAFT**

Parked aircraft may sustain damage to control surfaces or may risk ground-swinging ('weathercocking') in strong wind conditions. It will be for airlines and aircraft engineers to determine whether it is desirable to park any particular aircraft facing into the prevailing wind.

When this is the case the relevant operator must contact MA Airfield Control on ext. **3695** and make this request. Aircraft must not be re-positioned without approval from the Airfield Duty Manager.

The ADM will consider the practicality of non-standard parking and will consult with Airfield Control should any possibility of impact on taxiway strips and adjacent stands be suspected.

Permission to park non-standard will be given by the ADM. If necessary the ADM will discuss requirements with the operator's representative. Aircraft will not normally be allowed to park non-standard under their own power but will require to be re-positioned by a tug after arrival and disembarkation. Likewise, aircraft parked non-standard into wind will not normally be permitted to self-manoeuvre off stand due to the hazards posed by jet blast, particularly on pier-served/contact stands.

## ASI 18 – Aircraft Pushback Procedures

ASI Owner                      Ground Services Manager

### 1.            **GENERIC CONDITIONS AND PROCEDURES**

The following conditions apply to all pushbacks:

- Manchester Airport 'B' driver permit must be valid prior to any aircraft pushback.
- Mandatory requirement to use serviceable Head Set at all times for ANY Push Back, Aircraft Tow or Push and Park procedure. (See also ASB 10-2012 and ASI 16)
- Pilots must inform Air Traffic Control (ATC) if they do not have communication with the Pushback Crew. In cases where communication does not exist, a non-standard pushback will not be issued.
- Ground crew to confirm with Flight Deck that the aircraft and push back crew are fully ready to complete a safe procedure, prior to the push back request.
- When a pushback instruction includes a Tug Release Point (TRP) marked on the ground. Jet aircraft must ALWAYS be on the taxiway centreline and released at the relevant TRP unless instructed otherwise by ATC.
- All tugs should be equipped with a serviceable base radio and an up-to-date copy of the latest pushback procedures.
- Propeller aircraft are subject to special consideration, and as such, are not to be towed forward.
- Any information given as part of the pushback instruction that relates to the direction in which an aircraft must be facing (for example "facing west gate security") is applicable to the aircraft, not the pushback tug.
- Any information given as part of the ATC pushback instruction that relates to the position of an aircraft relative to a stopbar (for example 'behind stopbar Juliet 4') is applicable to the aircraft and the pushback tug.
- Any information given as part of the pushback instruction that relates to the position of an aircraft relative to a tug release point is applicable to the nose wheel of the aircraft only.
- The procedures provided herewith cover all designated stands, including subsidiary Left and Right centrelines.
- Positive confirmation must be made between the aircraft commander, headset operative and pushback tug driver as to any specific details of a non-standard pushback instruction prior to commencing the push.
- No change to the pushback clearance will be made by ATC once the pushback has commenced.
- The tug driver must monitor the Ground frequency to ensure pushback clearance has been given by ATC, and that the instructions have been relayed correctly by the pilot.
- Any changes to the Manchester Airport standard pushback procedures will be agreed by the Pushback Working Group and MA Ground Services Manager and published as soon as possible. Any revision change will be notified on Chroma Fusion information bar.
- Head Sets not to be used during thunderstorm warnings, as notified on Chroma Fusion information bar.

**2. CROSS BLEED STARTS**

Cross-bleed starts must not be carried out on stands due to excessive noise and jet blast hazard. Cross bleed starts may only be carried out on a suitable taxiway or taxilane, and then only with the express permission of the ADM. For all cross bleed starts, ATC must consult the Airfield Duty Manager on telephone number +44 (0)161 489 **3331** for approval.

**3. STAND-SPECIFIC PROCEDURES**

Stand-specific pushback procedures are published by MA Operations in the form of a table showing the stand and the specific manoeuvre to be followed for that stand, with variations according to jet or prop aircraft type where applicable.

These specific procedures comply with the generic rules given elsewhere in this Instruction. When a revised table is produced it will be promulgated electronically by email to an address list of relevant parties, and also via the MAGWorld site. It is essential that all organisations involved in pushbacks ensure that they are in possession of the current revision and confirm receipt to the MA Ground Services Manager.

**4. POWER-BACK MANOEUVRES**

Aircraft are not permitted to reverse off stands using engine power except in unusual circumstances. When an aircraft arrives with a known unserviceability which will prevent a push-back, the Airline and/or Ground Handling Agent must advise Airfield Control in advance, and the aircraft must park 'side on' or 'nose-out' at a remote stand. Where unserviceability of the aircraft or ground equipment, unknown at the time of arrival occurs, which means that there is no other way to get the aircraft off the stand, Airfield Control and ATC must be advised well in advance so that Airfield Operations can attend and supervise the safety of the surrounding areas.

## ASI 19 – Fixed Electrical Ground Power

**ASI Owner** External Engineering Manager

### 1. PROCEDURES FOR USE OF FEGP

Once the aircraft is parked the ground mounted pantograph ('crocodile') unit may be pulled out towards the aircraft and the cable plugged into the aircraft's external supply socket. A reasonable amount of slack cable should be left between the socket and the pantograph bucket.

For an airbridge-mounted unit, the cable may only be lowered and attached once the airbridge has been docked onto the aircraft and switched into auto-level mode. Attempts to use FEGP prior to this may stop the airbridge from working. Similarly, the FEGP must be disconnected before the airbridge can be removed from the aircraft on departure.

Certain remote stands have a unit stored below ground under a cover which 'pops-up'. Care must be taken to ensure that the unit is correctly stowed back under the cover before the aircraft departs.

Before being able to draw power from the FEGP, the individual user will need to swipe their valid ID card through the card reader on the control panel, which is usually located adjacent to the FEGP or on the airbridge. Once swiped the light on the card reader should flash **red/green**. Whilst the card reader is flashing and the unit is connected to an aircraft the individual user may operate the system by pressing the start button to activate the FEGP. If, however, the user has not connected the FEGP to the aircraft and activated the FEGP within approximately 5 minutes of swiping their card, then the user will have to swipe their card again to allow use of the FEGP. Once the system is activated this will assign the supply to a particular user and record the levy.

When the user has finished drawing power the FEGP needs to be de-energised by pressing the stop button on the control panel (same locations as for powering up).

Should the user attempt to use the FEGP without using the swipe card first then no power will be able to be drawn. Also should any unauthorised users attempt to swipe their card then no power will be able to be drawn and the card number logged. It is imperative that when an updated ID is issued that the ID is also updated at the Permit Office to ensure access to FEGP system is maintained.

If the FEGP fails to operate it must be reported immediately to Terminal Control on **3776** stating time, stand number, aircraft type and registration number along with the fault. Queries and ID authorisations are handled by:

**Tony Wild**  
**Permits Controller**  
**Pass Office**  
**Telephone 0161 489 3479**

**2. USE OF MOBILE GROUND POWER UNITS (GPU's)**

Only if the FEGP is unserviceable or incompatible should a mobile GPU be used. Constantly running GPU's can cause high noise levels on the apron; are an additional obstruction to free movement around a parked aircraft and, if poorly maintained, may deposit oil spillage on the stand. When the use of mobile GPU's is necessary the following procedures are to be observed:

- GPU's are to be used in a manner consistent with necessity and must be shut down when not required
- Ground Power Units are to be parked so that they can be driven 'away' from a running engine and not towards the engine
- Operators are to ensure, when GPU's are in use, that the connection cable between the GPU and the aircraft is routed, so that as far as is reasonably practicably, it does not present a trip hazard to persons
- Operators are to ensure that the GPU's are maintained so that they do not present a safety or environmental hazard (i.e. emissions). In addition, all associated cabling must be adequately shielded.

**3. AUXILIARY POWER UNITS (APU's)**

Aircraft APU's generate high levels of noise and significant fumes. The noise of an APU can mask the sound of approaching vehicles.

It is the responsibility of Airlines and Aircraft Handlers to ensure that APU's are used in a manner consistent with necessity and for the absolute minimum time necessary to meet the operational needs.

**4. 28 VOLT CONVERSION UNITS**

There are 23 x 28 volt conversion units placed on various stands around the apron. These units are used to convert the 400Hz ac supply to a 28Volt dc supply for smaller aircraft.

To operate these units they must first be connected to the 400Hz FEGP system, and then the FEGP is activated in the normal way. The 28 Volt connections can then be made with the aircraft and the unit started.

Upon completion the unit should then be switched off at the FEGP and the plug withdrawn from the aircraft.

## ASI 20 – Aviation Fuel Management

**ASI Owner** Airfield Safety Assurance Manager

### 1. **MANAGEMENT OF INSTALLATIONS**

The aviation fuel installation, comprising (but not limited to) the receipt and storage facility, apron pipeline network and stand hydrants are owned and operated by Manchester Airport Storage and Handling Company (MASHCO); a consortium made up of Exxon Mobil, Texaco, ASIG - Shell, Air BP and Q8.

The management of the aviation fuel installation is carried out by Exxon Mobil on behalf of MASHCO. An Operations Manager is on call H24 for the fuel storage depot.

### 2. **FUEL STORAGE, QUALITY AND DELIVERY**

Details of fuel and oils availability at MA are found in the UK AIP. JET A-1 (AVTUR) is stored at the Fuel Farm in tanks on the West Side of the airport. JET A-1 does not contain Fuel System Icing Inhibitor additives. AVGAS (100LL) is not available from fuel suppliers.

MASHCO are responsible for the quality of fuel supplied to the apron pipeline and hydrant network. At all times, fuel grade and quality must meet the specification fit for use in aircraft and in accordance with the requirements of the Air Navigation Order (ANO) and CAP748.

JET A-1 is delivered from the storage facility by pressurised pipeline network to hydrants at all pier-served terminal stands and most remote stands, from which a pumping vehicle may uplift the fuel to aircraft. Fuel is supplied to aircraft by the following companies: Shell, BP & Q8. Fuel may also be delivered to aircraft directly by tanker bowsers.

Any potential disruption to the normal supply of aviation fuel must be notified to the airport management immediately in writing by the quickest means.

### 3. **SAFETY PRINCIPLES**

The fuelling of aircraft will normally be carried out in the open air and is only to be carried out in Areas approved by the Airport Company.

Only personnel that have been suitably trained and assessed as competent may carry out aircraft fuelling.

Fuelling areas will be sited to avoid bringing fuelling equipment or aircraft fuel tank vents to within 15 metres of any building other than those parts constructed for the purpose of direct loading or unloading of aircraft.

Refuelling vehicles are not to approach aircraft until the aircraft engines have stopped and anti-collision lights have been switched off.

Refuelling vehicles should endeavour to be parked so as to enable freedom to exit the area in the event of an emergency. This is more essential for tankers.

All personnel engaged in refuelling procedures are to ensure that serviceable fire extinguishers are available.

All personnel engaged in refuelling procedures are to be aware of the method of summoning the Airport Fire Service.

Vehicles and equipment must not be parked under any part of the aircraft during refuelling, with the exception of refuelling equipment.

Replenishment of aircraft oxygen systems is not to take place when fuelling is in progress.

Refuelling should not take place when there is an electrical storm within 5km of Manchester Airport.

#### **4. FUELLING ZONE PROCEDURES**

During fuelling operations, air and fuel vapour are displaced from the aircraft tanks through vent points, which are usually situated at the aircraft wingtips. This presents a hazard of fuel vapour being ignited. For this reason, additional rules are required within an area known as the fuelling zone.

A fuelling zone is established when aircraft fuelling operations are in progress, extending at least 6 metres radially from the aircraft filling and venting points and from any part of the fuelling vehicle and equipment including hoses.

Particular requirements must be adhered to in the fuelling zone as below:

- All personnel must avoid any activity involving the risk of fuel vapour ignition. These include smoking, use of naked lights, operation of electrical systems and activity creating sparks from exposed iron or steel studs on footwear or from tools or other equipment or vehicles.
- Vehicle engines must not be left running in the fuelling zone. This includes Ground Power Units (GPU's). Hot vehicle exhausts are a major hazard and are prohibited inside the fuelling zone.
- Non-intrinsically safe equipment, including portable electronic devices (PEDs), such as mobile telephones, pagers, radios and any other electronic or electrically operated equipment are prohibited.
- Only authorised persons and vehicles are permitted within the fuelling zone and the number of these should be kept to a minimum.
- Airlines must ensure that passengers do not enter the fuelling zone whilst embarking or disembarking passengers. Baggage and passenger reconciliation checks must be carried out away from the fuelling zone.
- Aircraft Auxiliary Power Units (APU's), which have an exhaust efflux discharging into the fuelling zone, should, if required to be in operation during fuelling, be started before filler caps are removed or fuelling connections made. APU's must not be switched on during any refuelling operation.
- Photographic flash bulbs or electronic flash equipment must not be used within 6 metres of the fuelling equipment or any filling or venting points of the aircraft.
- The airline or aircraft operator should ensure that all personnel working on the inside of the cabin, hold or equipment compartment of the aircraft are made aware that fuelling is taking place.
- If the Fuelling Overseer considers that a hazard exists, refuelling should be stopped immediately until conditions permit resumption.

**5. BONDING AND GROUNDING – AIRCRAFT AND FUELLING EQUIPMENT**

It is essential that aircraft, fuelling vehicles and over-wing nozzles, where applicable, should be electrically bonded together throughout fuelling operations to ensure that no difference in electrical potential exists between the units.

Bonding is to be maintained until all hoses have been disconnected or tank filler caps replaced.

**6. FUELLING WITH PASSENGERS ON BOARD**

Normally, passengers should always be disembarked prior to the commencement of aircraft fuelling. Commencement of fuelling is defined as 'connection of the bonding clip.' Completion is defined as 'when the bonding clip has been removed'.

In circumstances where it is not possible to complete fuelling without passengers on board, airline operators of fixed wing aircraft may allow passengers to embark, disembark or remain onboard during fuelling operations. Airlines are required to develop their own safety procedures in such circumstances, to manage the risks associated. Suggested guidance includes the list on the following page.

- Cabin attendants, passengers and other relevant staff to be warned that fuelling will take place and that they must not smoke, operate electrical equipment or other potential sources of ignition.
- The aircraft's 'NO SMOKING' signs to be switched on together with sufficient interior lighting to enable emergency exits to be identified.
- The 'Fasten Seat Belts' sign must be switched off and passengers are to be briefed not to fasten their seatbelts.
- Provision should be made via at least two of the main passenger doors (or main passenger door plus one emergency exit when only one door is available), preferably at opposite ends of the aircraft, for safe evacuation in the event of an emergency. Throughout the fuelling operation these doors are to be constantly manned by a cabin attendant.
- Designated escape doors to be on the opposite side of the aircraft to the fuelling activity. Fuelling not to be permitted on both sides of aircraft.
- Whenever an exit with an inflatable escape slide is designated to meet the requirements in the above paragraph, the ground area beneath that exit and the slide deployment area must be kept clear of external obstructions.
- Ground servicing activities and work within the aircraft, such as catering and cleaning must be conducted in such a manner that they do not create a hazard or obstruct aircraft exits.
- Inside the aircraft cabin the aisles, all exit areas and exit access areas must be kept clear of obstructions.
- The ability of any passenger to effect a rapid evacuation from the aircraft, most particularly those whose mobility is impaired, is to be taken into account.

**7. FUELLING WITH ENGINES RUNNING**

Refuelling with engines running is only permitted in the following circumstances:

- Aircraft or helicopters engaged in casualty evacuation procedures
- Search & Rescue Helicopters
- Air Ambulances
- Military and other aircraft engaged in fire fighting

It is the responsibility of the fuel supplier to have a written agreement with the operator on procedures to be used by all parties during such an operation.

**8. FUELLING AND DE-FUELLING IN HANGARS**

Fuelling activities inside hangars are only permitted in circumstances where it is not possible for the operation to take place in the open air. Any such activity is to be risk assessed and carried out in accordance with the fuelling company's procedures.

Under no circumstances is fuelling or de-fuelling of AVGAS to take place inside any hangar or any other building.

The Airport Fire Service is to be in attendance, positioned outside the building.

**9. FUEL SPILLAGES**

The procedures to be used in the event of a fuel spillage are detailed in ASI 21.

**10. RESPONSIBILITIES**

**The aviation fuel installation managers are responsible for:**

- Ensuring compliance with the Air Navigation Order, CAP748 and all other relevant statutory and regulatory requirements relating to the handling and storage of bulk aviation fuels.
- Ensuring that the grade and quality of fuel product meets the required specification at all times.
- Notifying the airport company about any potential disruption to the normal supply of aviation fuel immediately in writing by the quickest means.

**The aviation fuel suppliers are responsible for:**

- Ensuring compliance with the Air Navigation Order, CAP748 and all other relevant regulatory requirements relating to the handling of aviation fuels and the fuelling of aircraft.
- Ensuring that at all times, the fuel delivered to aircraft meets the required specification, including the grade and quality of fuel product.
- Ensuring that refuelling tanker bowsers and refuelling equipment access and exit from the aircraft stands as highlighted in the Stand Plans.
- Training and competence of refuelling operatives.
- Ensuring that all vehicle drivers possess a HGV Class 1 driving licence.

**11. AUDITS**

Organisations that store, dispense or handle aviation fuel at MA will be subject to audits of this activity to ensure that they comply with the relevant legislative requirements. An appropriately qualified person from or on behalf of Manchester Airport will carry out this audit. The audit report will be made available to those being audited together with any recommendations of changes that may be required to procedures or equipment. In addition, audit reports may be made available to the Civil Aviation Authority or other regulatory bodies.

A reasonable time will be given to remedy any shortcomings found by the audit but the Airport Company reserves the right to withdraw permission for the facility or fuelling activity to continue if it is found to be dangerous or if remedy to the shortcoming is not completed within the agreed reasonable time.

Consortium member companies of MASHCO carry out their own safety audit annually.

Airline customers typically undertake fuelling audits once or twice per year.

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## ASI 21 – Spillages

**ASI Owner**                      Environment Manager

### 1.            **INFORMATION**

The environmental impact of a spill contaminating the River Bollin or one of the local streams can be devastating resulting in the loss of fish and plant life along a large course of the river.

Spills can arise during aircraft servicing, from poorly maintained vehicles and equipment, through accidental damage or from refuelling aircraft, vehicles or equipment. A spillage on the airfield/apron could be fuel, oil, de-icing chemicals, toilet effluent, detergent, or other chemicals. All airfield drainage can enter local watercourses. However, if you react quickly and correctly then the spill can be cleaned up and pollution can be prevented.

### 2.            **PENALTIES**

If you don't act, and pollution occurs, you could be prosecuted by the Environment Agency. Failure to report a spillage will also lead to an Airside Infringement Notice from MA Airfield Ops.

### 3.            **GENERAL RESPONSIBILITIES**

All Managers are responsible for ensuring that: their staff know and understand what to do in the event that they cause or discover any kind of spillage

All Airside Personnel, regardless of employer are responsible for: reporting any spillage which they cause or discover without delay. Providing information and where possible assisting in preventing the spill from entering the water drains.

The AEM is responsible for:

- The management of procedures for dealing with spillages

Terminal Control is responsible for:

- Commencing the cascade procedure detailed in EP 10 when a spillage report is received

**4. PROCEDURES**

If you cause or find a spillage of oil, fuel, toilet effluent or any other material you should therefore carry out the following actions:

- If possible, you should take all measures to clean it up and to stop it entering any drain.
- You should report it so that MA can arrange for it to be cleaned up to prevent it entering surface waters.
- Contact: Terminal Control on 0161 489 **3776**

You should provide as much of the following information as possible:

- Location of the spill
- Material spilt
- An estimate of the amount spilt
- Who or what caused the spill
- Whether it has entered any drains.

MA can assist in cleaning up the spillage and will recharge the company causing it for all costs.

**5. FURTHER INFORMATION**

This can be obtained from the MA Environment Department 0161 489 **3650** (office hours)

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## ASI 22 – Waste Disposal

**ASI Owner** Environment Manager

### 1. INFORMATION

On the airfield, waste arises from many activities: aircraft cleaning and catering, aircraft maintenance, from office activities and brew rooms. This generates an estimated 3500 tonnes of waste each year at Manchester Airport.

Although around 21% is segregated on site for recycling, this leaves a large proportion which is sent off-site for recovery or landfill. Reducing the amount of waste will reduce landfill, reduce emissions of greenhouse gases and save money.

As well as the need to segregate waste for recycling, there are a number of legal restrictions on the disposal of wastes such as aircraft cleaning and catering waste and oils that you should be aware of.

Further information on this subject, including the following Guidance Notes is available from the Environment Department at [environment@manchesterairport.co.uk](mailto:environment@manchesterairport.co.uk) or on 0161 489 3650.

- Environmental Guidance Note GN 01 - Waste & Recycling.
- Environmental Guidance Note GN 11 - Hazardous Waste Regulations
- Environmental Guidance Note GN10 - Disposal of Scrap Vehicles and Equipment

### 2. RESPONSIBILITY

If you produce or handle any waste at all at work, then you are legally responsible for ensuring that it is disposed of correctly.

### 3. PROCEDURES

- You should ensure that you understand what waste you produce and that it is deposited correctly.
- The annual Duty of Care survey should be completed and returned
- All staff using the compactors should be trained in their safe operation
- That FOD is not generated

MA provides facilities for the recycling or disposal of the following types of waste from airfield activities:

<b>Aircraft cleaning waste</b>	This can only be deposited in the compactors at West Gate as there are special restrictions on catering waste from Non-European airports.
<b>General waste</b>	All other general waste should be put in MA skips and compactors and not into FOD bins.
<b>Oil cans</b>	Line maintenance oil cans should be put into the wheelie bins on head of stand.
<b>Recycling</b>	The following materials can currently be recycled at Manchester Airport: Paper, Card, Plastic Wrap, Plastic bottles, Electrical equipment, Batteries, Fluorescent tubes, Wooden pallets and Scrap metal.
<b>Hazardous Waste</b>	MA does not generally provide facilities for the disposal of service partners' hazardous wastes such as waste oil, oil filters, oily rags, solvents etc. You should ensure you are aware which materials are hazardous, provide and use appropriate storage and arrange a separate contract for its disposal.

Misuse of MA facilities, through contamination of the recycling containers or from fly tipping waste brought in from home will lead to recharge of the costs and potentially prosecution.

#### 4. CONTACTS

Problems with the waste and recycling facilities:

- Terminals – **3944**
- West Gate – **079588 76818**
- World Freight Terminal - **5777**
- Further information on waste disposal and recycling - Sue Hodnett, Environment Adviser  
0161 489 **3650**

## ASI 23 – Aircraft Washing

**ASI Owner**                      Airfield Operations Manager & Environment Manager

### 1.            **APPROVED WASHING LOCATIONS**

In order to prevent pollution of local rivers and streams, the detergent and water used in aircraft washing needs to be contained. For this reason the washing of aircraft, vehicles and equipment is restricted to the following locations where special drainage systems are installed:

- Summer 2013 Remote stand 61L (Max Aircraft size A330-300)
- Winter 2013/14 Stand 61L & 86
- The northern apron attached to the Thomas Cook Hangar

NB - The washing of vehicles and equipment in landside areas is also restricted to designated locations.

### 2.            **APPROVAL**

Any organisation/person requiring to wash an aircraft must obtain permission from the MA Airfield Control. In the event that washing can be approved, a location is to be allocated by Airfield Control and an agreed time slot on the washing bay allocated.

### 3.            **FREEZING CONDITIONS**

Airfield Control may refuse permission to wash aircraft when freezing conditions exist or are forecast. This is necessary to prevent apron-icing hazard.

### 4.            **ON THE BAY**

Washing must be carried out in such a manner as to ensure that run-off does not escape the drainage channels. Upon completion of the wash the aircraft should be removed to an alternative stand as soon as possible to free up the washing bay for other users, unless approval has been given for the aircraft to remain there.

### 5.            **DRY WASHING**

'Dry washing' (without use of water) of aircraft is not currently permitted at any location other than those listed in paragraph 1 above.

Any airline or handling agent wishing to undertake dry washing must first agree a methodology with the ADM and MA Environment Department, and conduct a trial before receiving permission.

## ASI 24 – Push & Park Procedure

**ASI Owner**                      Ground Services Manager

### 1.            **PROCEDURE**

- Manchester Airport ‘B’ driver permit must be valid prior to any aircraft pushback.
- Mandatory requirement to use serviceable Head Set at all times for ANY Push Back, Aircraft Tow or Push and Park procedure. (See also ASB 10-2012 and ASI 16)
- Ground crew to confirm with the Flight Deck that the aircraft and push back crew are fully ready to complete a safe procedure, prior to the push back and tow request.
- No change to the pushback clearance will be made by ATC once the pushback has commenced.
- Head Sets not to be used during thunderstorm warning, as notified on Chroma Fusion information bar.
- Push and park procedure must be initiated by either the airline or appointed handling agent by telephoning MA Airfield Control. Airfield Operations may also initiate the procedure in the reverse manner. Airfield Control will advise whether push and park is available and the location to be used. The handling agent tug driver will request via NATS to initiate the procedure.
- Aircraft eligible for push and park must be fully departure-ready, e.g. passengers, freight, crew, fuel and catering all loaded, engineering works complete and the aircraft closed up.
- Certain stands at Manchester have been configured specially so as to facilitate the safe self-manoeuving of aircraft, up to a stated size, from a side-on or nose-out position onto the taxiway. These are

Stand	Max aircraft size	Position	Remarks
<b>231</b>	A320	Nose out	MA Airfield Operations presence required to control road traffic for taxi, and check for FOD or jet blast hazards.
<b>80</b>	B747-400	Nose out	MA Airfield Operations presence required to control road traffic for taxi, and check for FOD or jet blast hazards.
<b>100</b>	B737-300	Taxi-through	Conventional manoeuvre off this taxi-through stand. No ‘safety man’ or Airfield Operations presence required.
<b>101</b>	B737-300	Taxi-through	Conventional manoeuvre off this taxi-through stand. No ‘safety man’ or Airfield Operations presence required.
<b>Taxiway Golf</b>	A320 / B737H	On Centreline	
<b>Taxiway Quebec (Stand 63 side-on).</b>	B747-400	Nose facing south	Conventional manoeuvre from this location. No ‘safety man’ or Airfield Operations presence required

Additionally, the following taxiway locations may be used as 'Remote Holding Locations'.

<b>Taxiway November abeam Stand 86</b>	B747-400	Nose facing south	Conventional manoeuvre from this location. No 'safety man' or Airfield Operations presence required. <b>Currently closed until Winter 2013</b>
<b>RET VC @ VC1</b>	DH8-400 / E195		Departure from Runway 23L only. TORA 2504 metres.

For 'push and park' at apron locations a tug is to be used to reposition the aircraft from its pier stand to the push and park stand. For nose-out positioning the aircraft is to be reversed into position so that the nose of the aircraft (not the nose-wheel) is clear of any roadway or taxiway strip. To guide the tug crew a nose-wheel stop mark designated 'Nose-Out' is painted on the centreline and applies to all aircraft types, up to the maximum size aircraft type declared for the purpose of 'push and park'.

Once the aircraft has been positioned, the ground crew should ensure the stand area is clear of FOD, equipment and obstacles. If necessary ground crews should contact Airfield Operations for assistance.

### 1.1. Pushing to Apron Areas

When aircraft are pushed to apron areas, the following procedures are to be followed:

Aircraft should have the parking brake set. Some operators require the aircraft to be chocked. In such cases, the Handling Agent should advise the flight crew the aircraft has been chocked on arrival at the push and park stand. This can be done via the headset communication system, or using recognised hand signals. The ground crew must be satisfied the flight deck understand the aircraft has been chocked. The use of chocks is prohibited at 'remote holding locations' or on taxiways.

If the aircraft has been chocked, an engineer or ground crew member must be present for engine start at apron locations.

Start-ups are to be conducted only after Airfield Operations has inspected the stand and the surrounding areas for equipment and personnel who may be affected by jet blast. ATC must receive positive confirmation from Airfield Operations that "the stand is clear". This procedure does not apply to 'remote holding locations'. If necessary, Airfield Operations will protect the apron road system for taxi-off.

Pilots are to call for start-up as per normal published procedures but to state clearly to ATC on first call that they are parked 'nose-out'. Upon receipt of taxi clearance aircraft may taxi directly off stands using minimum breakaway power.

When aircraft are assigned to a 'REMOTE HOLDING LOCATION' for push and park, the aircraft will be expected to start engines and taxi to the holding location. Ground crew presence is not required for subsequent start-up and manoeuvring.

There is no requirement to contact Airfield Control or seek approval for towing manoeuvres within the confines of Western Maintenance Facility (the 'controlled landside' portion of Fairey's Apron). Similarly, there is no requirement for approval to undertake towing manoeuvres within the confines of the Executive Jet Apron & Hangar B

Organisations specifically Handling Agents involved in towing aircraft should only use the call-signs allocated to their organisation in accordance with the table below: -

Allocated Tug Call-signs	Organisation
Tug 1 to Tug 15	Servisair
Tug 16 to Tug 19	TBA
Tug 20 to Tug 49	Menzies Aviation
Tug 50 to Tug 52	World Freight Services
Tug 53 to Tug 58	TBA
Tug 59	Jet 2.com
Tug 60 to Tug 89	Swissport UK
Tug 90 to Tug 92	Monarch Engineering
Tug 93 to Tug 94	Flybe Engineering
Tug 95	Air livery
Tug 96 to Tug 98	Thomas Cook Engineering
Tug 99	RSS
Tug 100	Manchester Airport

It is the responsibility of each organisation to ensure individual call-signs are not used simultaneously by another tug or operative. An adequate system must be in place to ensure call-signs are allocated to a specific tug.

The pre-fix 'Tug' may only be used by vehicles designed specifically for pushing and towing aircraft. It should not be used by any other vehicle.

Operational enquiries may be directed H24 to the Airfield Duty Manager (00 44 161 489 3331).

**NB** - See also Aircraft Towing procedures in ASI 25

## ASI 25 – Aircraft Towing

ASI Owner                      Ground Services Manager

### 1. PROCEDURES

Manchester Airport 'B' driver permit must be valid prior to any aircraft pushback.

Mandatory requirement to use serviceable Head Set at all times for ANY Push Back, Aircraft Tow or Push and Park procedure. (See also ASB 10-2012 and ASI 16)

Head Sets not to be used during thunderstorm warning, as notified on Chroma Fusion information bar.

Ground crew to confirm with the competent person on the Flight Deck, that the aircraft and push back crew are fully ready to complete a safe procedure, prior to the push back request.

No change to the pushback clearance will be made by ATC once the pushback has commenced.

Before commencing an aircraft tow, the operative responsible for undertaking the tow must contact Airfield Control on telephone number 0161 489 **2384** to obtain approval. Airfield Control will either approve or decline the request to tow.

If approval to conduct the towing manoeuvre is granted Airfield Control will verbally state the destination stand or parking facility the aircraft is to be parked on. The operative should then read back the designator provided in order to ensure the information has been correctly received, e.g. Operative read back:

*“Tow Approved ABC Airlines Boeing 757-200 Stand 86 Right”*  
*“Tow Approved XYZ Airlines Boeing 737-300 Engine Test Bay”*

If permission is refused the towing manoeuvre **must not** be undertaken.

On receipt of approval, the aircraft may be towed to the destination stand or parking facility subject to the receipt of a positive ground movement clearance from Air Traffic Control on UHF Channel 1.

On arrival at the destination parking stand, the operative should verify the aircraft has been parked in the correct location with reference to any visual aids available, e.g. stand number signs, surface painted designators, etc. The operative should then contact Airfield Control on the same telephone number to confirm the aircraft has been fully parked, quoting the designation of the stand or parking facility, e.g.

*“ABC Airlines B757-200 has been parked on Stand 86 Right”*  
*“XYZ Airlines B737-300 has been parked in the Engine Test Bay”.*

In order to ensure the movement and positioning of all aircraft can be achieved safely, this procedure applies to the following towing manoeuvres: -

- Tows between all aircraft parking stands
- Tows to and from the Engine Test Bay Facility (or open field location)
- Tows to and from Fairey’s Apron and the Western Maintenance Hangars
- Tows to and from the RRS Apron (including the Hangar building)
- Tows to and from TATON parking areas (Weight Limitation of 10 tonnes)
- Tows to and from taxiways temporarily designated for aircraft parking

There is no requirement to contact Airfield Control or seek approval for towing manoeuvres within the confines of Western Maintenance Facility (the ‘controlled landside’ portion of Fairey’s Apron). Similarly, there is no requirement for approval to undertake towing manoeuvres within the confines of the Executive Jet Apron & Hangar B.

Organisations specifically Handling Agents involved in towing aircraft should only use the call-signs allocated to their organisation in accordance with the table below:

Allocated Tug Call-signs	Organisation
Tug 1 to Tug 15	Servisair
Tug 16 to Tug 19	TBA
Tug 20 to Tug 49	Menzies Aviation
Tug 50 to Tug 52	World Freight Services
Tug 53 to Tug 58	TBA
Tug 59	Jet 2.com
Tug 60 to Tug 89	Swissport UK
Tug 90 to Tug 92	Monarch Engineering
Tug 93 to Tug 94	Flybe Engineering
Tug 95	Air livery
Tug 96 to Tug 98	Thomas Cook Engineering
Tug 99	RSS
Tug 100	Manchester Airport

It is the responsibility of each organisation to ensure individual call-signs are not used simultaneously by another tug or operative. An adequate system must be in place to ensure call-signs are allocated to a specific tug.

The pre-fix ‘Tug’ may only be used by vehicles designed specifically for pushing and towing aircraft. It should not be used by any other vehicle.

Operational enquiries may be directed H24 to the Airfield Duty Manager (00 44 0161 489 **3331**).

## ASI 26 – Airbridge Operation

**ASI Owner** Airfield Safety Assurance Manager

### 1. TYPES OF AIRBRIDGE

- Avio
- Jetway
- Team

### 2. AIRBRIDGE TRAINING/VALIDATION and TESTING

An application to the Manchester Airport Learning Hub for the issue of an Airbridge Permit is subject to the applicant's successful completion of a theoretical and practical assessment, including a multiple choice knowledge test.

Training and validation of airbridge operators will be carried out by Manchester Airport Plc authorised Handling Agent or Airline representative.

The Operator must use the airbridge training material provided by MA contained within the Manchester Airport Airbridge Operators Training Manual. Additional material maybe added to the MA training manual, but is not permissible to remove any of the content.

Manchester Airport Plc will conduct the operator knowledge test. The test will check the underpinning knowledge of airbridge operators to ensure full training has been completed. Trainees must successfully complete this test before a permit is issued.

### 3. AIRBRIDGE OPERATOR PERMIT

Personnel who have successfully completed the required training, validation and knowledge test and have been issued with an Airbridge Permit may only operate Manchester Airport Airbridges.

The permit is valid for 3 years subject to re-validation. The permit holder must only operate airbridges that they have been specifically trained for.

In circumstances where, an Airbridge Operator is involved in an aircraft incident, Airfield Operations may remove the operator's permit pending investigation. MA reserves the right to suspend the licence for a specified period pending retraining and assessment, or to withdraw the licence altogether.

### 4. AIRBRIDGE PERMIT ISSUE

Manchester Airport Plc will issue individual Airbridge Operator's Permits and equipment keys. MA or their nominee will issue an Operator's permit on production of and in reliance of a Permit Application document signed by a certified validator demonstrating successful completion of an Airbridge Operators Validation and on completion of an Airbridge Operators Knowledge Test.

Airbridge Permits and airbridge keys remain the property of Manchester Airport Plc and need to be returned by the company on cessation of the key holders permit.

**5. GENERAL INFORMATION**

For further details regarding Airbridge permits training and/or Airbridge validation contact the Manchester Airport Learning Hub.

**Manchester Airport Learning Hub**

Telephone           0161 489 **5790**  
Fax                   0161 489 **5787**  
Email                [learninganddevelopment@manairport.co.uk](mailto:learninganddevelopment@manairport.co.uk)

**6. MAINTENANCE**

MA engineering is responsible for carrying out the following:

- Weekly Safety and operational checks on all airbridges
- A 10 weekly maintenance visit/service
- A 24/7 response to breakdown reports within 10 minutes from receipt of call.

Airbridge manufacturer's agents carry out independent annual inspections and provide a comprehensive report for each airbridge.

**NB** – See ASI 17 Strong Winds and Gales.

## ASI 27 – Aircraft Turnaround Management

**ASI Owner**                      Airfield Safety Assurance Manager

### 1.                      **GENERAL**

Under the Health & Safety Executive's guidance document HSG209 "Aircraft Turnround", aviation industry partners are recommended to apply common minimum standards to turnaround procedures at all UK airports.

The Manchester Airport Generic Aircraft Turnaround Plan describes the activities involved in an aircraft turnaround process and the points for consideration at each stage.

Safety must be the primary consideration of everyone working airside. It requires constant vigilance, attention to procedures and alertness to potential hazards. Airside Safety is of paramount importance and all of us have a vital part to play in ensuring that the aerodrome is as safe as we can possibly make it.

The 'Apron Area' represents a shared workplace and demands the co-operation of all employers who 'share' the area under UK Health & Safety Legislation.

There are 3 key things that need to be done by employers to protect employees' health and safety working within the airside environment:

- Co-operate and co-ordinate with other employers.
- Control your contractors
- Assess and control the risks to other people from your activities and inform them of any risks still left.

If there is co-operation and co-ordination between all employers sharing a workplace then everyone's legal obligations can be met. Good co-operation and co-ordination is vital where employers share a complex and dynamic workplace.

Any individual(s) not adhering to these procedures detailed within this instruction maybe liable to an infringement under the Airfield Infringement Scheme. See ASI 13.

### 2.                      **COMPLIANCE WITH LEGISLATION**

MA requires all organisations and personnel operating in Airside Areas to comply with the relevant legislation below:

- Air Navigation Order.
- 1954 Manchester Airport Byelaws.
- Health and Safety at Work Act 1974.
- Management of Health and Safety at Work Regulations 1999
- Health and Safety Consultation with Employees Regulations 1996
- Safety Representatives and Safety Committees Regulations 1977
- The Noise at Work Regulations 1989
- CAP 642 Airside Safety Management
- HSG 209 Aircraft Turnaround

### 3. PASSENGER HANDLING

Passengers are generally unaware of the dangers around them and are therefore particularly vulnerable to risk on the apron. They must always be closely supervised and contracts between the Airline and Handling Agent will need to take this requirement into account.

It is the responsibility of the Airline and/or the Handling agent to:

- Take full care of passenger safety during the embarkation and disembarkation of passengers.
- Supervise passengers at all times when they are between the Terminal Interior and the Aircraft Interior.
- Guide and control the movement of passengers when walking on the apron so that aircraft engines, aircraft refuelling procedures or other airside activities do not endanger them. Passenger routes must not pass below aircraft wings, beneath fuel vents or close to engines propellers or rotors of any aircraft on the apron.
- Ensure that they do not mix with passengers from other arriving or departing flights.

Passenger Ideal Guidance Systems (PIGS) and traffic cones used as an aid but must not replace the requirement for passenger supervision. PIGS are to be deployed by the person responsible for the control of passengers and the centre of the PIGS should be positioned approximately one metre away from the aircraft wingtip and the chains / barriers extended to both the front and rear steps.

### 4. HIGH VISIBILITY CLOTHING

All personnel must wear a high visibility waistcoat, jacket or equivalent when airside and outside of any building. This includes staff walking to and from workplaces airside. Airside access will be denied at security if this requirement is not adhered to.

When worn, the waistcoat or jacket must be properly fastened to provide maximum prominence to the front and rear of the garment.

High visibility clothing must be manufactured to the recognised British Standard BS EN 471:2003. Further guidance on high visibility personal protective equipment is available from the Health and Safety Executive (HSE). Please refer to their document L25 1992, titled "Personal protective equipment (PPE): high visibility clothing for airport workers" available from the HSE website at [www.hse.gov.uk](http://www.hse.gov.uk)

### 5. AIRCRAFT DOORS

Aircraft cabin and hold doors can be hazardous when open as a fall from either could result in serious injury.

Airfield Operations recommends that no aircraft door(s), either for the hold or cabin, are left open without the appropriate service equipment positioned correctly. If opening a door from inside an aircraft, personnel must have received confirmation that the appropriate equipment is in position before opening the door. Furthermore, personnel inside an aircraft must allow sufficient time for those outside the aircraft to retreat a safe distance from the door before it is opened.

All organisations are responsible for ensuring that suitable and effective measures are taken to prevent individuals from falling from aircraft doors.

The floor of the aircraft in the immediate vicinity of the cabin or hold door must be kept clear of hazards that could cause an individual to slip, trip or fall.

**6. USE OF HANDRAILS**

It is a legal requirement as part of the Working at Height Regulations that all Personnel must use equipment supplied (including safety devices) following training and instruction.

Working at height means a person is undertaking a task at a height where he/she could be injured by falling, even if it is at or below ground level.

Working at Height Regulations require all employers to do all that is reasonably practicable to prevent anyone falling a distance that could result in injury. The employer must assess the risks involved with any activity at height and where the risk cannot be avoided, introduce control measures commensurate with the risk.

Where the employer provides safeguards for preventing falls from height, for example handrails and/or harnesses, there is a legal duty on the employee to use those safeguards.

**7. POSITIONING OF EQUIPMENT**

Equipment must not be pre-positioned on apron stands prior to the imminent arrival of an aircraft such that it could cause an obstruction and/or damage to an aircraft.

Equipment must not be left unattended on a stand area or Inter-stand Clearway.

A passenger's route around the wing is not to be obstructed and as such, the numbers and positions of all vehicles in the vicinity of the aircraft must be considered, along with the location of the rear of stand road system.

Ensure that when an aircraft arrives on stand, all emergency exits are kept clear of handling equipment until external means of evacuation have been put into place.

**8. GROUND POWER ATTACHMENT & CHOCKING OF AIRCRAFT**

Chocks must not be pre-positioned or placed within the immediate vicinity of arriving aircraft as these present a trip hazard.

All airside personnel who are associated with the application of chocks and ground power of aircraft arriving onto stand must not approach the aircraft until the engines have been shut down and the anti-collision lights turned off.

After aircraft engines have shut down and the anti-collision lights are off, operatives should only approach the aircraft from the front to ensure their personal safety when chocking aircraft.

Chocks must be placed before any other turnaround activity may take place.

**Exceptions:**

It is acknowledged that where an aircraft has an unserviceable APU, it may be exceptionally necessary to keep an engine running whilst ground power is connected. This is a non-standard situation requiring procedures to be used following an assessment of the additional risks.

Aircraft departing from airbridge served stands must remain chocked until the airbridge has been fully removed from the aircraft and is in its parked position.

**9. CHOCKING OF SERVICE VEHICLES**

All vehicles that are involved in the servicing of an aircraft and that are parked within 2 meters of an aircraft should be chocked. The only equipment exempt from this are pushback tugs connected to an aircraft, any vehicle fitted with an inter-locking device and any vehicles that use manual or hydraulic stabilisers.

Manchester Airport is endeavoring to minimise the risks of aircraft and/or personnel being damaged/injured by unsecured ground service equipment.

Any operator who does not wish to chock their service vehicles during aircraft servicing must provide the Airfield Operations Manager with a suitable and sufficient risk assessment to substantiate their reasons.

**10. VEHICLE MANOEUVRING AND/OR PARKING UNDER AIRCRAFT WINGS**

Manoeuvring and/parking aircraft under an aircraft wing presents a safety hazard; for example should an aircraft vent any fuel. It also impinges on the safe separation distance between vehicles and aircraft and raises the potential for an incident/accident.

Only vehicles that have an operational requirement to park under an aircraft wing may do so. Examples of such vehicles might include those of aircraft refuellers or aircraft maintenance companies.

All other vehicles must manoeuvre at a safe distance from aircraft wings.

**11. USE OF BANKSMAN WHEN REVERSING**

The dangers of reversing on apron areas are heightened because of a relative lack of manoeuvring space.

All service vehicle operators and their operatives are to adopt a procedure of using a banksman to provide external guidance when reversing a vehicle on the apron.

All dual or multi-crewed vehicles operating on the apron area must use at least one of the crewmembers as a banksman.

Airfield Operations is aware that not all vehicles operating on the apron are dual or multi-crewed.

Therefore, all organisations that operate vehicles with a single crewman are required to provide the Airfield Operations Manager with a thorough risk assessment for the reversing of their vehicles.

## 12. INTER-STAND CLEARWAYS

Inter-Stand Clearways (ISCs) are a common feature on aprons at international airports in the UK and overseas. They are intended to indicate, by way of ground markings, the lateral extent of an aircraft stand and a clear route by which vehicles may transit between the front and rear of a parked aircraft.

Clearways are especially important for provision of an unobstructed route for access of emergency vehicles and egress of fuelling vehicles.

The ISC is delineated by a 'saw tooth' white line each side, similar to the markings indicating the approach to a pedestrian crossing on a public road. The width of the ISC is 6 metres and its positioning allows a minimum of 1-metre buffer from the wingtip of the largest span aircraft type using the stand. The ISC will extend from the head of head or equipment area to the rear of stand roadway or taxiway strip lines, whichever is applicable.

The Inter-Stand Clearway must at all times be kept clear of parked, unattended equipment. ISCs are not intended to be used to pre-position vehicles and equipment awaiting aircraft arrival. Misuse of ISCs will be treated as a safety occurrence and recorded as such by MA Airfield Operations.

A number of clearways have been installed with zones that have been marked in **red**.

The **red** zone area of the Inter-stand clearway delineates an area that must be kept clear of any obstacles when aircraft are manoeuvring on or off an adjacent stand. The **red** zone provides suitable clearance from an aircraft wingtip when parking on an adjacent stand

Vehicles / Equipment transiting or left unattended in the **red** zone whilst an aircraft is manoeuvring on or off an adjacent stand could cause a wingtip collision. Drivers may pass thoroughly the **red** zone area of an Inter-stand clearway as normal when aircraft are not manoeuvring on or off adjacent stands

The driving or parking of vehicles / equipment in the **red** zone whilst an aircraft is manoeuvring on or off an adjacent stand is subject to Manchester Airport's Infringement Scheme.

## 13. MARSHALLING OF AIRCRAFT

The personnel of Airfield Operations are the only individuals authorised to marshal an aircraft.

If a member of flight crew asks or signals for guidance from a person not employed by Airfield Operations it must be disregarded.

**Marshalling is provided where no other form of guidance is available or where VDGS is unserviceable or not calibrated for the aircraft type.**

There may, at times, be a short delay before an individual from Airfield Operations arrives but on no account must any ground personnel attempt to marshal an aircraft onto stand.

**14. VISUAL DOCKING GUIDANCE SYSTEMS (VDGS)**

SAFEDOCK AVDGS is currently employed to guide aircraft to the correct parking position on all contact stands and some remote stands.

SAFEDOCK will be operated solely by Ground handling agent staff, and must only be operated by personnel who have received formal training and are deemed competent to carry out this task.

Ground handling agent staff will activate this system, having checked that the stand is safe for aircraft to park.

A swipe-card at the reader device is located at the head of stand. By swiping a card, handling agent staff are confirming to Airfield Control that the stand has been checked and judged to be safe for an aircraft to use.

**15. WINGTIP CLEARANCES OF AIRCRAFT UNDER TOW**

All tug drivers are reminded that it is their responsibility to ensure adequate wingtip clearance is maintained whilst towing or pushing an aircraft.

Any permission given by Air Traffic Control to tow an aircraft must not be taken as an assurance that wingtip clearances are guaranteed on either taxiway or apron areas.

All tug drivers must therefore remain vigilant at all times when towing or pushing an aircraft.

**16. EMERGENCIES ON THE AIRFIELD**

The telephone number in case of emergency is **2222**.

In the event of an emergency there should be no assumption by any party in the vicinity of an aircraft that the emergency services have already been alerted.

During an incident 'on stand' a precautionary evacuation using the normal means of disembarkation may be more desirable to the aircraft commander than an evacuation using emergency slides.

Operators and handling agents are responsible for ensuring the availability of equipment that will facilitate a normal disembarkation.

All airside personnel are to remain clear of incidents and accidents, whether involving aircraft, vehicles or equipment unless their attendance is specifically requested or required by the Incident Management Team. The incident/accident Commander will determine when normal operations can be resumed.

Inbound aircraft declaring an emergency will be parked on a remote stand after landing, even if the incident has been 'stood down'.

**17. HEAD OF STAND SAFETY BOARDS**

Head of Stand Safety Boards are installed at all Terminal Pier aircraft parking stands. The Safety boards are highly visible and will provide the emergency Fuel hydrant cut off switches and Aircraft Emergency **STOP** buttons.

The Fuel Emergency Stop Switch is to be used in case of an accident or incidents that require the aircraft fuel hydrant system to be shut down.

The Aircraft Emergency Stop button is to be used when there is an urgent requirement to indicate to an aircraft parking on stand that it should immediately stop. This should only be used in a situation where a hazard is observed that could lead to an accident involving the aircraft whilst in motion.

## ASI 28 – Storage and Handling of Unit Load Devices (ULDs)

ASI Owner                      Ground Services Manager

### 1.            **OPERATING PROCEDURE**

MA Ground Services Manager will agree with airline handling agents and ULD providers the seasonal assessment of the number of ULD's required to meet their operational demands, no later than September 30<sup>th</sup> (Winter Requirements) and March 31st (Summer Requirements).

Airfield Operations / MA Ground Services Manager will carry out audits of ULD containers each week. Airlines will be informed of any breach of the agreed figures. The Airline will then be given seven days notice to remove any units over the agreed figure. Any units not removed within the reasonable time will be charged at a fee as published in the MA fees and charges.

Handling Agents will only use the Racks to store ULDs or other devices to prevent them from being moved by wind. Any company not adhering to these requirements are subject to an infringement being served to them, which carries a £50 fine. Damaged ULD's will be stored at stand 71 prior to removal for repair.

Any ULD found 'on the Apron floor' Airfield Operations will treat as FOD and will issue an AOR and fine accordingly.

Airlines and Handling Agents have agreed through the AOC to manage these sites and to ensure safe storage for all containers. Any damage to the racking or unsafe working practice observed whilst using these facilities must be reported to the Airfield Duty Manager on x3331.

Special operating procedures have been developed for use of Area 1. These procedure are displayed at the entrance to the site, and staff should familiarise themselves with the procedure before operating in this area.

### 2.            **SCHEDULE OF ULD RACKING**

A schedule of ULD racking and airline allocation quotas will be issued twice yearly for the forthcoming season as published by the MA Ground Services Manager

## ASI 29 – Aircraft De-Icing

**ASI Owner**                      Ground Services Manager

### 1.            **GENERAL REQUIREMENTS**

Aircraft de-icing may be carried out by any competent organisation operating airside by contractual arrangement with airline operators and with a current Ground Handling Service Licence (GHSL).

Aircraft de-icing fluids are pollutants with the potential for considerable environmental damage. Therefore when de-icing is taking place, it is essential that run-off from airside areas is contained and separated from other drainage.

### 2.            **LOCATIONS FOR AIRFRAME DE-ICING**

There is no centralised de-icing facility on the airport and therefore airframe de-icing is to take place whilst the aircraft is made ready for departure at the parking stand.

De-icing is not permitted on the Western Maintenance Apron

### 3.            **COMMUNICATIONS**

Handling Agents and Service Partners **MUST**, inform in advance, Terminal Control on Ext. **3776** prior to undertaking Aircraft De-icing. If no answer leave a message and contact the Airport Duty Engineer on Ext **3678**.

A separate notification is needed for each 24 hour period and each Terminal or remote stand. This is necessary to ensure the airport's drainage systems can be placed into containment mode to prevent contamination of local watercourses. Failure to do so could result in a pollution incident and pursued under the Airfield Infringement Scheme or result in prosecution by the Environment Agency.

### 4.            **HEALTH & SAFETY CONSIDERATIONS**

Care must be taken when carrying out de-icing to ensure that passengers and staff in the vicinity of the aircraft are not sprayed with de-icing fluids. The timing of the activity should be agreed via the appropriate Turnaround Co-ordinator.

De-icing fluids on aprons can make the surfaces very slippery and care needs to be taken by all those walking in the vicinity of de-icing activities. Handling agents and airline staff must warn passengers to take care when boarding aircraft from a non-airbridge gate. Drivers should be aware that braking and steering performance of vehicles might be impaired.

### 5.            **FLUID STOCKS**

ALL De-icing companies **MUST** keep the Airfield Duty Manager updated on fluid stock levels daily and inform the Airfield Duty Manager of any operational problems immediately.

## ASI 30 – Airside Competency & Training

**ASI Owner**                      Airfield Safety Assurance Manager

### 1.            **GENERAL**

The principle duties in respect of people at work (including) airside are outlined in the Health and Safety at Work Act 1974 and can be summarised as follows:

- Every employer has a duty to ensure so far as is reasonably practicable the health and safety of any individual who might be affected by any work activity within the control of the employer.
- Every employee has a duty to take reasonable care for the health and safety of himself and other persons who might be affected by their acts or omissions.
- The Aerodrome licensee is a provider of a workplace and in some cases a provider of equipment and therefore has duties to ensure so far as reasonably practicable the health and safety of others who use that place of work. This is particularly important for the common user areas and for issues which require co-ordination across the airport. The responsibility is limited to ensuring co-ordinated action on H&S matters and ensuring co-operation between employers in aspects of managing safety.
- The airside areas of an airport and in particular the aprons are workplaces which are shared by a variety of employers, and in these situations all employers have a legal duty placed on them to cooperate with each other and co-ordinate the measures taken in order to fulfil the duties.

### 2.            **TRAINING & COMPETENCY**

The particular risks that are inherent in airside operations and the type of activities which are necessary to turn round and service an aircraft make the ramp and other aircraft movement areas potentially dangerous places for unsupervised persons who do not know the hazards. It is both a statutory requirement and a personal safety imperative that ALL employees who are required to work on the ramp or aircraft movement areas, are competent at their job and have been trained in the safety procedures required for the activities that they carry out.

It is required that all employers provide adequate training for staff to enable them to undertake their duties safely before working on the ramp or in other aircraft movement areas unsupervised.

Consistency of operating procedures in a complex working environment can help minimise accidents and incidents. It is important that employers ensure that all staff are able to recognise and understand written, verbal and signposted safety instructions and guidance.

The Apron Safety Committee has agreed a common set of minimum personal competencies for undertaking various apron activities.

An adequate training programme would include imparting an understanding of the following:

- Health and Safety legislation requirements
- Local Emergency Procedures
- Current Airport Standing Instructions
- The importance of reporting Accidents and Faults
- FOD hazards
- Aircraft hazards (Turnround activity, jet blast and ingestion, noise and fuel spillage)
- Non Aircraft hazards (Vehicle, equipment, Airbridge driving and parking, speed limits, fuelling safety and adverse weather conditions)
- The requirement to wear appropriate PPE
- Fire Safety requirements
- Enforcement Agencies at the airport.
- Co-operation with other airside users.

### **3. MA Airfield Safety Awareness Training**

To assist in ensuring high safety standards on the airfield a Manchester Airport "Airfield Safety Awareness" DVD and accompanying booklet have been produced.

The Airfield Safety Awareness training package provides basic safety information that every airfield user should be aware of and understand.

To ensure the safety of employees it is a requirement for all employees, working airside, to view the DVD. The DVD should be used to supplement training delivered by employers. It is not intended to replace existing training programmes.

A Declaration form must be signed by each employee confirming they have viewed and understood the DVD contents. The signed Declaration should be kept with personnel training records and made available to Airfield Operations upon request for auditing purposes.

The DVD and accompanying paperwork are available from the Airfield Safety Assurance Team via email - [airfieldoperations@maniarport.co.uk](mailto:airfieldoperations@maniarport.co.uk)

#### **3.1 Maintaining Competency**

All employers should ensure that an appropriate system of re-assessment and refresher/development training is provided, to maintain the competence of employee's who work in the airside environment.

### **4. SERVICE PARTNER TRAINING AUDITS**

See ASI 12 Airside Audits

## ASI 31 – Airside Driving

**ASI Owner** Airfield Safety Assurance Manager

### 1. AIRSIDE DRIVER PERMIT (ADP) PROCEDURES

#### 1.1. Permit Requirement

No person is permitted to drive in any airside area of Manchester Airport without a valid ADP, which is appropriate to the area in which they are driving. All ADPs carry a photograph of the driver and **or** an identification number corresponding to their Security Pass.

To ensure that drivers of vehicles requiring airside access are in possession of a valid ADP Airfield Security will conduct visual checks of driving permits before Security access is granted airside.

Airfield Security will deny access to drivers of vehicles who are not in possession of a valid driving permit and contact Airfield Operations.

In the case of HGVs, PCVs or unconventional vehicles, a Certificate of Competence, issued by the Vehicle Operator, is required.

#### 1.2. Exceptions

Vehicles being escorted by a vehicle driven by an appropriate permit holder.

#### 1.3. Permit Types

**A** Permits drivers to use the airside roads and stand/equipment areas without an ATC clearance, but does not permit operation on perimeter roads or beyond the double white lines, which define the limit of the Apron.

**M** Permits drivers to operate on perimeter roads and taxiways north of Runway 05L-23R up to the **Runway** holding points.

**R** Permits drivers to operate on any part of the manoeuvring area including runways.

#### 1.4. Permit validity

The **'A' Permit** entitles the holder to drive on Airside service roads and aprons at MA and must be carried at all times whilst driving Airside.

The permit will be valid for 3 years from the date of issue.

An **'A'** Permit does not entitle the permit holder to drive on the Manoeuvring Area of Manchester Airport or any other UK airport. However, it is a mandatory requirement before obtaining an **M or R** Manoeuvring Area permit.

**M or R** Manoeuvring Area will only be issued to staff who have an operational requirement to drive within the Manoeuvring Area at Manchester Airport.

The 'R' permit will be valid for 1 year from the date of issue.

The candidate or company will need to show a clear requirement to operate in these areas and seek approval from the Airfield Safety Assurance Manager.

### 1.5. Training and Administration

The Manchester Airport Learning Hub on behalf of Manchester Airport will provide the training and administer the ADP scheme that includes the following:

- 'A' Permit Airside Driver Training (theoretical)
- M & R Manoeuvring Area Driver Training (theoretical)
- Local Airfield Familiarisation
- Administration of the mandatory test for personnel
- Issue of Airside Driver permits and supporting documentation
- Collating and updating database of all drivers at Manchester Airport

A list of charges is available from the Manchester Airport Learning Hub.

Companies wishing to undertake their own Driver Training should contact the Airfield Safety Assurance Manager for approval.

Companies that are currently approved by MA to carry out their own driver training will be subject to regular audits by Manchester Airport. This is in order to maintain and preserve the high standards of driver training required by MA. See ASI 12 Airside Audits

When an employee successfully completes the required driver-training course and has been issued with an ADP by the Manchester Airport Learning Hub, employers are then responsible for providing a training programme of practical driving and monitoring to ensure that the driver is competent to drive on the areas detailed on the ADP.

### 1.6. Transfer between companies operating at Manchester Airport

When a driver who holds a valid MA ADP transfers to another company at Manchester Airport the new employer is required to inform the Manchester Airport Learning Hub and request the transfer of all documentation to the new company. The driver will also be required to fill out a new application form.

### 1.7. Application for an ADP

Applications are available from the Manchester Airport Learning Hub. Contact the training team on 0161 489 5790.

### 1.7.1. Applicant Requirements

All applicants for the issue or renewal of an ADP must meet the following requirements:

- Have a current full UK EC/EEA, or foreign equivalent driving licence which permits the holder to drive a motor vehicle on public roads within the UK.
- An operational need to drive a vehicle airside on a frequent and unescorted manner\*
- Be able to demonstrate that they can recognise and understand written safety instructions of the type issued periodically by MA Operations Dept.
- Have completed and proved competent at the appropriate level training provided by MA or an MA approved training organisation
- Meet the basic minimum medical standards.
- New companies will need to show a clear requirement to operate airside and seek approval from the Airfield Safety Assurance Manager.

**NB** - Details of minimum medical standards required are available from the Manchester Airport Learning Hub.

The Airside Driving Permit remains the property of Manchester Airport and will cease to be valid and must be surrendered in the following circumstances:

- On demand by the Airport
- Immediately if the Holder loses his/her UK Driving License for offences under the Road Traffic Acts
- Any defacing, alteration, or misuse of a permit
- On demand as a penalty for a driving offence/series of offences
- When the holder ceases to be employed at the airport
- When a change of employer occurs at the airport

### 1.8. Medical Standards (Fitness to Drive)

The medical standards (fitness to drive) have been established in consultation with the CAA, HSE & Department for Transport (DfT). CAP790 details the minimum medical requirements for the issue of an ADP, however, Manchester Airport impose additional fitness requirements over and above those required for driving on public roads.

Prior to the issue of an Airside Driving Permit, and at set periods thereafter, basic minimum medical standards must be met. Meeting these standards does not exempt employers from adopting higher standards should they choose to do so. A higher review frequency maybe appropriate for some individuals with existing medical conditions at the recommendation of the health professional.

Establishing required medical standards is but one control to mitigate risks associated with airside driving and all employers should ensure that appropriate, task based, risk assessments for airside driving are in place.

An Occupational Health Practitioner (Doctor or Nurse) must carry out the initial medical examination. Where any doubt about fitness to drive exists, the advice of an Occupational Health Practitioner familiar with airside operating procedures should be sought. For Occupational Health Practitioners who are not familiar with the Airside Environment, reference should be made to Manchester Airport Occupational Health Unit.

The medical comprises of a general health questionnaire plus specific tests for eyesight and hearing. The medical questionnaire needs to be completed prior to attendance to the MA Occupational Health Unit.

Vision testing for the medical is based on the standard for Group 2 vehicles as defined in the DVLA 'At a Glance guide to the current medical standards of fitness to drive'. In the event that this standard is not met, it maybe possible to issue a local permit for driving Group 1 vehicles only based on an individual meeting the relevant (lower) standard defined in the DVLA guidance.

Group 1-category vehicles are defined as:

A Group 1 vehicle refers to an ordinary car or minibus of up to 8 seats (including the driver) that can be driven on the public road by a holder of a standard licence. For the purpose of airside driving, this type of vehicle is referred to as Group 1, with all other vehicles being classed as Group 2.

Individuals issued with this type of local permit will not be permitted to trail equipment as this may exceed the permitted weight limit for Group 1 vehicles.

The hearing test must be an audiometric examination; it is not acceptable to use a forced whisper test due to a lack of consistency and reliability.

An Airside Driving Permit (ADP) will only be issued on production of the following:

- A valid Airside Security ID
- A full and current UK DVLC licence or equivalent (both parts, for UK licences)
- Medical certificate

There are no exemptions to this requirement.

Where the DVLA places a condition or restriction on a driver this must be considered by the employer and medical advice obtained. Individuals are responsible for informing their employer of any medical condition that may affect their ability to drive. The employer must then inform Manchester Airport Occupational Health Unit of any change or restriction on a driver. Appropriate action will be undertaken as soon as a potential medical issue is brought to the airports notice, which may involve suspending or removing the ADP.

Details of minimum medical standards are available from the Manchester Airport Occupational Health Unit.

### 1.9. Renewal of ADP

ADPs are to be renewed in the following circumstances:

- A & M permit - Every three years or at the expiry date whichever is earlier.
- 'R' permit – Every 12 months or at the expiry date whichever is earlier.
- When an employee transfers between MA based organisations.
- Following any period of disqualification

## 2. AIRFIELD DRIVING PROCEDURES

### 2.1. Definition of Terms

The terms 'Movement Area', 'Manoeuvring Area' and 'Apron' are defined in the glossary at the beginning of the Aerodrome Manual Part 1. All personnel operating 'Airside' must understand the distinction between the Apron and the Manoeuvring Area.

The term 'airside area' has broadly the same meaning as 'Movement Area'.

It must be noted that the 'double white' lines divide the Apron (on which vehicles may move without the permission of ATC) from the Manoeuvring area (on which all movements are subject to ATC permission).

### 2.2. General Rules

- Inspect your vehicle before driving it.
- Drive only where your ADP allows.
- Give way to aircraft including aircraft under tow at all times.
- Display the vehicle flashing obstruction light(s).
- Use dipped headlights at night and in reduced visibility.
- Observe the relevant Movement Area speed limits at all times.
- Comply with the standard rules of the road when overtaking and passing other vehicles.
- Observe and comply with 'low headroom' signs.
- Carry only the 'permitted' number of passengers in the vehicle.
- All passengers must be seated.
- Ensure that all loads are safe and secure. Doors and shutters must be closed when operating airside.
- Observe reversing procedures Note. Either use a banksman or provide Airfield Operations Manager with an adequate risk assessment.
- Do not leave vehicles unattended with engines running (unless there is a justifiable need for the engine to be running).
- Observe all parking restrictions.
- Apply the handbrake when the vehicle is parked.
- Personnel in vehicles must remain entirely inside the vehicle.
- Do not drive across aircraft stands unless involved in the turnaround on that stand.
- Do not park underneath an aircraft wing unless you have an operational requirement to do so.
- Do not park or leave equipment in the Inter-stand Clearways.
- Report all vehicle unserviceability without delay.
- Do not park or leave equipment in the cross-hatched No Parking areas
- Do not drive under the influence of drink, drugs and intoxicating substances.

### 2.3. Airfield Maps

All vehicles that are required to operate on the manoeuvring area must be equipped with a current Manchester Airport Manoeuvring Area Map.

The Manoeuvring Area Map clearly shows all taxiways, runways, holding points and vehicle routes marked with their appropriate designation. It also details important telephone

numbers and the actions for a driver to undertake in the event that the vehicle should break down or that the driver should become unsure of his/her position on the airfield during Low Visibility Procedures (LVP's).

Drivers of vehicles that operate solely on the aprons and apron road system should be given access to the Manchester Airport Apron Road System Map to maintain familiarisation of the apron road system layout.

All Airfield Maps are available on Manchester Airport's website <http://www.magworld.co.uk/airfieldoperations>

Availability of The Manoeuvring Area Map must be included in the Vehicle Walk round Inspection Check List as detailed within Annex 3 of Manchester Airport's 'Vehicle and Equipment Standards for Operating Airside'.

#### **2.4 Wearing of Seat Belts**

It is a requirement that all vehicles operating airside at Manchester Airport are fitted with seat belts compliant with the Department for Transport Construction and Use Regulations.

Drivers and passengers of vehicles fitted with airbags should always wear seat belts. Airbags are designed to lessen the likelihood of serious injury to persons wearing seat belts. If seat belts are not worn, unrestrained drivers and/or passengers could sustain injuries from airbags in the event of a vehicle accident

Side facing seats such as those fitted to crew buses are not required to have seat belts fitted. It is highly recommended that drivers and passengers wear seat belts at all times when operating airside. Seat belts can significantly reduce the severity of injuries sustained in the case of an accident, even at low speeds.

Operators of vehicles operating airside are reminded of their obligation to ensure that seat belts are fitted and in good working order.

#### **2.5 Vehicle Manoeuvring and/or Parking under Aircraft Wings.**

Manoeuvring and/parking vehicles under an aircraft wing presents a safety hazard; for example should an aircraft vent any fuel. It also impinges on the safe separation distance between vehicles and aircraft and raises the potential for an Incident/accident.

Only vehicles that have an operational requirement to park under an aircraft wing may do so. Examples of such vehicles might include those of aircraft refuellers or aircraft maintenance companies.

All other vehicles must manoeuvre at a safe distance from aircraft wings.

#### **2.6 Towing of Aircraft Steps**

It is a requirement that all trailed equipment is towed in a safe manner.

It is the responsibility of the operator to ensure aircraft steps are maintained in good working order and that operatives carry out a walk around check prior to the steps being used.

Prior to a tow commencing, the stabilisers must be fully raised to prevent grounding and all loose or detachable items must be removed.

To avoid the potential collision between taxiing aircraft and vehicle traffic on the Apron road system, passenger steps should be lowered to a height of a maximum of 4.3 metres prior to transportation. It is recommended that all towable steps be marked clearly to enable operatives to determine the correct towing height.

Whilst towing, consideration must be given to the speed of travel, most particularly when manoeuvring aircraft steps in confined spaces and/or around corners.

In cases of adverse weather conditions, e.g. strong winds, vehicle and equipment operatives must ensure aircraft steps are in the fully lowered position before commencing a tow as the likelihood of them toppling significantly increases with height. Furthermore, slower towing speeds will be necessary as the likelihood of aircraft steps becoming unstable increases with stronger wind conditions.

Steps must be parked in designated bays with the parking brake applied and stabilisers lowered such that they cannot inadvertently move.

### 3. BUS AND/OR COACH OPERATION ON TERMINAL 2

The availability of space on the Terminal 2 head of stand road system means that it is not possible to facilitate safe bus and/or coach operations in both directions along this stretch of road. Therefore, a one-way system for buses and/or coaches must apply.

Buses and/or coaches transiting north along Terminal 2, i.e. from stand 200 in the direction of stand 215, must use the head of stand road system.

Buses and/or coaches transiting south along Terminal 2, i.e. from stand 215 in the direction of stand 200, must use the rear of stand road system.

At no time should buses and/or coaches' transit across vacant stands or drive between aircraft on pier served stands.

Passengers will enter/exit the bus or coach at the head of stand road system.

### 4. SPEED LIMITS

Location	Speed Limit
Entering Buildings	5 MPH
Apron Stands	5 MPH
T3 Coaching Lane	5 MPH
T1 Southern Front Apron Road leading to Baggage Hall Entrance	5 MPH
T1 Stand 12 Link Bridge HOS Road	10 MPH
Section of North Road that runs under IDLEX	10 MPH
Apron Roads	20 MPH
Other Roads	20 MPH

Drivers must note that:

- Speed limits must be adjusted according to prevailing weather conditions.
- Vehicle speeds are monitored on an ad Hoc basis by Manchester Airport Airfield Operations.

## 5. USING MOBILE PHONES AIRSIDE

The Manchester Airport Policy on the use of mobile phones describes the Instructions to personnel working airside in relation to using mobile phones and driving airside.

The use of hand held mobile phones by drivers of moving vehicles airside, including supervising or escorting a non Airside Driving Permit holder is prohibited.

Hands-free phones may be used but must be installed according to the manufacturers instructions and should follow the British Standards Institution's Guide to In-vehicle Information Systems (DD 235:19196).

The use of hands-free phones is prohibited if the handset is still being held during use.

Under no circumstances should mobile phones be used within the aircraft re fuelling zone unless the handset is intrinsically safe.

A fuelling zone is established when aircraft-fuelling operations are in progress, extending at least 6 metres radially from the aircraft filling and venting points, and from any part of the fuelling vehicle and equipment including hoses.

It is the responsibility of all airside users to ensure passengers embarking or disembarking aircraft whilst re-fuelling is taking place comply with this safety procedure. Exemptions

The only permitted use of a hand-held mobile phone whilst driving is for a genuine emergency call to Airfield Operations on ext **3331/3339** or the Manchester Airport Emergency ext **2222** and only if it would be unsafe for a driver to stop.

Any person using a mobile phone whilst driving airside will have their driving permit revoked and be issued with an Airfield Occurrence Report (AOR).

## 6. VEHICLE IGNITION KEYS

It is the responsibility of all airside vehicles and/or equipment operators and their operatives to ensure that an unauthorised driver cannot use a vehicle and/or piece of equipment.

To prevent vehicles fitted with a key ignition being moved without consent, such vehicles must have their ignition keys removed whilst parked unattended on aircraft stands, head of stand roads, or other locations authorised for the parking of vehicles.

To prevent vehicles not fitted with a key ignition being moved without consent, such vehicles should, where reasonably possible, have their battery isolated whilst parked unattended on aircraft stands, head of stand roads, or other locations authorised for the parking of vehicles.

At all times, all vehicles must be accessible via the driver's door in the event that the vehicle needs to be moved for safety reasons.

#### 6.1. Exemptions

Vehicles and/or equipment that depend on engine power to carry out their function (for example hydraulic lifts) and Airfield Operations vehicles where the driver is carrying out duties close to the vehicle (for example aircraft marshalling) are exempt from this notice.

### 7. AIRSIDE TOWING RESTRICTIONS

A maximum of 4 Baggage Trailers (all types) and 4 Freight & Cargo Trailers is permitted to be towed airside. **NB.** Maximum of 3 trailers inside buildings.

All trailers must have **red** or **amber** reflectors at or near each end, clearly visible in conditions of poor visibility or in darkness. High intensity reflective sheet material or reflective paint is an acceptable alternative.

### 8. SECURING OF LOADS

Airside drivers are responsible for ensuring that all loads are safe and secure whilst transporting them airside. Anything carried in or on vehicles and trailers must be secured. Vehicle doors and shutters must be closed.

### 9. DRIVING ON THE MANOEUVRING AREA

The following statements outline specific instructions for driving on the manoeuvring area.

#### 9.1 Taxiways

In addition to the driving procedures, drivers are to comply with the following:

- Retain situational awareness by listening and looking.
- Monitor the appropriate RTF frequency for the area of operation.
- Avoid distractions, concentrate.

#### 9.2 Runways

For the purpose of this instruction, the runway is deemed to include the relevant 'Cleared and Graded Area'

In addition to the driving procedures, drivers are to comply with the following:

- Obtain permission from ATC.
- Use dipped headlights.
- Monitor other activity on the runway, at holding points, final approach, in the circuit and in the climb out by looking and listening.

#### 9.3 Free Ranging

Free Ranging permits vehicles to operate without the requirement to contact ATC. A list of call signs authorised to Free-Range is held by the AOM.

Vehicle drivers are only permitted to 'free range' in the area within which their permit allows them to drive. Free ranging does not apply to runways.

Free Ranging is not permitted when LVPs are in operation.

Drivers of Vehicles Free Ranging are responsible for:

- Operating within the privileges of their ADP.
- Maintaining their own separation from aircraft; aircraft under tow and from other vehicles.
- Maintaining a 'listening watch' on the appropriate ATC frequency.
- Contacting ATC when requiring to cross or enter a runway.

#### **9.4 Action when Lost on the Manoeuvring Area**

If you become lost or unsure of your position whilst on the manoeuvring area, the following actions should be taken:

- Drivers are to report to ATC (by RTF) Immediately. ATC will stop all movements until the location of the vehicle is ascertained.

### **10 RADIO PROCEDURES**

All users of operational radios at MA must have received appropriate training by their employer.

All organisations using radio facilities on MA are required to have the approval of NATS Telecommunication Engineering Manager.

The following radio disciplines must always be observed when using the RTF on the Manoeuvring Area at Manchester Airport:

- Use the correct frequency for the area of operation.
- Use standard RTF phraseology at all times.
- Carefully monitor relevant frequencies.
- Listen carefully to instructions.
- Use the Vehicle Call sign on every RTF transmission.
- Readback appropriate ATC instructions.

#### **10.1 Radio Failure Procedures**

If working under ATC approval on a Runway and you suffer a radio failure you must vacate at the earliest opportunity and seek a REFUGE area. You must then make contact with ATC Watch Manager on 0161 499 **5336** using other means available, for example, mobile telephone, adjacent fixed landline telephone or alternative radio frequency. ATC will provide safe guidance or will request an Airfield Operations vehicle to assist.

If working under ATC approval on the Taxiways and you suffer a radio failure, complete your approved journey. When in a safe location contact ATC by other means to confirm you have vacated the manoeuvring area.

If towing an aircraft and you suffer a radio failure on the manoeuvring area, you must hold your position until assistance arrives.

If Free Ranging and you are able to vacate the manoeuvring area to the Apron Road System or Airfield Perimeter Track without crossing a Runway, then do so at the earliest opportunity.

**11 DRIVING DURING LVPS**

See ASI 15 Low Visibility Procedures

**12 INTER-STAND CLEARWAYS**

Inter-Stand Clearways (ISCs) are a common feature on aprons at international airports in the UK and overseas. They are intended to indicate, by way of ground markings, the lateral extent of an aircraft stand and a clear route by which vehicles may transit between the front and rear of a parked aircraft.

Clearways are especially important for provision of an unobstructed route for access of emergency vehicles and egress of fuelling vehicles.

The ISC is delineated by a 'saw tooth' white line each side. The width of the ISC is 6 metres and its positioning allows a minimum of 1-metre buffer from the wingtip of the largest span aircraft type using the stand. The ISC will extend from the head of head or equipment area to the rear of stand roadway or taxiway strip lines, whichever is applicable.

The Inter-Stand Clearway must at all times be kept clear of parked, unattended equipment. ISCs are not intended to be used to pre-position vehicles and equipment awaiting aircraft arrival. Misuse of ISCs will be treated as a safety occurrence and recorded as such by MA Airfield Operations. Such events may result in action being taken under the Airfield Infringement scheme.

A number of clearways have been installed with zones that have been marked in **red**. The **red** zone area of the Inter-stand clearway delineates an area that must be kept clear of any obstacles when aircraft are manoeuvring on or off an adjacent stand. The **red** zone provides suitable clearance from an aircraft wingtip when parking on an adjacent stand

Vehicles / Equipment transiting or left unattended in the **red** zone whilst an aircraft is manoeuvring on or off an adjacent stand could cause a wingtip collision. Drivers may pass thoroughly the **red** zone area of an Inter-stand clearway as normal when aircraft are not manoeuvring on or off adjacent stands

The driving or parking of vehicles / equipment in the **red** zone whilst an aircraft is manoeuvring on or off an adjacent stand is subject to Manchester Airport's Infringement Scheme.

**13 TERMINAL COACH LANE BETWEEN STANDS 21 & 22**

The coach lane between stands 22 and stand 21 that serves gate 20 A, B, C and D is only to be used for Manchester Airport coaching operations. This lane is designated 'one way' only in the direction from Stand 22 to Stand 21 and must not be used as a short cut by other vehicles and equipment.

Vehicle and equipment parking is prohibited in this area.

Exceptions to this rule are Rescue and Fire Fighting Response, Medical Emergency and Airfield Operations Personnel for essential requirements

**14 INFRINGEMENT SCHEME**

All fines will be directed to the individual's employer.

The following list represents infringements of safe and best practice commonly associated with Airfield Driving, but is not exhaustive. The list has been compiled as a guide to how the **Airfield Occurrence Report (AOR)** will be issued.

<b>Personal</b>	<b>Vehicles</b>
Exceeding the required airside speed limits.	Obstruction light not illuminated.
Obstructing taxiing aircraft.	Faulty towing connections.
Failure to carry a ADP whilst driving airside.	Bald tyres.
Driving with a invalid driving permit.	Vehicle cabs containing Foreign Object Damage (FOD).
Reversing a vehicle without a banksman.	Failure to display a current Airside Vehicle Permit.
Careless driving.	Defaced Airside Vehicle Permit.
Encroached Taxiway.	Driving a <b>red</b> -tagged vehicle.
Parking or leaving equipment unattended in an Inter-stand Clearway.	

Some offences may be considered to be of a minor nature by Airfield Operations staff who have the discretion in such circumstances to offer verbal advice only. However offender's names will be noted and if found to be persistent, offenders will be given an Airfield Occurrence Report.

All other infringements will be recorded and presented to Service Partners by way of a monthly report.

Any vehicle found to be defective will be **red** tagged and will be removed and placed out of service until rectified.

Anyone found to be driving a vehicle that has been taken out of service will be subject to **the AOR process and maybe subject to a disciplinary.**

## ASI 32 – Airside Vehicle & Equipment Standards

**ASI Owner**

Airfield Safety Assurance Manager

### 1. RESPONSIBILITY

Responsibility for the safe condition of vehicles/equipment, the inspection regime safety inspection records and rectification of defects lies with the operator.

Any changes to an operator's maintenance regime or facility must be reported to the Airfield Safety Assurance Manager.

Operators must adopt and be able to demonstrate a robust method of auditing and assessing their maintenance provider's performances with respect to quality and compliance.

Operators must ensure the presence at all times of an authorised and competent person who has the authority to remove any vehicle/equipment from the airfield, should a safety issue arise.

The operator is responsible for ensuring that employees who operate airside vehicles/equipment are appropriately trained to pre check the vehicle/equipment prior to use and to report defective vehicle/equipment.

Operators must inform employees of their responsibilities regarding vehicle/equipment and the legal responsibility to ensure vehicle/equipment is safe prior to use.

Operators are advised to have a written contract or Service Level Agreement with their maintenance provider, this should cover items such as frequency of service and safety inspections, items checked during inspections, rectification of defects found during inspections and keeping of records.

Manchester Airport requires a right of access to premises of the maintenance records for audit purposes.

### 2. REQUIRMENTS OF A VEHICLE / EQUIPMENT SAFETY SYSTEM

#### 2.1 Safety Inspections

First Use CAP 642 Safety Inspection is required prior to any vehicle and trailed equipment being operated airside for the first time. A declaration should be made to state the vehicle is new to operating airside at Manchester Airport.

A maintenance provider must carry out CAP 642 Safety Inspections every 17 weeks on all vehicles and trailed equipment that are three years old or more and that are less than 7.5 tonnes and every 17 weeks on all vehicles that are 1 year old or more over 7.5 tonnes. Vehicles under 3 years old require a CAP 642 Safety Inspection every 12 months.

Out of Service vehicles that do not conform to the CAP schedule must return the AVP to MA Motor Transport. This can then be registered as not in service and the AVP will be suspended. Failure to suspend an AVP on a piece of equipment and exceeding the CAP schedule will result in MA Motor Transport having to CAP 642 inspect the equipment at the Operator's expense.

A safety inspection relates only to the condition of the vehicle/equipment at the time of the inspection, it does not confer its reliability.

CAP 642 Safety Inspection Sheets must include items listed within Annex 1 and 2 of the document 'Vehicle and Equipment Standards for Operating Airside at Manchester Airport' and include the inspectors and operators name, date of inspection, the vehicle/equipment identifying number and any remedial work carried out should also be detailed on the CAP 642 safety inspection sheet.

All vehicle/equipment CAP 642 inspections must comply with:

- Department of Transport Test Certification
- CAA CAP 642
- PUWER and LOLER
- Manchester Airport Vehicle and Equipment Standards
- Manchester Airport CAP 642 Supplementary Vehicle Inspection Items

Vehicles and equipment that are to be safety inspected must be clean and FOD free. Compacted dirt, grease or other contaminants on the vehicle is not conducive for carrying out effective safety inspections.

A Safety Inspection can be a stand-alone inspection or may be part of a more comprehensive inspection. CAP 642 Safety Inspections do not negate the need to carry out manufacturers maintenance procedures. These should be incorporated into the maintenance regime.

## **2.2 Facilities for Inspections**

A maintenance provider must have facilities commensurate with the type and size of fleet and equipment they inspect and maintain and must be able to demonstrate compliance with VOSA standards.

It is not a requirement to undertake CAP 642 Safety Inspection for trailed equipment inside a maintenance facility. Such inspections maybe carried out airside by the maintenance provider.

A diesel engine smoke meter (or a gas analyser if petrol) should be used to ensure that the level of exhaust smoke is within the legal requirements. Information on the levels of permitted exhaust smoke is contained in VOSA's annual test inspection manuals.

Operators should also have access to a brake tester for the purpose of checking brake efficiency. While a decelerometer may be adequate for some vehicles, the use of a roller brake tester is strongly advised. A roller brake test is an important indicator of braking efficiency, although not a substitute for a robust maintenance programme.

The following represents a non-exhaustive list of appropriate facilities:

- Undercover accommodation for the largest and maximum number of vehicles to be maintained at any one time so that safety checks are conducted to a satisfactory level in all weathers.
- Tools and equipment appropriate to the size, nature and types of fleet must be made available.

- Adequate under vehicle inspection facility. Ramps or pits may not be needed if the vehicles have enough ground clearance for a proper inspection to be made on hard standing.
- Adequate lighting for the purposes of carrying out inspections in accordance with HSE Workplace health, safety and welfare.
- Access to suitable calibrated brake test equipment (e.g. a roller braketester, decelerometer)
- Access to suitable calibrated headlamp test equipment
- Access to suitable calibrated engine exhaust emission test equipment
- Access to steam or pressure under-vehicle washing facilities
- A safe working environment

### **2.3 Inspections**

Operators must ensure that any persons carrying out safety inspections are technically competent on the complexity and type of vehicle being inspected. A working knowledge is not sufficient. Evidence of individual competency must be made available upon request by MA and be to Manchester Airport's satisfaction.

If an inspector requires assistance during the inspection or audit process, then the operator must ensure a person(s) in attendance are familiar with the operation of that vehicle/equipment under test.

### **2.4 Records**

A twelve-month planner should be used to ensure accurate frequency of vehicle/equipment inspections and evidence of such made available to Manchester Airport upon request.

Each vehicle / equipment should have it's own file containing the following maintenance records where relevant:

- Safety inspections sheets
- Defect Reports
- MOT paperwork
- Annual headlamp aim, exhaust emissions and brake efficiency print outs
- Modification or remedial works paperwork
- Daily walk round inspection sheets
- Certification of any statutory test items

Any records of inspections and remedial works, including drivers walk round checks detailing defects, must be kept for a minimum of three years and operators must ensure that such records are dated, signed and available at all times for inspection/auditing purposes.

A nil fault reporting system should be adopted by operators with respect to drivers walk round checks. A nil defect report sheet may be discarded after 14 days.

A logbook record of Walk Round Inspections will suffice in most cases providing no faults have been found.

Computer records are acceptable provided they contain the requisite level of information and details. All inspection sheets must be completed and signed by the person who carried out the inspection.

## **2.5 Daily Walk Round Inspection**

Daily Walk Round Inspections of vehicles and equipment are mandatory. It is the responsibility of the operator to ensure these checks are carried out and any defects recorded and corrected. The operator must ensure it's drivers and staff are aware of this requirement.

A responsible, competent person trained to carry out vehicle walk round examination checks, must carry out daily Walk Round Inspections prior to each use of any vehicle/equipment.

Vehicles with multiple drivers should receive a walk-round inspection once in any twenty-four hour period. The walk round check must include the whole vehicle including any combination of trailers or dollies.

Vehicle defects must be recorded and reported to a competent person who has the authority to ensure that appropriate action is taken to rectify any defects found.

The drivers walk-round inspection must be recorded signed and dated by the driver. This record must then be kept with the vehicle maintenance records held by the operator.

Any equipment/vehicle found to be unserviceable must immediately be removed from the airfield, by the operator until maintenance work has been completed to the required vehicle and equipment standards for operating airside at Manchester Airport.

The Daily Vehicle Walk-round Check List must include those items contained within Annex 3 of the document 'Vehicle and Equipment Standards for Operating Airside at Manchester Airport'

## **2.6 Ramp Vehicle Safety Inspections**

All airside vehicles/equipment will be subject to Vehicle CAP 642 Inspection spot checks.

Staff from MA will carry out these airside spot check inspections and have the authority to issue Prohibitions and/or Defect Notices and if necessary remove the AVP.

Any vehicle/equipment deemed to be in a dangerous condition by having a Safety Significant Defect will be issued with a Prohibition Notice and the AVP will be removed and the vehicle/equipment will be prohibited from the airfield.

If a Prohibition Notice is issued for the vehicle/equipment the Company will request immediate removal from the airfield. The Operator shall ensure the vehicle/equipment fault is rectified and inspected by the Company's Motor Transport prior to the vehicle/equipment being returned Airside for use.

Operators must ensure access and assistance to their premises, vehicles and equipment and premises of their maintenance provider is afforded to Manchester Airport.

## 2.7 Scheduled Servicing/Maintenance works on the apron area

The carrying out of scheduled servicing/maintenance works on the apron area is strictly forbidden. This excludes trailed equipment undergoing CAP 642 Safety Inspections

Only emergency breakdown repairs sufficient to remove the vehicle/equipment from an airside location may be carried out airside with the prior consent of MA. Airfield Operations must be advised prior to such repairs being carried out to determine any effect they may have on airfield operations and safety.

## 2.8 Modifications, Adaptations or Alterations to Vehicles / Equipment

Conventional road vehicles that have been modified must still comply with the standards contained in the DFT Construction and Use Regulations 1986, irrespective as to whether the vehicle is being used on public roads or not.

Non-conventional vehicles that have been modified must have one of the following:

- Change of Use Notification from VOSA
- Insurance letter covering the modifications
- Coach Builder Certification

A vehicle must be resubmitted for a safety inspection and Airfield Safety and Compliance are to be informed in writing should any modifications be carried out. The vehicle must be made available for inspection as required by Manchester Airport.

## 2.9 Operating Unserviceable Vehicles and Equipment

Should the Operator fail to comply with reasonable direction issued by the Company to move vehicles or equipment that is either unfit to operate or defective, within the specified time the Company may remove and store the equipment. The Operator will be charged a removal fee of £50 per item or such other fee as the Company shall from time to time publish.

## 2.10 Self-Certification

Requirement for obtaining self certification for vehicle maintenance at Manchester Airport are available in the document "CAP 642 Vehicle Maintenance Self Certification Agreement" and on Manchester Airport's website [www.magworld.com](http://www.magworld.com)

## 3. AIRSIDE VEHICLE PASSES

Manchester Airport Motor Transport (MA MT) will issue all AVPs on behalf of Manchester Airport PLC (MA) and an AVP will remain the property of MA.

Passes are issued from the MA MT facility at Hangar 3, which is located in the Western Maintenance Area at Manchester Airport between the hours of 0900 to 1600 Monday to Friday.

A charge of £25 will be made for the issue of an AVP however; this may be reviewed at MA's entire discretion. If an AVP is lost or stolen it must be reported **immediately** to Manchester Airport Motor Transport (MT) and Greater Manchester Police (GMP) Airport Police Station. An administration fee will be levied by MA to replace lost or stolen AVP's.

Vehicles/equipment issued with an AVP must only enter the Security Zones detailed on the permit.

The operating protocol forms part of Manchester Airports Safety Management System and this requires that every vehicle/equipment operating airside should have its own AVP that must be displayed on the vehicle/equipment at all times when operating airside. For such a permit to be issued the operating protocol further requires that the vehicle/equipment be inspected by a competent person, trained in the techniques of vehicle examination, diagnosis and reporting, prior to its initial use airside and inspected every 17 weeks thereafter.

There are four different types of AVP available as follows:

**Permanent (Blue)**

Issued to vehicles under 3 years old on production of a valid Inspection Certificate or a self-certification form stamped by the operator, this pass can be validated for up to 12 months.

**Temporary (Green)**

Issued to non-self certified companies for vehicles over 3 years old and on production of a valid Inspection Certificate. This pass is valid only for up to 4 months.

**Delivery (Red) non-Airfield**

Issued on production of a valid Inspection Certificate valid for up to 12 months, allowing an operator point to point access by the shortest route to a point of delivery only.

**Escorted Access (Yellow)**

Issued for a limited period of up to five working days, for an operator with reason to have short-term vehicular access airside, or up to 17 weeks with a valid Inspection Certificate issued by MT regardless of the age of the vehicle.

This permit does not confer access without the vehicle being escorted at all times whilst operating airside. The sponsors responsible for the escorted vehicle must sign for the pass on collection.

The information recorded on an AVP will be as follows:

- The AVP expiry date
- A printed serial number of the AVP
- The vehicle/equipment identifying number
- Make/model of the vehicle/equipment to which the AVP is to be issued
- Vehicle Seating Capacity
- The vehicle Operators Company name
- A contact telephone number (24hrs if vehicle parked airside)
- Approved access security zones: All zones, Critical part

### 3.1 Exceptions

- Police vehicles attending an emergency
- Specialist military vehicles attending an emergency escorted by police vehicles.
- Local authority fire appliances attending an emergency
- Local authority ambulances attending an emergency
- Local authority or private ambulances on non-emergency duties, by arrangement, maybe escorted onto the Airfield by GMP.
- On occasions, contractors or vehicles carrying abnormal or indivisible loads can be escorted onto the airfield by a competent person, subject to current security arrangements, and escorted by an authorised person from the client company.

### 3.2 Application for an AVP

In every case an official Manchester Airport Airside Vehicle Permit Application Form **3a** must be completed by an Operator applying for an AVP, or in the case of a Self Certifying Stamp holder a CAP 642 Manchester Airport Self Certification declaration form that the vehicle is part of a compliant maintenance regime.

A valid Airside Liability Insurance Certificate, a CAP 642 Certificate and vehicle inspection documentation must be provided with each and every application for an AVP as well as a written declaration that all items have been tested, are in appropriate working order and condition and that all statutory and regulatory requirements have been complied with.

Should MA MT have reason to doubt the authenticity or validity of any of the documentation provided in connection with the application for an AVP, then the application will be rejected and Airfield Safety and Compliance Department advised of the refusal.

### 3.3 The Issue of an AVP

The issue of an AVP does not guarantee the right to drive or operate any vehicle/equipment airside and parking restrictions and apron rules and regulations must be adhered to at all times.

Application for privately owned or non-operational vehicles will not be authorised.

MA MT will ensure that the AVP does not expire on either a Saturday or Sunday; this will allow the Operator to have access airside with the vehicle when MA MT is closed over the weekend, and similarly an AVP should not normally expire on a Bank Holiday.

MA MT may at its discretion refuse to issue an AVP if the person issuing the AVP has reason to suspect that an AVP is, or has previously been misused by the person or Company requesting the issue of an AVP.

An AVP is issued by reference to the condition of the vehicle/equipment as presented on its first use CAP 642 safety inspection.

Any modifications, adaptations or alterations to a vehicle require a further inspection by a competent person, to confirm that it remains compliant with manufacturers recommendations and has obtained confirmation and cover from the Operators insurance company before being used airside.

### 3.4 Security Obligations

AVP's are non-transferable. Should an operator sell, scrap, transfer or otherwise dispose of a vehicle/equipment then the operator to whom the AVP was issued, must **immediately** return the AVP to MA MT to be cancelled.

AVP's must also be returned to MA MT at their request and when the AVP has expired.

### 3.5 Removal of an AVP

An AVP will be removed from any vehicle/equipment that cannot meet the required standard. If an AVP is removed from a vehicle or GSE by Airfield Operations, that AVP must be retrieved by the vehicle operator from Airfield Operations prior to the vehicle/equipment returning to operate airside at Manchester Airport.

The operator cannot apply for another AVP whilst the vehicle/equipment has an AVP under suspension.

Any vehicle/equipment involved in an airside safety related accident/incident involving vehicles or equipment, will have its AVP automatically removed by Airfield Operations. The vehicle/equipment will be sent to MA MT to undergo a CAP 642 inspection. This inspection will be at the operator's expense.

If there is reason to believe that a government agency or control authority will need to see the vehicle/equipment in its present condition, Airfield Operations will initiate quarantine of the vehicle and the Operator of the vehicle/equipment acknowledges and confirms MA's right to quarantine the same.

The operator must contact MA MT for a copy of the completed CAP642 Inspection Sheet and MA MT will fax a copy of the same CAP 642 Inspection Sheet to Airfield Operations.

Upon the operators application and through Manchester Airport's AOR process:

- Airfield Operations will issue an AOR to the employee, employer or company.
- The employer then has 21 days to respond in writing to Airfield Operations stating the actions taken.
- Details of the AOR will be recorded on the Airfield Incident and Infringement database.
- It will automatically generate an email to the company informing them of the AOR details.
- If the company has not replied within the 21 day period of the AOR being issued a reminder will be generated two weeks by email using the same electronic process for a period of two months.
- If a response is not received within two months, the Airfield Operator Administrator will then address individual cases subject at all times to MA's right to withdraw the AVP should circumstances warrant.

Airfield Operations will only consider reinstatement of the AVP if in receipt of an adequate and satisfactory CAP 642 Inspection Sheet and any other information or documentation considered relevant by Airfield Operations.

### 3.6 Records

MA MT will maintain insurance details and records of all AVP's issued, which will include the identifying number of the vehicle, the Operators name and the issue date of the permit.

An authorised representative of the Operator must sign to indicate that the AVP has been received.

ASCD will in conjunction with an accredited motor industry provider conduct annual audits of those Operators who have been approved to self certify and carry out CAP642 inspections. ASCD will maintain the records of these audit reports.

MA MT will carry out vehicle safety inspections on airside locations weekly in every calendar month. The results of such inspections will be documented within the monthly Manchester Airport Safety Performance Report.

### 3.7 Insurance Details

All Operators applying for an AVP must submit an original Insurance Certificate and maintain insurance for the full AVP term. Should the Certificate expire part way through the dates applied for, then a new Certificate of Insurance should be supplied on or within seven days of the date of expiry. Failure to do so will result in the withdrawal of the AVP.

The minimum value of liability required for the issue of an AVP is £50,000,000 GBP (Fifty Million Pounds) to cover airside vehicle and driving activities.

Not less than £100,000,000 GBP (One Hundred Million Pounds) aviation liability unless an alternative limit has been agreed by the Company subject to type / location of operation / service.

For further information on Insurance Policy requirements refer to the Manchester Airport plc Schedule of Charges and Terms and Conditions of Use.

### 3.8 Legal Aspects

It is an offence under Section 21B and 21C of the Aviation Security Act 1982, as amended by the Aviation and Maritime Security Act 1990 to:

Give false information either for the purposes of or in connection with an application for an AVP or in connection with continued holding of an AVP that has already been issued.

Go with or without a vehicle on any part of the restricted airside area of the airport without permission of Manchester Airport.

Failure to meet the requirements will result in the AVP being withdrawn and the vehicle removed from airside areas and formal legal action being pursued by MA.

**Further information relating to Vehicle and Equipment Standards for Operating Airside at Manchester Airport is available on Manchester Airport's website [www.magworld.com](http://www.magworld.com)**

## ASI 33 – FOD & Airfield Sweeping

**Owner** External Engineering Manager

### 1 FOD MANAGEMENT AND CONTROL – PRINCIPLES

Manchester Airport (MA) will endeavour to reduce the risk to aircraft from FOD through a combination of methods, including;

- Adopting the principals and guidance set down in Appendix 3E of CAP168 – Clearance of Foreign Objects and Debris
- The operation of an airside cleansing regime
- Providing certain facilities for the collection and disposal of FOD
- Educating airside users about the hazards of FOD and their roles and responsibilities in its control
- Arranging regular publicity campaigns / events to explain the hazard that FOD presents to aircraft safety
- Highlighting good and poor practice in relation to FOD management / control to the airport community
- Providing periodic FOD awareness training for all MA employees who work airside
- Requiring other companies who are involved in airside activities to provide FOD awareness training to their employees
- Ensuring that, as part of the design process for any airside development / construction project, consideration is given to ensuring that the future operation of the facility does not create FOD issues.
- Requiring all airside construction / maintenance works to include a project specific FOD control plan.
- Actively investigating all reported FOD incidents and publicising any ‘lessons learned’
- Enforcing the Airside Infringement Scheme as it relates to FOD
- Identifying and, wherever possible, eliminating FOD ‘hot-spots’ or entrapment areas, either through infrastructure improvements, publicity campaigns, change of use or a combination of such measures
- Making it a mandatory requirement for all Ground Handling Licensees and airside tenants to produce a FOD prevention / management policy

### 2 AIRSIDE FOD COLLECTION / CLEANSING REGIME

As far is reasonably practical, MA will endeavour to ensure that;

- FOD is prevented from finding its way onto any part of the Movement Area
- FOD present on the Movement Area is removed as soon as possible / practicable

MA will employ a number of methods to achieve these aims. These will include;

- a) **Provision of FOD Bins** – A minimum of one FOD bin will be located at a strategic position at the head of each stand. Their purpose is to enable airside workers to dispose of small items, which might become a hazard to aircraft, i.e. padlocks from bags.

They are not to be used to deposit other rubbish e.g. waste from aircraft. Any individual who is seen depositing inappropriate material into a FOD Bin may be subject to action in accordance with the Airfield Infringement Scheme (ASI 13).

FOD Bins will be emptied once per day.

**b) FOD Removal: Aprons and Taxiways** - In order to minimise the risks to aircraft, FOD control activities will be undertaken on the movement area by MA 24 hours per day. This activity will be undertaken by a combination of mechanical road, precinct or FOD BOSS sweepers, handpicking or other suitable methods.

MA will endeavour to ensure that all stands and taxiways are swept at least twice per day. However, the frequency and timing of FOD management activities will be dependent on a number of factors, including the availability of stands, weather conditions, direction of runway use, aircraft movements etc. Additional ad-hoc sweeping will be provided if and when required.

**c) FOD Removal: Other Airside Locations** - FOD clearance operations in other airside areas will predominantly consist of either hand litter-picking or mechanised sweeping with a small precinct sweeper. The areas that are covered by this regime include;

- Defined sections of the perimeter fence
- Pantograph (FEGP) baskets
- Under and 3m outwards from the terminal building lines
- Around ULD and other designated equipment storage areas

### 3 RESPONSIBILITIES

Everybody who works airside at MA is responsible for:

- Ensuring that their personal activities do not generate FOD
- Removing any FOD which they observe, regardless of whether or not it relates to their activities
- Removing FOD from vehicles and equipment as a preventative measure
- Inspecting vehicles frequently during use to check for loose parts, open doors etc
- Not choosing to ignore FOD
- Reporting persistent FOD problems in their area of work, to their Line Manager or MA Airfield Duty Manager (Ext **3339**)

Whilst the requirements outlined above cover every individual working airside, certain individuals and organisations shall have specific responsibilities and duties as outlined below.

#### **Baggage Handlers**

- Frequent inspections of vehicles and equipment in order to identify any materials that could create FOD
- Inspection of the apron areas following the completion of loading /unloading

#### **Airbridge Operators**

- Inspection of the airbridge prior to and following every operation

#### **Aircraft Operators**

- The regular removal of rubbish from aircraft holds

#### **Cabin Crew**

- Ensuring that bags of rubbish removed from their aircraft are not left on or around the stand (including on airbridges)

#### **Aircraft Engineers / Refuellers**

- Inspecting the apron area around any aircraft with which they have been working on to ensure no tools, equipment or general FOD has been left on the stand

#### **Aircraft Cleaners**

- Carrying and not throwing bags of rubbish (which may split)
- Checking work areas after completion of tasks and removing all rubbish and FOD

#### **Construction Workers**

- Ensuring that vehicles taking plant and materials to / from the working area are clean and do not deposit mud, stones or other debris on the movement area
- Taking measures to ensure that no materials from the works area find their way onto the movement area, whether this be by being blown, spilt or by any other methods

#### **Airfield Operations and Other MA Staff**

- Being particularly vigilant whenever active on the movement area.
- Carrying out formal routine inspections as required by the ADM.
- Reporting to all regular offenders, and specific problems relating to FOD.

#### **Handling Agents**

- As part the preparations for accepting an aircraft onto a stand, carry out a pre aircraft arrival FOD inspection

#### **Push-back Crews / Tug Drivers**

- Undertaking a pre-push back FOD check of the stand and adjacent taxiways

### **4 HIGH WINDS**

In addition to the general and specific responsibilities set out in Section 4 above, all airside staff should also be particularly vigilant prior to and during periods of high winds. In particular, they should take all necessary and reasonable steps to ensure that any plant, equipment or other material that may cause a FOD hazard if blown onto the movement area is securely fixed or stored before the onset of the high winds. Further guidance on the steps that should be taken by all parties when high winds are forecast are also contained in ASI 17, 'Strong Wind and Gale Plan'.

**5 INFRINGEMENT SCHEME**

Any airside organisation, their agents / sub-contractor and / or employees found not to be taking reasonable steps to prevent or assist with the prevention and removal of FOD may be subject to redress through the Airfield Infringement Scheme (ASI 13).

## **AMENDMENT FORM**

The Airfield Policy & Planning Manager is responsible for ensuring the Aerodrome Manual is reviewed annually and is responsible for retaining editorial control of the Aerodrome Manual.

All users of the Aerodrome Manual should submit an amendment form to instigate change as a result of changes in contact details, Policy or procedural change in the light of operational experience.

The amendment form will be reviewed by the Airfield Policy and Planning Manager and where appropriate submitted to the Airfield Safety Management Council for approval and implementation.

Please use the form to identify any amendments you wish to make to your Airside Standing Instructions.

In the case of title/contact number changes they will be updated in the electronic copy as soon as possible and other changes once approved.

**Amendment Form**

**To:** Airfield Policy and Planning Manager  
5th Floor, Olympic House, Manchester Airport M90 1QX  
[rory.mcloughlin@manairport.co.uk](mailto:rory.mcloughlin@manairport.co.uk)

**From:** \_\_\_\_\_

**Position:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Contact No:** \_\_\_\_\_

**Date:** \_\_\_\_\_

ASI/Section	Reference	Subject	Comments/Changes

**Please use this form as a master copy**