Version Control

Date	Amendment	Page/ Section	Version
24/06/26	Addition of reference to EGCC-I-AOPS-037 – ASI 037 – Diversion Policy Addition of Section 7.8.3 Location of Snow Fleet Equipment Addition of thunderstorm/lightening information Re-naming of Appendix 10 to 9 Amendment of Weather State 2 (Table)	8.3 7.8.3 10.1 Appendix 9 4 p22	V2.0
23/06/26	Changes to formatting to ASI	All	V2.0
18/06/26	Weather Status	4	V1.3
18/06/26	Location For Snow Fleet Equipment	Appendix 9	V1.3
08/01/26	Snow Movement Plan: Terminal 2 updated	7.7.2.2	V1.2
08/12/25	Airfield Operations Duty Manager responsibilities. Addition of "Ensure any snow-covered operational surfaces that are unsuitable for aircraft use are promulgated and marked using barriers & glims"	2.1.2	V1.1
08/12/25	Stand Movement Plan: Terminal 2 stands updated	7.7.2.2	V1.1

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1. Introduction and Terms of Reference

1.1 Purpose Statement

The Adverse Weather Plan details the measures to be taken by Manchester Airport with respect to potentially disruptive weather. Low Visibility procedures are not covered within this document and are contained with the Aerodrome Manual as Airside Standing Instruction 15. However, the weather state will include low visibility for the purposes of communication.

1.2 Objectives

This plan should accomplish the following:

- Provide a clear policy for prior notification of adverse weather allowing for an effective and combined landside and airside community preparation phase.
- Define and specify the actions to be taken by all relevant parties in the response to adverse weather.
- This plan therefore concentrates on the planning, organisation and response to any major weather event including specific procedures pertaining to the clearance of contaminants such as snow, ice, and flooding.
- The plan also incorporates the procedures for activating the Bronze Incident Management Centre (IMC) and the processes for notifying airline customers and service partners of the airport operational status in the event of a disruption scenario.

1.3 Regulatory Relevance

This document is published in accordance with the requirements of the CAA UK Regulation (EU) 139/2014 GM1 ADR.OPS.B.035 Operations in winter conditions and is therefore consistent with the UK National Snow Plan.

1.4 Document Background

Adverse weather conditions introduce potential hazards to Airports and Aircraft operations.

Whilst snowfall is often the most widely recognised adverse weather condition, significant disruption can be realised from other weather conditions. Strong winds, heavy rain or ice can lead to the disruption of normal airport operations.

Whilst Manchester Airport makes every effort to minimise disruption, the approach must be a collaborative one which recognises the shared goal of limiting the overall impact. Therefore, all airport users must take adequate precautions when notified of potential adverse weather. General safety guidance is made available to all personnel in the format of Information notices or Annual Winter Operations Safety Bulletins. It is the responsibility of operational managers to ensure this information is made available to all employees working or driving in airside or landside areas.

1.5 Planning and On-going Review

Planning for weather is an ongoing process within Manchester Airport. However, owing to the general prevalence of adverse weather during the winter season the following steps will be taken in readiness for the onset of winter:

- Between April and August, the Head of Airfield Operations (HAO) will host meetings with the internal response teams including Airfield Operations, Customer Experience Team, MACH/Control Directorate, Landside Operations and Assets/Engineering to review the resources and plans and agree any changes.
- Training will commence for staff operating snow and ice clearing equipment in September.
- Table-top exercises will be conducted from September and throughout the season to test and review various components of the Adverse Weather Plan.
- 'Live' testing will be carried out in September to simulate adverse weather events. Each department will be responsible for ensuring their teams are trained on the plan and local live exercises are conducted.
- Consultation will take place with Airlines & key service partners from September onwards.

- At the end of each winter season, the Business Continuity & Resilience Team will organise an internal 'wash-up' review, the purpose of which will be to review the Adverse Weather Plan in the light of experience. As part of this process, airlines and handling agents will be invited to provide MA with feedback.

The Adverse Weather Plan will be updated on a minimum of an annual basis, with any changes effective from September. A debrief session will be held after each weather event to ensure learning and best practice from prior events is adopted going forward.

1.6 Forecasting Tools and Accountability

The AODM shall be the primary weather assessor for airport-wide weather and associated adverse weather statuses.

Manchester Airport uses the following meteorological services to assess the threat to airport operations during the winter period.

- A Weather Forecasting Service from StormGeo which provides an airport specific prediction of rain, heat, thunderstorms, frost, ice or snow through the provision of a rolling 24-hour forecast, and a 2-5-day outlook.
- Aviation Weather Warnings issued by the Met Office (TAF – Terminal Aerodrome Forecast)
- Telephone briefings with the Aviation Forecaster at the StormGeo HQ in Aberdeen
- Actual runway surface temperature data acquired from sensor devices

2. Snow and Ice Procedures

2.1 Key Postholder Responsibilities

The Head of Airfield Operations is responsible for the planning, organisation and annual review of the Airfield Adverse Weather Plan, and is responsible for the aerodrome response, ensuring that everyone is fully conversant with their roles, operational procedures and regulatory requirements.

2.1.1 Airport Duty Manager

The **Airport Duty Manager (ADM)** is responsible for:

- Promulgating the weather status to the airport community.
- Opening an event in CIM and logging the actions taken.
- Initiating and assuring the actions detailed as per this Adverse Weather Plan are taken.
- Commencing pre-treatment or snow clearance operations by MA's Winter Operations Service Partner (WOSP), managed through the LDM.
- Activating the Bronze Incident Management Centre (IMC) if required.

- Acting as the principal link between all operational teams and the IMC in the event of a severe and/or prolonged weather event.
- Receiving and disseminating regular updates to the IMC and broader airport community regarding the progress on snow/ice clearance.
- Reviewing the impact to deliveries, specifically those providing welfare provisions during the disruption and assigning responsibilities to appropriate affected areas.

2.1.2 Airfield Operations Duty Manager

The **Airfield Operations Duty Manager** is responsible for:

- Monitoring meteorological conditions, forecasts and warnings and disseminating them as necessary. Continual assessment of surface temperatures to determine treatment priorities.
- Providing regular airfield status reports to the ADM and/or IMC (if active).
- Initiating airside snow clearance or ice treatment operations.
- Promulgating any change in operational status of the airfield via NOTAM.
- Ensuring ATC are aware of which centrelines have been cleared of snow and available for use.
- Ensure any snow-covered operational surfaces that are unsuitable for aircraft use are promulgated and marked using barriers & glims.
- Determining the need for activating staff call-out procedures according to the threat of snow and ice in conjunction with the Snow EBDM and coordinating allocation of resources.
- Coordinating stand availability and the operational status of aircraft parking stands between Snowman Aprons and Snowman Airfield Control.
- Ensuring that information relating to the operational status of the airfield is promulgated to airline customers and service partners via the Community App
- Maintaining detailed logs of clearance and treatment activities, taxiway closures and ATC flow restrictions.
- Advising the EBDM of the use of anti-icing chemicals on the airfield and the locations to be treated (records to be maintained by the EBDM).

2.1.3 Airfield Operations Lead

The **Airfield Operations Lead** is responsible for:

- Ensuring that Airfield Operations staff have been deployed in accordance with operational needs and ensuring the welfare of Airfield Operations staff.
- Complete a readiness check at the start of each shift during the Winter season to confirm the status of respective assets (including snow fleets) and anti-icing media and grit.

2.1.4 Snowman Airfield

Snowman Airfield is responsible for:

- Conducting assessments of runway surface state in accordance with the Global Reporting Format and ensuring accurate reports of contaminated runway surface state are promulgated to pilots.
- Ensuring surface inspections of the Manoeuvring Area are conducted and conditions monitored to ensure that ongoing aircraft operations are conducted safely.
- Coordinating airside snow clearance or ice treatment operations when in progress.
- Promulgating any change in operational status of the airfield to the Airfield Operations Duty Manager.
- Responsible for the planning and coordination for re-opening the runway after a snow closure.

2.1.5 Snowman Apron

Snowman Aprons is responsible for:

- Conducting and recording regular checks of the operational status of aircraft parking stands.
- Informing Airfield Control of stand availability and the operational status of parking stands.
- Agreeing priorities for treatment of parking stands with Snowman Airfield Control.
- Aid ATC in moving inbound taxiing aircraft to forward holding points off-stand to ease taxiway congestion.
- Inspecting stands prior to use, ensuring sufficient clearance has taken place to facilitate turnaround of the maximum size aircraft intended to use that stand.

2.1.6 Landside Duty Manager (LDM)

The **Landside Duty Manager (LDM)** is responsible for

- Complete a readiness check at the start of each shift during the Winter season to confirm the status of respective assets (including snow fleets) and anti-icing media and grit. This shall be reported in respective logs.
- Serving as primary internal landside contact for disruptive weather responses, gaining reports from all key landside managers.
- Providing regular landside status reports to the ADM and/or IMC (if active).
- The management of the Control Room, Traffic Marshals and the associated supervision of the forecourts, CCTV system, exit barriers, road network and car parks ensuring safety and efficiency.
- Liaising with external network providers including MCC, Highways Agency, GMP or Fire Service to update on airport-related network concerns.
- Serving as the primary contact for the WOSP (Mitie) including responsibility to initiate the WOSP response when air temperatures are predicted to be 3 degrees or less. To provide a minimum of 2 hours' notice to Mitie with instruction to complete full site gritting.
- Contact to be made to Mitie as follows:
    - FOH Duty Manager: 07384 238326
    - Duty Manager T1: 07884 734825
    - Duty Manager T2: 07788 387087
    - Duty Manager T3: 07884 734344
- Liaising with IMC to allow regular update messages to be initiated.
- Providing instruction to initiate the disruption email to all customers with car park bookings via MAN Customer Communications Team
- Arranging dynamic workplace inspections of all forecourt areas, including taxi feeder park and private hire waiting areas
- Considering the impact to local hotels/accommodation, their associated walking routes, footpaths and car parks in the event of mass disruption and cancellations.
- Assuring landside areas of crash gates have been cleared of any snow

2.1.7 Facilities Manager (Soft Services)

The **Facilities Manager – Soft Services** is responsible for:

- Ownership of the landside elements of the Adverse Weather Plan including processes and procedures, ensuring that the document is circulated to all relevant parties and any changes are communicated to affected or responsible parties.
- To regularly monitor the on-site stock of rock salt and arrange for supplies to be replenished as and when necessary.
- To ensure that accurate records of all pre-treatment activities are produced by MA's WOSP and to maintain these for a period of three years.
- Ensure salt containers across Landside estate are full prior to Winter season and replenished as required.
- In the event of a severe and/or prolonged frost / ice/ snow event:
    - Manage the landside snow clearance or ice treatment operations in conjunction with other MA units (i.e. Car Parks Operations, Customer Transport, LDM).
    - Act as the principal link between the landside snow clearance teams and the LDM.

2.1.8 Winter Operations Service Partner (WOSP)

The **Winter Operations Service Partner (WOSP)** is responsible for:

- Ensuring that the Landside Winter Operations team are informed of mobilising plans and the network is treated in accordance with the agreed priorities.
- Ensuring that the landside winter operations equipment is properly maintained, and the vehicles always have an adequate fuel supply.
- Ensuring that all winter operations equipment has been subject to a full service prior to the start of the winter season.
- Conducting serviceability checks on all winter operations equipment after each use.
- Ensuring that all staff employed in winter operations duties are adequately trained and qualified to use the plant.
- Ensuring that regular checks are made on the remaining stock in each rock salt bin and they are re-filled as and when required.
- To provide MA with accurate and timely records of all winter operations activities undertaken by them on MA's behalf.

2.1.9 Landside Bussing Team Manager (LBTM)

The **Landside Bussing Team Manager (LBTM)** is responsible for:

- Continuing to provide Landside Incident Management live updates when required.

- Ensure roadways, manoeuvring areas & walkways around CTOC and CTAC are safe for use, including gritting walkways and de-icing vehicle screens.
- All equipment required is available.
- Confirm resource plan meets weather response requirement across all areas.
- Inform Customer Transport Team of adverse weather conditions and manage areas accordingly. Provide team with regular updates.
- Arrange dynamic workplace inspections of CTOC and CTAC

2.1.10 Car Park Team Manager (CPTM)

The **Car Park Team Manager (CPTM)** is responsible for:

- Carrying out assessments of likely risk to car park operation at the start of each shift during which disruptive weather is forecast.
- Inform all Meet & Greet/Drop & Go drivers of adverse weather condition warnings, monitor situation during shift, obtain regular updates from drivers regarding current conditions in car parks. Ensure all staff have correct PPE, de-icing equipment etc.
- Ensure the passenger arrivals areas are gritted, making the request directly to the LDM.
- Ensure salt containers are full prior to November each year and monitor levels throughout the season.
- Monitor surface condition of car parks (including decking) and close if unsafe for vehicles or pedestrians. Mid Stay, Short Stay and top level of all MSCP's are areas of importance.
- Ensure that all staff employed in winter operations duties are adequately trained and qualified to use equipment.
- Arrange dynamic workplace inspections of all self-park car parks in addition to all Meet & Greet products as well as Drop & Go and surrounding areas

2.1.11 All Landside Users

All Landside Users are responsible for:

- Drivers must advise Control Room of road, car park, terminal forecourts and bus stops conditions.

- Control room provide pertinent updates on surface weather conditions and potential safety concerns to LDM.

2.1.12 Airfield Senior Engineering Manager

The **Airfield Senior Engineering Manager** is responsible for:

- Ensuring that arrangements are made for suitable supplies of anti-icing/de-icing materials throughout the winter period.
- The training of all MA staff (engineering, airfield operations and fire service) using the specialist snow and ice clearing equipment.

2.1.13 Engineering and Baggage Manager

The **Engineering and Baggage Duty Manager** is responsible for:

- Provision of equipment and resources for anti-icing and snow clearing on the airfield.
- Providing regular resourcing status reports to the ADM and/or IMC (if active).
- Mobilisation of snow fleet to its designated forward holding area (seasonal holding for November to March only).
- Ensuring the readiness of the Engineering Team by 1st October each winter.
- Ensuring that snow clearing and anti-icing equipment is checked and serviceable for use by 1st October each winter.
- Out of hours re-ordering of anti-ice media stock.
- Taking appropriate actions to contain drainage systems and thereby prevent contamination of watercourses.
- Overseeing allocation of equipment and personnel.

2.1.14 Airfield Liaison Manager (ALM)

The **Airfield Liaison Manager (ALM)** is responsible for:

- Ensuring the Airfield Operations Controllers are conversant with their responsibilities under the Adverse Weather Plan.

- Reviewing stand allocation plans during periods of prolonged snowfall and operational disruption.
- Arranging additional resource in the form of a Snow Airfield Control to support the Airfield Controllers during periods of adverse weather.

2.1.15 Airfield Operations Controllers

The **Airfield Operations Controllers** are responsible for:

- Liaising with Snowman Aprons to determine stand clearance and treatment priorities, providing advance notification of aircraft movement schedules.
- Updating the stand allocation plan to reflect the availability of aircraft parking facilities.
- Issuing Community App updates, at the request of the AODM.
- Ensuring an appropriate area is made available as a parking area for the snow fleet, at the request of the AODM.
- Ensuring that agreed stands are closed to facilitate the implementation of snow dumps.

2.1.16 Airport Resilience Team Manager

The **Airport Resilience Team Manager** is responsible for:

- Deploying staff as required to clear Apron Walkways and Parking Stands as directed by Snowman Apron and / or ADM.

2.1.17 Snow EBM

The **Snow EBDM** is responsible for:

- Calling in additional staff resources to supplement the snow clearing operation.
- Allocating staff resources to available equipment and allocating call signs to staff operating snow clearing equipment.
- Provision of and filling of “yellow prill bins”/self-help points on aircraft stands with appropriate solid de-icing material.
- Coordinating the snow clearing or anti-icing teams in operation as requested by the AODM.
- Keeping logs of areas treated and quantities of materials used.
- Conducting and recording routine surface inspections of airside roads, equipment areas and green passenger walkway areas.
- Ensuring that any equipment faults are reported to MT and maintaining a log of equipment plant that is in/out of service.

- Monitoring stock levels of anti-icing and de-icing materials and reordering when necessary
- General welfare of staff driving snow and ice clearing vehicles.
- Proactively clearing de-icing fluid from stands with Airfield Sweeper

2.1.18 Aircraft De-Icing Providers

The **Aircraft de-icing providers** are responsible for:

- Communicating any operational difficulties to the AODM where necessary.
- Communicating any change to status or operational capability to the AODM.
- Providing accurate de-icing time stamps.

2.1.19 Head of Motor Transport

The **Head of Motor Transport** is responsible for:

- Ensuring that snow-clearing and anti-icing equipment is properly maintained and has an adequate fuel supply.
- Ensuring that all winter operations equipment has been subject to a full service prior to the start of the winter season.
- Conducting of serviceability checks for all snow clearing and anti-icing equipment after each use.
- Provision of trained staff for attending to running repairs to snow clearing and anti-icing equipment when in operation.

2.1.20 ATC Watch Manager

The **ATC Watch Manager** is responsible for:

- Switching on airfield ground lighting when snowfall commences
- Coordinating with the AODM to establish priorities for snow clearing and to determine the tactical operational capability and flow restrictions to aircraft movements.
- Coordinating with the Scottish Control Centre concerning disruption to aircraft movements.
- Communication of accurate airfield status information to aircrew using ATIS and Essential Aerodrome Information via RTF.
- Providing meteorological reports through the OPMET system.
- Ensuring SNOWTAMS prepared by Airfield Operations are suitably promulgated.
- Ensuring engineers maintain clearance of critical airfield equipment e.g., snow clearance from ILS aerial

2.1.21 MARFFS Station Manager (Fire Chief)

The **MARFFS Station Manager (Fire Chief)** is responsible for:

- Ensuring access routes to the North and South Fire Stations remain clear of snow and ice contamination.
- Ensuring Fire Station pedestrian routes/walkways remain clear of snow and ice contamination.
- Ensuring sufficient stocks of Prill, spreaders and snow shovels are available for both the North and South Fire Stations.
- Ensuring that a record is maintained of Prill spreading at both the North and South Fire station.
- Ensuring access to Emergency RVP sites remain clear of snow and ice contamination.
- Supporting apron clearance when fire category permits.

2.1.22 Airfield Security Team Manager

The **Airfield Security Team Manager** is responsible for:

- Ensuring Snow & Ice Clearing Vehicles are given priority at North and West Gate Security Entrance Points. Priority will also be given to Airfield Operations & Motor Transport personnel.
- Conducting regular inspections of North Gate, West Gate, South Side and Western Maintenance Area Security entrance points to ensure surfaces remain safe for vehicles and pedestrians, requesting assistance via the Snow Cell if necessary.
- Providing extra Hand Working resource.

2.1.23 Aircraft Fuelling Companies

Aircraft Fuelling companies are responsible for:

- Ensuring equipment, materials and resources are available to clear snow and ice contamination from the west site fuel farm compound.
- Dispersing solid anti-icing granules in the airside fuelling vehicle parking area at Stand 65.

2.1.24 Airlines and Handling Agents

Airlines and Handling Agents are responsible for:

- Ensuring the Winter Operations 'Airside Safety Bulletin' issued by Manchester Airport at the beginning of each winter season is circulated amongst all 'front-line' airside workers and incorporated in daily shift briefings and toolbox talks.
- Ensuring operational teams are continually briefed with details of weather warnings disseminated by Manchester Airport.
- Verifying that aircraft parking stands are suitable for use immediately prior to an aircraft arriving on stand.
- Reporting observed snow or ice contamination on aircraft parking stands to Airfield Control.
- Advising AST (x3776) in advance of carrying out any aircraft de-icing activity.
- Ensuring that passengers are not exposed to undue hazards whilst being escorted across the apron for boarding or disembarking, including safety of passenger steps, requesting support from MA if necessary.
- Advising passengers of adverse conditions and the presence of snow deposits where snow is falling or has recently fallen.
- Making use of de-icing and snow clearing materials stored in yellow self-help bins to support the snow and ice clearance effort.
- Ensuring that ground service equipment is parked in marked equipment areas or removed completely to designated parking areas off stands.
- Supporting snow clearance activities by providing resources to push back aircraft, thus providing access to parking stands by snow clearing machinery.
- Assist in the clearance of snow on passenger walkways and access / egress routes.
- Keeping the Airport Operating Database up to date with all required time stamps.

2.1.25 All Staff

All **Staff** are responsible for:

- Taking extra precautions when snow and ice conditions are present.
- Adhering to the guidance and procedures contained in the Adverse Weather Plan and Airside Safety Bulletin issued at the beginning of each winter season, and periodically throughout the season.

- Reporting any areas that are potentially unsafe to Airfield Operations (x3331) or via their operations office.
- Driving with extreme caution at speeds that take into account the surface conditions and the proximity of aircraft and personnel.
- Minimising vehicle movements over fresh snow as far as practicable. This prevents compaction of snow and thereby helps to make treatment and removal easier to achieve.
- Making use of de-icing materials stored in yellow bins to support the snow and ice clearance effort.
- Where possible, assist in the clearance of snow on passenger walkways and access / egress routes.
- Ensuring that ground service equipment is parked in marked equipment areas.

3. Communication

3.1 Immediate Actions

Following the initial receipt of an adverse weather forecast the AODM shall initiate communication by completing the following actions

1. Report weather status changes to the Manchester Airport Control Hub (MACH) via the ADM and/or AFL.
2. Contact key postholders to ascertain asset serviceability/availability. Where the AODM is unable to make contact with relevant post holders, the MACH will support and escalate as necessary, the ADM/AFL will update the Community App with relevant weather status information.

3.2 Notification Cascade

The AODM shall remain appraised of the adverse weather forecast and provide regular updates as required to the MACH (ADM and/or AFL), the Director and Head of Aerodrome Operations. The MACH will escalate as required and as per processes outlined within the Incident Management Handbook. These shall be in addition to Community App updates issued and community conference calls.

4. Weather Status

The Weather Status provides a clear gateway decision-making process with which pertinent weather information can be disseminated to the Community.

Weather Status	Criteria	Actions	Communication
Weather State 0	No Adverse Weather Forecast	• Normal Operations	• None
Weather State 1	Adverse weather in 5-day forecast	All companies and departments to prepare, start considering the actions and equipment needed, check visibility, stock levels, wind speed limits on equipment etc <u>Airside</u> • AODM will continually monitor weather for a possible change in status, and update ADM when required. <u>MACH</u> • ADM to update IMT Lead and assess IMT activation against Escalation Criteria Matrix.	<u>MACH</u> • ADM receives update from AODM and updates IMT Lead. • Airport community conference call held at the discretion of the ADM, dependant on expected weather and anticipated level of disruption to normal ops. • AFL to communicate information via Community App banner (Disruptive weather warning due to adverse weather conditions over the period between [DAY] to [DAY]) <u>Airside</u> • AODM to update ADM, EBDM, ATCWM, Fire Chief as required. <u>Airport Community</u> • Consider actions required to prepare for adverse weather forecast and be ready to update on preparedness on Community calls.

Weather State 2	Adverse weather in 48hr forecast
	
	• AODM to use discretion to declare based on other disruptive weather deemed to be potentially disruptive
		MACH
		• ADM to continually liaise with AODM for possible status change.
		• ADM to update IMT Lead and assess IMT activation against Escalation Criteria Matrix.
		
		Airside
		• AODM to ensure Airfield Ops & Snow Fleet vehicles and equipment are in preparatory state for mobilisation.
		• AODM to ensure sufficient MA personnel are available for call-in, where applicable, to support operational response and clearance activities during adverse conditions.
		• AODM to re-check that adequate stock for both aircraft and apron operations is available via relevant providers and Asset Engineering to support operations in all weather conditions.
		• AODM will continually monitor weather for possible change in status
		
		Landside
		• LDM to obtain a report from the relevant external provider and advise on 'standby position'
		  ○ Fuelling and serviceability status of vehicles and equipment
		  ○ Confirmation of consumable stock levels and availability across storage points and operational vehicles
		• LDM to ensure sufficient personnel are available for call-in if required to provide enhanced presence in the Landside areas (including the Control Room), to provide cover if the
			MACH
			• ADM receives update from AODM and updates IMT on-call manager.
			• ADM schedules and chairs Airport community conference calls.
			• AFL to communicate information via Community App banner (Disruptive weather warning due to adverse weather conditions over the period between [DAY] to [DAY])
			
			Airside
			• AODM to update ADM, EBDM, ATCWM, Fire Chief as required.
			
			Landside
			• LDM initiates Landside Operations Incident Management Hub
			• LDM provides regular updates to ADM on landside status as required.
			• LDM to update MAG FM and S&B service delivery manager.
			
			Airport Community
			• Update on available resource at Community calls.
			• Report any issues on resource or safety.

weather restricts staff availability and to ensure a constant presence on the road network.

Airport Community

- Ensure all actions required to maintain safe operations are completed e.g. Removal of unnecessary equipment from apron areas, increased chock availability, consider staff and vehicle resources

Weather State 3	Adverse weather in 12hr forecast
	
	• AODM to use discretion to declare based on other disruptive weather deemed to be potentially disruptive
		MACH
		• ADM to continually liaise with AODM for possible status change.
		• ADM to update IMT Lead and assess IMT activation against Escalation Criteria Matrix.
		
		Airside
		• AODM will activate personnel call-out to initiate response teams to manage and mitigate disruption, including airfield, apron, and control functions across all weather conditions.
		• AODM to ensure vehicles and weather equipment are in preparatory state for mobilisation
		• AODM to re-check that adequate stock and materials for aircraft and apron operations are available through relevant providers and Asset Engineering (including storage and distribution resources) to support operations in all weather conditions.
		• Increase surface condition and safety audits to ensure all airside areas continue to remain safe
		
		Landside
		• LDM to activate external provider disruptive weather personnel and equipment to support operations for adverse weather conditions.
		  ○ Vehicles and equipment activated
		  ○ Consumable stock and vehicles restocked, if required
		• LDM to activate personnel call out to provide enhanced Landside presence (including the Car Park Control Room) and ensure strategic staff deployment
		
		Airport Community
			MACH
			• ADM receives update from AODM and updates IMT Lead.
			• ADM schedules and chairs Airport community conference calls.
			• AFL to communicate information via Community App banner (Disruptive weather warning due to adverse weather conditions over the next 12hr period between XXX times)
			
			Airside
			• AODM to update ADM, EBDM, ATCWM, Fire Chief as required.
			
			Landside
			• LDM provides regular updates to ADM on landside status as required
			• LDM continues to chair Landside Operations Incident Management Hub
			• LDM to update MAG FM and S&B service delivery manager
			• Update the Landside Events group
			
			Airport Community
			• Update on available resource at Community calls.
			• Report any issues on resource or safety.

- Ensure all resources are available.
- Ensure all timings on aircraft movements are up to date through the airport AODB systems, including Chroma and ACSIP

Weather State 4	Adverse weather evident	MACH
		• ADM to continually liaise with AODM for possible status change.
		• ADM to update IMT Lead and assess IMT activation against Escalation Criteria Matrix.
		
		Airside
		• Personnel are allocated to adverse weather equipment and duties
		• Continue to update IMT with airside activity
		• Airside disruptive weather treatment in progress
		
		Landside
		• LDM to activate external provider disruptive weather personnel and equipment to support operations for adverse weather condition
		  ○ Vehicles and equipment activated
		  ○ Consumable stock and vehicles restocked, if required
		• LDM will instruct the Landside Operations team to commence surface treatment operations
		• LDM to obtain status information on local road network and liaise with ADM
		• If a roadway or car park becomes unsafe due to weather conditions, complete a risk assessment and restrict access where safe to do so. Engage the Airport Fire Service to assess the situation and determine if they can provide support, such as water removal or other mitigation measures.
		• If a car park cannot be accessed due to bad weather, a Traffic Marshal will be positioned at the car park entrance to redirect guests / staff to the alternative car park
		• LDM to strategically deploy personnel to provide adequate cover for the Landside operation
			MACH
			• ADM receives update from AODM and updates IMT Lead.
			• ADM schedules and chairs Airport community conference calls.
			• AFL to communicate information via Community App banner (Disruptive weather due to adverse weather conditions expected between [TIME] – [TIME])
			
			Airside
			• AODM to update ADM, EBDM, ATCWM, Fire Chief as required.
			
			Landside
			• LDM provides regular updates to ADM on landside status
			• LDM to update MAG FM and S&B service delivery manager and update the Landside Events group
			
			Airport Community
			• Update on available resource at Community calls.
			• Report any issues on resource or safety.

		• If flights are cancelled, the LDM will notify the MAN Customer Communications Team to issue an email to all car park bookings outlining any known disruption and potential options. <u>Airport Community</u> • Ensure all resources are available. • Ensure all timings on aircraft movements are up to date through the airport AODB systems, including Chroma and ACSIP	
Weather State 5	Significant disruptive weather occurring	<u>MACH</u> • Community communications managed by IMC / MACH. • ADM to continually liaise with AODM for possible status change. <u>Airside</u> • Airside weather management/treatment in progress. • Continue to update IMT with airside activity. • Liaise with ATC to determine if flow rates are required. <u>Landside</u> • Landside disruptive weather treatment in progress. • If a car park cannot be accessed due to bad weather, a Traffic Marshal will be positioned at the car park entrance to redirect guests / staff to the alternative car park. • LDM to strategically deploy personnel to provide adequate cover for the Landside operation. <u>Airport Community</u> • Ensure all resources are available. • Ensure all timings on aircraft movements are up to date through the airport AODB systems, including Chroma and ACSIP	<u>MACH</u> • Airport community conference call (on Teams), chaired by ADM. • ADM receives update from AODM and updates community • AFL to communicate information via Community App banner (Major disruption due adverse weather conditions expected/Flow rate of XX from XX until XX) <u>Airside</u> • AODM to update ADM, EBDM, ATCWM, Fire Chief as required. <u>Landside</u> • LDM to update MAG FM and S&B service delivery manager • LDM to chair Landside Operations Incident Management Hub. • Update the Landside Events group. <u>Airport Community</u> • Update on available resource at Community calls. • Report any issues on resource or safety.

Weather state 6	Operational suspension due to adverse weather*	MACH • Community communications managed by IMC / MACH. • ADM to continually liaise with AODM for possible status change. Airside • Airside disruptive weather /management treatment in progress Landside • LDM to provide IMC with status information re. Airport and local road network plus motorways • Landside disruptive weather treatment in progress • If a car park cannot be accessed due to bad weather, a Traffic Marshal will be positioned at the car park entrance to redirect guests / staff to the alternative car park LDM will be responsible for deploying personnel to provide adequate cover for the Landside operation Airport Community • Ensure all resources are available. • Ensure all timings on aircraft movements are up to date through the airport AODB systems, including Chroma and ACSIP	MACH • Airport community conference call (on Teams), chaired by ADM. • ADM receives update from AODM and updates community • AFL to communicate information via Community App banner (Major disruption due to adverse weather conditions. Flow rate of XX in use. Expected time of reopening XX) Airside • AODM to update ADM, EBDM, ATCWM, Fire Chief as required. Landside • LDM to update MAG FM and S&B service delivery manager and update the Landside Events group • LDM continues to chair Landside Operations Incident Management Hub Airport Community • Update on available resource at Community calls. • Report any issues on resource or safety.

* This status may be initiated outside of the prescribed sequence on occasions whereby weather conditions may not be affecting Aerodrome infrastructure and/or services but the ability to clear aircraft of contamination is compromised, resulting in delays and disruption. This may occur outside of weather states. Aircraft de-icing providers are required to liaise directly with the AODM and raise any concerns over capability against forecast predictions. Initiation will be made via the Airfield Operations Duty Manager and communicated via the Community App.

4.1 Downgrading of WS

To ensure the community remain up to date with conditions, the AODM must ensure the ADM is informed should the weather situation improve, the MACH will then issue a communication via the Airport Community via the Community App.

For example, snowfall has ceased, and airport operations are normal a message should be issued via the Community App confirming the most relevant weather state (appreciating there may be a further adverse weather forecast. The message should include a plain English statement of the latest position.)

5. Incident Management Centre (IMC)

The IMC is responsible for the airport-wide response strategy and managing overall communications with internal and external stakeholders. Access to the IMC will be restricted to MA personnel who have been appointed to carry out a substantive management or supporting role within the IMC Organisation Structure. The IMC will be chaired by the ADM / IMT Manager.

5.1 Activation

Throughout declared incidents of adverse weather and under their discretion, the ADM will update the IMT Lead and assess IMT activation against Escalation Criteria Matrix as per the process outlined within the MAN Incident Management Handbook.

6. Community Briefings

When the IMC is active, all requests about airport disruption should be via the IMC. The contact telephone numbers for IMC will be promulgated to airport users via the Community App or email where applicable. During periods of prolonged snowfall or severe adverse conditions, the IMC will establish a schedule of community briefing calls via Teams/Conference calls, details of which will be communicated via email to established email distribution lists. Further details on the community call process can be found within the Incident Management Handbook.

6.1 Community Conference Calls

Conference calls are recognised as an effective method to:

- Provide detailed updates to the community of specific risk periods to aid planning
- Discuss potential operational risks and prepare appropriate responses ahead of adverse weather

The ADM (or appropriate deputy) shall chair the community conference calls and hold a community conference call at their discretion. It is recognised that there is likely to be an optimum time to hold such a call, once a reasonable likelihood of adverse weather is forecast, and at a time which will provide the most value to the community.

The following postholders shall ensure they are present on the call to provide an update to the community on their respective areas as required:

- IMT Lead — Incident Management Team
- AODM — Airfield operation
- LDM — Landside operation (car parks, road network, bussing and forecourts)
- EBDM — Asset availability/serviceability (airfield and terminals)
- CEDM — Terminal operation
- SDM — Security operation
- All members of the Airport Community

StormGeo will, wherever possible, provide a forecast on each call to aid decision-making and highlight time periods with a key risk of disruption.

The ADM will follow community conference calls with an email update detailing key points covered and operational readiness of key areas.

When adverse weather is expected within 12 hours and circumstances allow, the ADM will chair the community call if deemed necessary. The AODM will provide an overview of the weather forecast, and procedures for the mobilisation and management of the forecast weather. The ADM in collaboration with the AODM, is responsible for ensuring the appropriate communications channels are established and monitored in readiness for disruption.

Surface Inspection Regime

When winter conditions are present inspections of airport (airside and landside) surfaces will take place. These inspections will take place at regular intervals and logs will be kept. Whilst it is not practicable to carry out a continuous monitoring of all areas, the programme of inspections is determined to be suitable for aiming to keep as many of the accessible surfaces as possible free from contaminants.

Any areas of concern that are identified during the airfield inspection process will be relayed to Snowman Aprons for clearing/treatment action to take place. If necessary, areas will be closed to pedestrians or traffic until treatment has taken place. Inspection frequency may be altered at the discretion of the Snowman Airfield if conditions are rapidly changing.

6.2 Customer Notification

- MAN Customer Communications Team will be advised by ADM to update social media channels with pre-notification of predicted adverse weather at the airport. If this notification occurs, OOH, the on-duty emergency press officer will be contacted to update all contact channels.
- CAVU are to be advised by MAN Customer Communications Team (or duty press officer, OOH) to update the notification ticker on MAN website with notification that we are expecting adverse weather at the airport.
- When deemed necessary, the LDM is to arrange distribution via email of a 'Guidance regarding adverse weather conditions' to all customers with car park bookings arriving within the next 24 hours. This email will advise all upcoming guests to expect adverse weather conditions at the airport, to allocate additional time to travel to the airport and to take additional care upon arrival to the site.

6.3 Liaison with Highways Agency and Adjoining Highways Authorities

During periods of severe weather – particularly heavy snowfall – contact will be maintained with both the Highways England (HA), Transport for Greater Manchester (TfGM), Greater Manchester Police

(GMP) and adjoining highway authorities regarding the condition and availability of the road network in the Greater Manchester region and beyond.

GMP Airport Section Control Room	0161 856 0250
Highways England Regional Control Centre number	01925 298 083
Highways England customer contact centre	0300 123 5000
TfGM Control Room	0161 244 1893

7. Ice Conditions (including aircraft de-icing plan)

7.1 De-icing Provider Responsibilities

All de-icing providers must adhere to the below when de-icing aircraft

- Contact the AODM and attend or dial into a conference call at their request.
- Maintain attendance until such time as the specific winter threat has passed (or as directed by the AODM).
- Liaise with AODM and provide regular operational performance updates including any operational difficulties ahead of time.
- Communicate any change to status or operational capability.
- ERZT and EDIT times are to be entered into ACISP

7.2 Structure and implementation of response plans

The AODM shall use StormGeo & Vaisala to determine the presence of ice conditions in the forecast.

As frost or ice can form quickly all airport users should be alert to the presence of ice hazards and take appropriate care.

The accountable postholders shall respond in accordance with the weather state, putting into action plans and procedures to effectively mitigate the risk that ice conditions can present.

7.3 Landside Procedures

LDM shall activate the Mitie response. LDM will instruct the Landside Operations team to commence surface treatment operations of the CTOC, MA road network and associated Car Parks. The LDM will activate the personnel call out to provide enhanced landside presence (including the Control Room) and ensure strategic staff deployment.

7.3.1 Road Network

Ensure surrounding MCC road network is clear, then Ringway Road, Palma Avenue, roadway between A1 & A2 car parks (Woodhouse Lane). The specific road network responsibilities can be seen in Appendix 7.

7.3.2 Car Parks

- If a car park cannot be accessed due to ice, a Traffic Marshal will need to be positioned at the car park to intercept guests/staff and direct to the designated alternative car park
- MAN Customer Communications Team are to be alerted of sending out a disruption warning email to car park bookings.
- The alternative car park list is listed in Appendix 6.
- The priority list for Car Parks forms part of the gritting plan as agreed by the LDM and MAG FM.

7.4 Airside Procedures

7.4.1 Critical Frost Cover

During forecast weather conditions that fall outside of a threat of snow, that are likely to require prolonged and simultaneous use of all pavement surface treating vehicles, the AODM will activate a 'Critical Frost Cover' that will be initiated via Engineering and Baggage Duty Manager.

7.4.2 Stand De-icing Granules

Yellow self-help bins containing solid de-icing granules are provided on all apron areas for the purpose of enabling treatment of specific ice or snow hazards by all airside staff. The solid de-icing granules are permitted for use on Apron parking stands and within the vicinity of aircraft. Protective gloves should always be used when handling granules/scoops. Yellow bins containing rock salt will be provided in T2 west service yard where the drainage does not enter the airside containment system.

7.5 Environmental Considerations

7.5.1 Drainage System Requirements

Prior to the instigation of anti-icing procedures in the airside environment, the AODM should obtain positive confirmation from the EBDM that the drainage system has been placed into 'containment' in the relevant Catchments Areas.

This is to prevent anti-icing materials from contaminating local watercourses, a mandatory requirement of the Environment Agency. During the winter months, following a review of the midday weather forecast, the AODM should advise the EBDM of the likelihood of anti-icing action.

7.5.2 Runway 05R/23L

It should be noted that the grass areas surrounding the final 750 metres of Runway 23L (i.e. west of the drainage lagoons) cannot be contained. Therefore, brushing contaminated snow onto the grass should be avoided wherever possible.

7.5.3 Western Maintenance Area (Fairey's Apron)

Similarly, Fairey's Apron cannot be contained, and therefore the distribution of anti-icing materials is not permitted in this area.

West side of slot drain (non-containment)

- No treatment permitted exception to rock salt as per 6.3 below.

East side of slot drain (containment)

- No treatment is preferred and should be avoided where possible.
- Prill can be deployed when there is operational justification.

However, a moderate distribution of rock salt along pedestrian walkways is acceptable, subject to tenants being notified of this action in advance. The agents concerned are:

- The Hut Group (THG)
- Jet2 Engineering

7.6 Airfield Anti-icing Strategy

Whenever ice conditions are likely the AODM should arrange for pre-emptive airfield anti-icing to prevent the accretion of ice. The following factors should be considered when taking a decision to anti-ice.

- The amount of surface water present on the manoeuvring area and the potential for anti-icing chemicals to become diluted
- Actual and forecast surface temperatures
- The current weather, and likelihood of precipitation in the form of sleet/rain in advance of snowfall
- Practicality of undertaking anti-icing from an operational perspective
- The application rate at which anti-icing chemicals should be applied
- During peak risk periods, stock levels will be replenished to remain above 200,000 litres of Safegrip ECO2 media. However, should a significant risk of prolonged snowfall and/or ice

be forecast, the AODM will increase on site stock levels to a maximum of 500,000 litres. Stock capacity will provide an estimated capacity for continued operations of seven days.

Engineering Operations should be instructed to treat the full airfield, with particular attention being paid to treating taxiway turns and intersections where it is likely an aircraft will deviate from the central portion of the taxiway during any ground swing or taxi manoeuvre.
Early treatment of non-critical areas (i.e. the Perimeter Road) with Rock Salt is recommended.

Manufacturer guidelines will be used as a guide for determining the application rates as they can vary according to conditions.
The AODM will remain alert to the weather conditions and the extent of any precipitation post anti-icing in order that an assessment of the likely holdover time can be made. This information will be passed across subsequent shifts to ensure well balanced decisions can be taken over a period of several days.

Runway Anti-icing Media Application Rates

	Ground temp. 0 to -5°C	Ground temp. -5 to -10°C	Ground temp. Below -10°C
Frost/Rime	5-7 g/m^2	7-9 g/m^2	10 g/m^2
Black Ice	8-12 g/m^2	17-20 g/m^2	23-26 g/m^2
Packed snow/ice, depth <10mm	10-14 g/m^2	19-23 g/m^2	29-32 g/m^2
Packed snow/ice, depth >10mm	16-24 g/m^2	29-35 g/m^2	44-48 g/m^2

Anti-Icing

Wet surface, temperature expected to fall below 0°C	6-8 g/m^2
Expected freezing rain	10-15 g/m^2

7.7 Landside Snow Clearance Procedures

7.7.1 Organisation

- LDM to activate Mitie disruptive weather personnel and equipment; Vehicles and equipment activated. Checks for adequate stock for both grit bins and vehicles.
- LDM will instruct the Landside Operations team to commence gritting if required on the CTOC, MA road network (See Appendix 7) for specific road responsibilities) and associated Car Parks.

- LDM to activate personnel call out to provide enhanced Landside presence (including the Control Room) and ensure strategic staff deployment.
- LDM to alert the MAN Customer Communications Team to issue a disruption warning to all car park bookings.
- Consideration will be taken with regards to if car parks or forecourts have to be closed and what the alternatives would be (see Appendix 6).

7.7.2 Clearance Priorities

The following areas are prioritised for clearance.

- Footpaths, beginning with terminals working outwards of the estate
- 4 vehicles focusing on the road network (including forecourts and GTI), each prioritising the MA landside estate as per the following areas
    - T1
    - T2
    - T3
    - Up ramps of T1 MSCP/T1 Shorty Say/Mid-Stay/T2 East/T2 West
    - All on site car parks
    - Off-site car parks
    - Western Maintenance

- If a car park cannot be accessed due to snow, a Traffic Marshal will need to be positioned at the car park to intercept guests / staff and direct to the designated alternative car park.
- CAVU are to be alerted of sending out a disruption warning letter to car park bookings. OOH the LDM will be responsible for issuing the letter.
- The alternative car park list is listed in Appendix 6.
- If the Forecourts are closed the alternatives are:
    - T1 Lower Forecourt closed – use T1 Upper Forecourt, followed by T1 Short Stay
    - T1 Upper Forecourt closed – use T1 Lower Forecourt, followed by T1 Short Stay
    - T2 Upper Forecourt closed – use T2 Lower Forecourt, followed by T2 West MSCP
    - T3 Forecourt closed – use T1 Lower Forecourt, followed by T3 MSCP
    - GTI closed – use GTI bays (if TFGM agree) if not use Palma Avenue

7.8 Airside Snow Clearance Procedures

7.8.1 Initiation and Notification

The presence of even small accumulations of wet snow can significantly affect the performance of aircraft and vehicles. The clearance of surfaces will start as soon as contamination starts to accumulate on surfaces.

Airfield surface inspections will be reported in the Global Reporting Format by the Airfield Operations to ATC, for promulgation through to AIS and ATIS, with Snowtams issued when required. Pilots will use this information to determine if the surface state permits them to land safely. ATC are responsible for ensuring accurate runway surface states are passed to flight crews.

ATC are responsible for ensuring SNOWTAMS are updated or cancelled as and when necessary.

Surface state reports will include the coverage, type(s) and depth of contaminant present in each third of the runway. The RCR will be passed to pilots, who will confirm if they can accept the current RCR or need to hold. The decision to close a runway will account for the need to remove contaminants from the runway, taxiway and road surfaces in a manner which minimises operational impact, but considers the risk that any accumulations of slush, standing water or wet snow may freeze if left untreated. The height and location of any snowbanks will be reported as soon as these are likely to affect safe manoeuvring by the most critical aircraft operating.

Measurement and the reporting of surface conditions will be carried out frequently during changing conditions to ensure pilots are in receipt of an accurate runway surface state report. This may require increased gaps in the traffic sequence to facilitate access to the runway by Airfield Operations personnel.

Airside forward holding and mobilisation points for the snow fleet will be managed throughout the Winter Season 1st September – 31st March. The AODM and EBDM will coordinate the use of the locations and manage access and egress for the snow fleet users.

7.8.2 Organisation

Airfield Operations will hold a telephone briefing with Airfield Control to discuss the stand utilisation determine the priorities for inspecting, clearing and treating stands. The Snow EBDM will allocate personnel to snow clearing teams and equipment.

All personnel standing by for snow-clearing duties will remain on standby on site in anticipation of a request initiate snow clearance operations. Should the forecast allow, the AODM in consultation with

the EBDM will jointly have the authority to release personnel, called out for the purpose of snow clearing, to conduct other duties. Personnel must remain on site and contactable for the duration of the shift, to revert to snow clearance duties as soon as possible should the need arise.

7.8.2 A) Manoeuvring Area Clearance Priorities

Priority 1

- Runway 05L/23R, ensuring centreline lights remain visible.
- Runway links at A1, J1
- Taxiways A, B, K, J, P, dual taxiway centrelines D and E
- Taxiways Z, NA, NB, G
- Access route to Runway 05L/23R from South Fire station via RET VD.
- Stand 61 Ground Equipment Assembly Point
- Emergency access to Fire Stations and Crash Gates (1, 13, 16 & 20)
- Access to Emergency RVP1 and Northside Fire Station
- Stands according to demand

Priority 2

- Taxiway ND
- CTAC
- JF, R
- Key airside roads and taxiway crossings, incl. T2 Bussing Lounge access and Aether/Signature

Priority 3

- Taxiways C, JE, L, NC
- Access tracks to Crash Gates (14 & 15) in Bollin Valley
- T2 service yard
- Runway 05R/23L
- Runway 05R/23L access/exit links T, U
- Access to Emergency RVP South

Priority 4

- Taxiways VA, VB, VC Taxiways S, V and W, Y if required
- Runway crossings at DZ/D, FZ/F, HZ/H
- Emergency access to Crash gates (6, 7, 8, 9 and 10)
- Access roads to Sub Stations
- Engine Test Bay – cleared if demand exists
- Runway 05L/23R access/exit links at AF, AG.
- Airfield perimeter track to South Fire station and Pump Station access
- Cargo Lane to West Gate Security
- Maintenance Hangar areas, Signature Aviation Apron and ancillary areas

Due to specific operating conditions and movements rates, a decision may be made to deviate from the priorities and direct resources to areas that may provide greater tactical opportunities. MA will endeavour to clear taxiways to full pavement width, although it is possible that some operational taxiways will remain contaminated with snow as the clearing operation continues. Where contamination is such that AGL is not visible to pilots, or the surfaces are contaminated with ice, the taxiway will remain closed until such time they have been cleared and treated.

Priority will also be diverted to ensuring pavement areas between the taxiway and apron stands are clear of snow and ice to improve traction for tugs conducting pushback and towing manoeuvres.
Storage of cleared snow on grass areas is avoided if possible and is positively swept into drainage systems that collect run-off and contaminants for containment.

7.8.2 B) Apron Clearance Priorities

The AODM will coordinate stand clearance priorities with Airfield Control based on timings showing within the Airport Operating Database. These will be communicated to the stand clearance team and glycol recovery vehicles to maintain an efficient clearance and safe operation. The details below show where snow will be moved from and to and should not be confused with order of priority.

Snow Movement Plan: Terminal 1

- Stands 1-15 (Pier B North) - Brush to Stand 15

- Stands 2-12 (Pier B South) - Due to construction area between TWY's Delta & Lima, an appropriate stand needs to be determined by Snowman Apron
- Stands 21 to 31 (Pier C South) - Due to construction area between TWY's Delta & Lima, an appropriate stand needs to be determined by Snowman Apron
- Stands 22-32 (Pier C North) - Brush to Stand 28 & 201
- Stands 61-64 - Due to construction area between TWY's Delta & Lima, an appropriate stand needs to be determined by Snowman Apron
- Taxiway JE - Brush to Stand 15
- Taxiway L - Due to construction area between TWY's Delta & Lima, an appropriate stand needs to be determined by Snowman Apron
- Taxiway R - Brush to Stand 28 & 201

<u>Snow Movement Plan: Terminal 2</u>

- Stands 101-113 - Brush to Stand 901
- Stands 903-917 - Brush to Stand 919
- Stands 106-116 - Brush to Stand 104
- Stands 203-215 - Brush to Stand 104
- Stands 204-214 - Brush to Stand 81
- Stands 301-308 - Brush to Stand 301
- Stands 70-73 - Brush to Stand 81
- Stands 929-927 - Brush to Stand 925
- Stands 80, 81 & 233 - Brush to Stand 81
- Taxiway NA1/2 - Brush to Stand 104
- Taxiway NB - Brush to Stand 81
- Taxiway NC - Brush to Stand 81
- Taxiway ND3-ND2 - Brush to Stand 301
- Taxiway R - Brush to Stand 301
- Taxiway D4-D6 & E4-E6 - Brush to Non-load bearing P/L
- Taxiway D7-D8 & E7-E8 - Brush to Stand 81
- Taxiway E9-E10 - Brush to Stand 74
- Taxiway E10-Z1 - Brush to Stand 925

- Taxiway Z1-Z3 (blue & orange) - Brush to Stand 919
- Taxiway Z3 (blue & orange) - Brush to Stand 901

Snow Movement Plan: Terminal 3

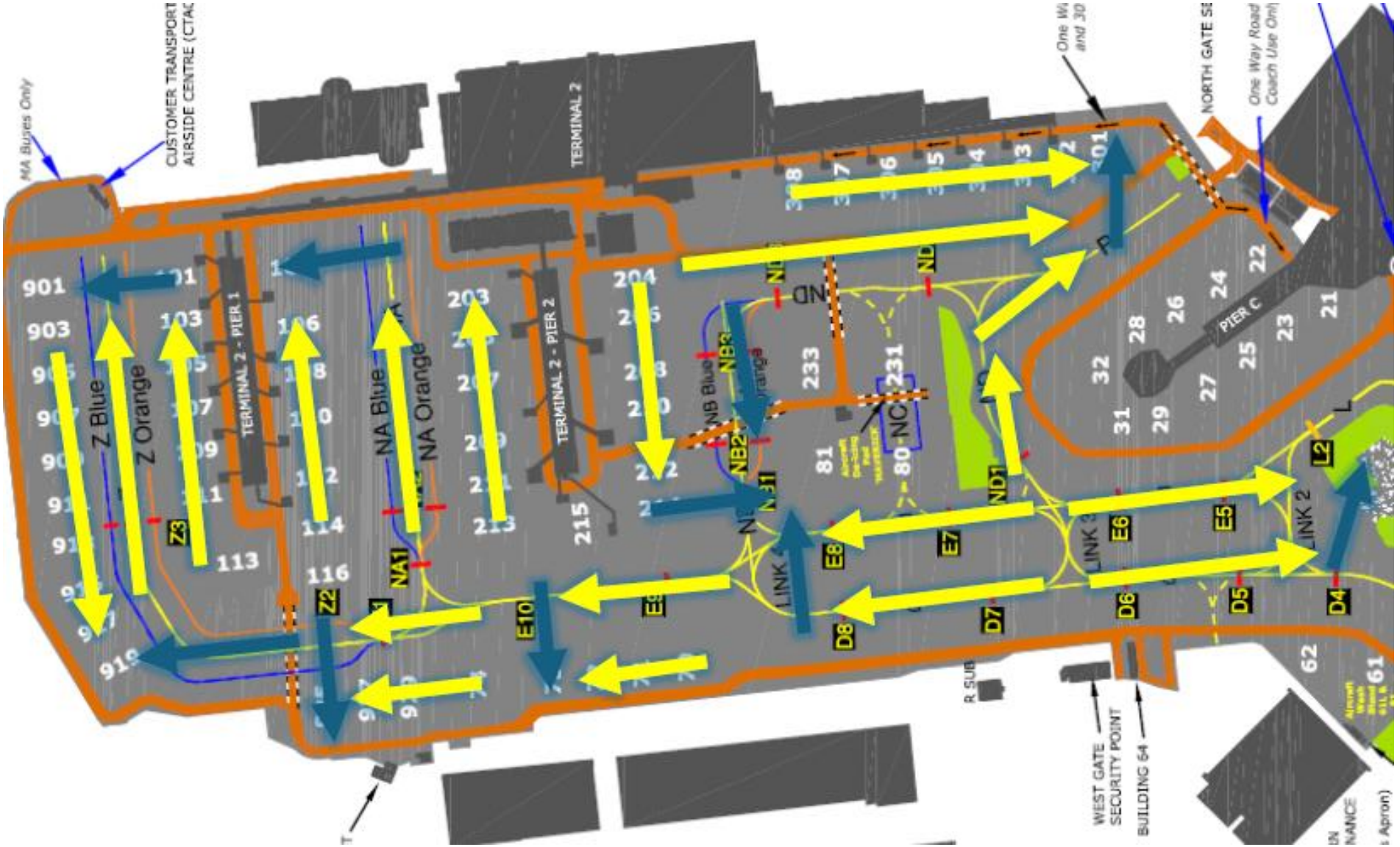
- Stands 47-58 - Brush to Stand 50
- Stands 41-44 - Brush to Stand 41
- Stands 16-18 - Brush to Stand 41
- Taxiway G - Brush to Stand 58
- Taxiway JF - Brush to Stand 41

Snow Movement Plan: Other Areas

- Stands 66-74 - Brush to Stand 71
- Stands 72-929 - Brush to Stand 71
- Stands 901-917 - Brush to Stand 901
- Signature Apron - Brush to ROMPA
- Engine Test Bay - As required
- WMA - As required

In the event a severe snowfall scenario is forecast, snow dump locations will be dynamically managed by the AODM in coordination with Airfield Control to ensure stand capacity is maximised.

The effected stands will remain closed until such time a natural thaw occurs, or snow dumps can be moved to an alternative storage location. These areas may be adjusted according to the severity and longevity of snowfall. R&M Developments can also be contracted to remove snow from the Airfield.



7.8.2 C) Stand Clearance Access

Glycol recovery vehicles are available through the winter period to assist in the clearance of excess aircraft de – icing product from stands. The AODM will manage the deployment of these throughout the winter season

During heavy or prolonged snowfall, it may be necessary to clear occupied stands of night stopping aircraft. The most effective method to achieve this is to remove parked aircraft from a row of adjacent stands by pushing them into the Taxiway to allow for a complete sweep and treatment of all stands within a given area. Once completed, aircraft will be towed back onto the treated stands.

This strategy would only be employed when operational conditions are met, and adequate GHA resources are available.
Where practicable, aircraft parking stands will be cleared of snow after departure. Snowman Apron will be appointed to specifically manage the clearance and treatment of apron parking stands in accordance with stand allocation plans and airfield capacity needs.

All stands will be checked for suitability for use in advance of aircraft arrival and additional treatment may take place before the aircraft is parked. Where steps are to be used, a clear area must be provided to allow safe disembarkation of passengers along marked walkways or to waiting bus transport. A supply of de-icing granules will be provided at the head of each stand therefore enabling Handling Agents and Service Partners to treat isolated patches of ice and create safe passenger routes. As far as reasonably practicable, stands will be cleared to full width for the maximum size aircraft, therefore minimising hazards during aircraft turnaround.

As far as possible, snow will be brushed from the head of stand, towards the rear of stand and then ploughed forward to a designated ‘snow dump’. The purpose of this strategy is to minimise the impact of snowbanks on the movement of airbridges, maintain access to FEGP units and equipment parking areas.

7.8.3 Location of Snow Fleet Equipment

Stand 22 is the designated stand for snow fleet equipment during winter operations.

8. Airport Snow Closure Policy (SNOCLO)

8.1 Runways – Possession

Whilst snow clearance is in progress on a runway, increased spacing may be required to allow time for the winter vehicles to access the runway between movements. If conditions deteriorate beyond the acceptable aircraft operating limits, the runway will be closed by ATC and will remain under the control of Snowman Airfield. The remainder of the airfield manoeuvring area will continue to be under ATC control. The runway will remain closed until the RCR becomes acceptable for aircraft performance.

During a snow closures, MAFRS may deploy personnel to undertake snow clearing duties and therefore the MAFRS Fire Chief will liaise with the AODM to determine the available Fire Category before allowing operations to continue.

Snowman Airfield will adopt the following procedure when reinstating a runway for operational use under the control of ATC.

- Update the Runway Condition Code
- Ensure that all snow-clearing vehicles have vacated the runway.
- Undertake a runway inspection
- Confirm that an appropriate level of Fire Category is available.
- Subject to the schedule of movements (i.e. the maximum size of aircraft expected), the AODM and RFFS Fire Chief may elect to declare a reduced Fire Category to allow a limited number of RFFS personnel to continue snow-clearing duties. Any reduction in Fire Category must be promulgated to operators via RTF and NOTAM. During snow (and for consideration) the RFFS may be restricted to responding to domestic and medical calls due to access into areas which are yet to be cleared of snow.

Experience has demonstrated that a period of approximately 90 minutes is required to clear and anti-ice each runway when conditions deteriorate beyond aircraft use. In these circumstances a SNOCLO message will be issued by SNOWTAM & NOTAM with an expected duration of 90 minutes

The time of any SNOCLO will be notified as far in advance as possible to enable operators to manage passenger communications, aircraft procedures and de-icing activities in the most efficient manner. Flight operations may continue until such time that the runway is formally closed for snow clearance however once precipitation has started, continued operations will necessitate frequent inspections of the runway to ensure accurate surface state reports are available to pilots. Where possible, advanced notifications and coordination will take place between Airfield Operations and ATC to prioritise and manage any imminent movements.

Landside areas and roads will also be treated during this closure time; teams will therefore use the procedures in section 7.2 of this plan to manage the clearance of snow across the estate.

This will be accompanied by a message to the Community App and displayed on the Airport Operating Database System. During or after heavy snowfall, a longer duration of snow closure may be necessary. If circumstances dictate, Airfield Operations will consider the need to extend the estimated closure duration. This decision will be agreed between the AODM and IMC (if active) who will communicate this extension with the LDM and airport community via Community App. The 'SNOCLO Matrix' details any estimated period of airfield closure dependant on the depth of snow accumulation present on airfield surfaces.

Snow Accumulation	Estimated Duration of Airfield Closure
6mm – 10mm	2 Hours 30 Minutes
11mm – 20mm	3 Hours
20mm – 100mm	Approximately 4 Hours 30 Minutes
100mm – 200mm	Approximately 6 Hours
200mm +	Approximately 6 - 12 +

8.2 Runways – Return to Service Procedure

A runway will only be returned to operational service once the Runway Condition Code permits aircraft operations. Airfield Operations will aim to provide a minimum of 50 minutes notice to all ground handling agents of the runway returning to service and notification will be via the Airport Community App.

Implementation communication will be sent via the Community App & Email to the T1, T2 and T3 External Stakeholders distribution lists. A CHROMA banner will be updated where possible and a conference call may be held by IMC with the AODM/ADM. This communication should be sent at least 1hr prior to reinstatement of operations (where possible).

Snowman Airfield will update ADM/IMT on

- Advise on the current airfield status.
- Update with expected re-opening times.
- Advise of any operational restrictions post opening

The following information is to be promulgated as a minimum standard by IMC following an update of the following by the AODM.

Example:

"EGCC Winter Ops: 23R SRW to open 1300z. Outbound rate 10ph.

Airline Operators

- Continue to ensure accurate TOBT times for all flights.

GHA

- Continue to ensure accurate TOBT times for all flights.

De-icing Providers

- Instruction to GHA and de-icing providers to continue update TOBT and ERZT times
- Expected runway opening time
- Estimated outbound flow rate (if appropriate – based upon limiting factors i.e. average de-ice time/number of de-ice rigs available)

NATS

- Advise on any network restrictions.
- Advise any change to tactical flow rates applied.

Airfield Operations will be ultimately responsible for determining whether a stand is "serviceable" and available for use by aircraft. A serviceable stand is one which has been cleared of snow and ice contamination and has been appropriately treated with ant-icing chemicals to prevent further ice formation. The cleared area should account for the footprint of the maximum size aircraft and the areas used by Ground Service Equipment during the turnaround process. Safe access around the aircraft, and its wingtips will be maintained as far as possible. Isolated patches of snow and ice may be present and where possible these areas will be treated using the granular de-icing products available on each stand. It must however be noted that it is not possible to fully clear a stand which is already occupied by a

parked aircraft and therefore personnel must be extra cautious when preparing such aircraft for departure.

8.3 Diversions and Capacity Management

Subject to availability, diverts can be accepted. Priority will normally be given to commercial operations, over Military and private flights. For more information on diversions, please refer to EGCC-I-AOPS-037 – ASI 037 – Diversion Policy.

To protect our normal schedule of flights, Airfield Operations will closely monitor the operational capability of UK Airports and determine the number of parking stands available for diversionary aircraft. This will be in addition to Plan 39.

The ADM will manage the Diversion plan, devolved to IMC if initiated and the AODM will set an "inbound diversion cap" and notify ATC of any capacity limitations. The "cap" is intended to identify the number of inbound aircraft which can be accepted without impacting upon stand allocation plans associated with our normal schedule of flights.

In the event of significant disruption and limited availability of parking stands, a decision may be taken not to accept inbound diversions. Such decisions will be promulgated by NOTAM, Community App and the AODB.

8.4 ATC Flow Management

During periods of reduced airfield capacity and adverse weather, it may be necessary to implement 'ATC flow control' measures to ensure the number of arriving aircraft does not exceed airfield capacity. This will usually occur when the number of available parking stands is reduced due to the presence of winter contaminants, or runway capacity is reduced due to the availability of associated taxiway infrastructure. In such cases, the level of flow to be implemented will be determined by the AODM in conjunction with the ATC Watch Manager and IMC, if active.

ATC flow measures will not be implemented if the available airfield capacity exceeds demand. ATC do not impose outbound flow restrictions; however, an expected outbound rate will be calculated by the AODM based on any known restrictive parameters such as weather avoidance, ATC network restriction or de-icing capabilities. This figure will be considered when applying any tactical inbound flow

restrictions. Flow measures will be notified to the airport community via the Community App and/or Conference calls.

9. High Wind Procedures

9.1 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

9.2 Notification

The Met Office issue Strong Wind and Gale Warnings direct to the Airfield Operations Duty Manager (AODM). The AODM will also utilise information provided by StormGeo, who provide bespoke meteorological services to Manchester Airport.

9.3 Landside Procedures

The LDM is to instruct the Traffic Marshall team to ensure the following is done prior to the wind arriving.

- Lower any VMS matrix signs
- Lay flat or sandbag any none fixed A Frames*
- Check and secure any temporary fencing or hoardings

If prolonged strong winds are expected S&B will need to check if each device has wind deflectors installed to prevent muffled calls, potentially additional workload for S&B. If we have prior notice of bad weather, we will need to contact S&B Service Delivery manager to ensure they have adequate engineers on site. In some extreme cases barriers may need to be removed if they pose a threat to guests / property. If possible, the barrier area will be cordoned off or a Traffic Marshal placed in position to ensure no access permitted in error.

Sandbags can be obtained via R&M Developments for weighing down signs and barriers only. Mark Henry 07831 120156. Daytime hrs only and these are chargeable so you must only request the amount we need.

The LDM will ensure issues affecting the road network or issues that could cause potential disruption to the Landside Operation are reported accordingly to the CPOM, CTTM, ADM and the CPTM.

9.4 Airside Procedures

The AODM will inform the MACH to issue a Community App message and arrange for the same warning to appear on the message bar of AODB.

The AODM is responsible for:

- Escalating the Weather Status to implement the 'internal' notification procedure.
- Contacting all ground handling companies via telephone requesting that all equipment is securely stowed.
- Instructing the Airfield Safety & Compliance Officers (ASCO) to begin inspections of the apron areas to remove any loose items of FOD that could be blown onto the manoeuvring areas.
- Instructing the Airfield Safety & Compliance Officers (ASCO) to begin inspections of apron equipment to ensure that it 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 landside areas close to the critical part boundary and all contractors operating in airside areas, take appropriate action to secure equipment and materials, as well as lowering cranes etc when appropriate.
- Instructing the Airfield Safety & Compliance Officers (ASCO) to begin 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.
- Distribution of storm chocks and the request of the ground handling community.
- Ensuring service partners are made aware of warnings via a brief from the ASCO team.

Handling Agents and other ramp staff are responsible for:

- Checking Unit Loading Devices (ULDs) that are their responsibility and that they are correctly racked on the racking stations provided with stops raised. Stowing ULD's on Weldwork Trailers

will not normally be acceptable, unless within the baggage halls. Where possible towing empty ULD containers along the apron road systems should be avoided during strong winds

- Where ULD's cannot be stored on the airfield racking system, rope should be obtained from Airfield Operations, and ULD's secured together in a designated place identified by the AODM.
- Aircraft steps must be fully lowered and, where possible, turned into wind with stabilisers down and brakes ON.
- Ensure that all covers on trucks and trailers are lashed down.
- Check that all equipment is correctly parked in designated equipment parking areas and secured, completing checks of own equipment in regular intervals.
- 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 Engineering and Baggage Duty Manager (EBDM) 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 Airport Duty Manager (ADM) DM & AODM.

Airfield Control is responsible for:

- Informing AST – Asset Support Team on telephone number 0161 489 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.

9.5 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 aircraft facing into the prevailing wind.

When this is the case, the relevant operator must contact Airfield Control on telephone number 0161 489 3695 and make this request. Aircraft must not be re-positioned without approval from the AODM.

The AODM 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 AODM only. If necessary, the AODM 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.

10. Heavy Rain and Flooding

10.1 Structure and implementation of response plans

All airport users should ensure they are aware of forecast heavy rainfall and consider areas of their operation which may become adversely affected as a result.

During thunderstorm activity, airfield operations should be closely monitored using real-time meteorological information, with aircraft movements, refuelling operations and airside activities reviewed as conditions deteriorate. Where lightning is detected within the airport warning area, appropriate safety procedures should be implemented, including the suspension of exposed ramp operations and the relocation of personnel to safe shelter until the threat has passed. The suspension of aircraft refuelling may also be considered, with the fuel supplier responsible for assessing conditions and informing the AODM when fuelling operations are suspended or resumed.

Manchester Airport receive lightning notifications directly from the MET office, this information is then shared to the airfield community via the community app.

10.2 Notification

If a weather warning is issued or there is severe rainfall in the forecast which is believed to have the potential to cause operational disruption, then the AODM in conjunction with the ADM will update the weather status.

10.3 Landside Procedures

If heavy rain is forecast, the LDM will ensure the Traffic Marshall community complete regular checks of the road network and MAG car parks – with feedback to the LDM if a build-up of water or flooding is occurring.

- The Control Room will continually monitor CCTV of the road network and Car Parks and report to the LDM any build-up of water or flooding.
- Any reports of flooding of the road network or car parks would be circulated by the LDM to the CTTM, CPTM, ADM, GMP. If applicable the Highways Agency and MCC would be informed.
- Known locations:
    - Shadow Moss car park
    - Area 350 (Beryl) M&G Parking on Thorley Lane
    - Thorley Lane by the entrance to Jet Parks 1 & Private Hire Waiting Area
    - Parade Road by the mini roundabout
    - Outwood Lane

The requirement is to monitor these areas but not close them until it becomes an issue.

- Monitor arterial roads surrounding the area (A555, M56 etc)
- A map of the MAG road network and MCC adopted roads are available in Appendix 7.
- If a road or car park is suffering from flooding, the LDM in conjunction with the CPOM (if it is a car park) would make a dynamic risk assessment as to the safety of the area. If required, the Fire Service can be requested to assist in pumping excess water away from areas most affected. If required sandbags can be obtained from MAG FOH.
    - Road network - If there is a risk to the public or staff due to the flooding of a road, a diversion would be put in place to enable safe and undisrupted traffic flow.
    - Car Park – If it is no longer safe to use a car park an alternative car park list is available in the Appendix 6. The Control Room would need to be advised and monitor diverted vehicles away from booked car parks. Traffic Marshall attendance at both the closed car park and alternative car park will be required.

10.4 Airside Procedures

During periods of heavy or prolonged rainfall all airside surfaces will be closely monitored for contamination, with the appropriate RCR issued when required.

There are some areas which are prone to pooling or flooding. These have been identified over many years and should be closely monitored during heavy or prolonged rainfall:

- Stands 62-63 – slot drains
- Pier B, T1 – odd stands (1-7)
- P-DZ runway crossing point
- Mobile barrier storage area near Stand 12 (outside of taxiway strip)
- Taxiway Z

Should the surface become contaminated and unsafe for airside users, vehicles or assets Airfield Operations shall close the affected area until such time that the contamination has subsided.

Any closure is to be communicated to the AODM and in turn to the Community via the Community App. The same applies to reopening such areas.

In addition, the EBDM is responsible for ensuring that the impact upon water, power, gas supply services and effluent disposal is assessed, and likely implications passed to the ADM & AODM.

11. Excessive Heat

11.1 Landside Procedures

During periods of high temperatures, inspections of all pavement surfaces should be increased across all landside areas.

Consideration should be given to the provision of additional breaks, and water supply to staff working outside to provide shelter and relief. All staff should be encouraged to wear protective equipment, try and remain out of direct sunlight.

11.2 Airside Procedures

Airside inspections will be increased during periods of hot weather, with particular attention being paid to runway surfaces and areas that have undergone previous repairs. This will ensure that surfaces are not adversely affected by the heat and surfaces remain safe for aircraft operations.

Consideration should be given to the provision of additional breaks, and water supply to staff working outside to provide shelter and relief. All staff should be encouraged to wear protective equipment, try and remain out of direct sunlight.

12. Reporting

Following a period of adverse weather, the ADM or nominated deputy shall create a report for MAN senior leadership which details the impact of the affected period.

The report shall be produced with the support of landside, airfield and terminals teams and represent an overall airport-wide summary of the measures deployed and operational impact. The report shall include reference to the following (not exhaustive):

- Asset availability
    - Runways
    - Taxiways
    - Aircraft stands
    - Car parks
    - Forecourts
    - Terminals
- Performance (key business metrics)
    - OTP
    - Last bag performance
    - Delays (AM and AF-attributable)
    - Remotes (unplanned)
    - NPS
- Weather

    - Actual vs. forecast conditions
- Response
    - DWS category
    - Communication timeline
    - Response deployed with cost incurred
- Continuous Improvement
    - Learnings and best practice to carry forward

13. Glossary

ADM	Airport Duty Manager
ALM	Airport Liaison Manager
AODM	Airfield Operations Duty Manager
ASCO	Airfield Safety and Compliance Officer
MA RFFS	Manchester Airport Rescue & Fire Fighting Service
AIS	Aeronautical Information Service
ASB	Airside Safety Bulletin
ASTM	Airfield Security Team Manager
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
BMS	Building Management System
IMC	Bronze Incident Management Centre
IMT	Bronze Incident Management Team
CAP	Civil Aviation Authority Publication
CCTV	Closed Circuit Television
CFME	Continuous Friction Monitoring Equipment
CTOC	Customer Transport Operations Centre
CTAC	Customer Transport Airside Centre
DSP	Departure Sequencing Protocol
DWC	Disruptive Weather Cell
DWS	Disruptive Weather Status
EGCC	ICAO Code for Manchester Airport
ERRC	Emergency Response Radio Channel
EBDM	Engineering and Baggage Duty Manager
FEGP	Fixed Electrical Ground Power
FM	Facilities Management
GMC	Ground Movement Controller - ATC

GMP	Greater Manchester Police (Airport Division)
GRF	Global Reporting Format (Runway Condition Report)
HOAO	Head of Airfield Operations
ICAO	International Civil Aviation Organisation
IATA	International Air Transport Association
LDM	Landside Duty Manager
MACH	Manchester Airport Control Hub
MAFRS	Manchester Airport Fire and Rescue Service
MAN	IATA Code for Manchester Airport
MA PC	Manchester Airport Priority Controller
METAR	Aviation Routine Weather Report
mm	Millimetres
MO	Meteorological Office
MT	Manchester Airport Motor Transport Department
NATS	National Air Traffic Services Ltd.
NOTAM	Notice to Airmen
OiC	Officer in Charge
OPMET	Operational Meteorological
PLAN39	Mass Diversion Protocol
RTF	Radio Telephony
RTHP	Runway Taxiway Holding Point
RVP	Emergency Rendezvous Point
S&B	Schiedt & Bachmann (car parks system provider)
SNOWTAM	Snow Notice to Airmen
TAF	Terminal Aerodrome Forecast
VHF	Very High Frequency

14. Appendices

Appendix 1 – Landside Gritting Routes and Mileage

Following areas closed for this season, those highlighted in red do not require gritting.

- Jet Parks 1
- Jet Parks Ringway
- Jet Parks 3
- Hasty Lane (Meet and Greet Storage)
- Thorley Lane (Meet and Greet Storage)

Terminal 1

Hand Grits - Inbound & Outbound	Mileage	Vehicle - Inbound &Outbound	Mileage
Footpath outside T1/Pass Office	0.10	Ramp Road East - to T1 Short Stay	0.20
Footpath Terminal Road North & South	0.20	Ramp Road South	0.20
Footpath Outwood Lane	1.00	Ramp Road North	0.20
Footpath North Gate Landside	0.50	Exit Road West	0.10
Footpath T2 East Service Yard	0.50	Short Stay T1 top floor	0.10
Footpaths Malaga Ave	0.20	Top Floor MSCP 1	0.10
Train Station Pedestrian Area	0.10	Drop off T1	0.10
Bus Station Pedestrian Area	0.10	Terminal Rd South	0.30
Footpath Chicago Ave	0.20	North Gate landside	0.10
Footpath Voyager and staff car park 2	0.20	T2 East Service Yard	0.20
		Outwood Lane	1.00
		Outwood Lane into Bus Station Entrance	0.20
		Bus Station Exit to Voyager roundabout	0.10
		Terminal Rd North	0.10
		Toronto Ave	0.10
		Meet and Greet T1	0.10
		Arrivals T1 Forecourt	0.10
		Departures T1 Forecourt	0.10
		Malaga Ave	0.10
		Chicago Ave	0.10
Total Mileage	**3.10**		**3.60**

Terminal 1 Travel

Travel to load	2.50
Travel return	2.40
Number of trips	3.00
Total Travel Mileage	**14.70**

Terminal 2

Hand Grits - Inbound & Outbound	Mileage	Vehicle - Inbound &Outbound	Mileage
Footpath World Way	1.00	Atlanta Ave	1.50
Footpath Atlanta Ave	1.50	World Way	0.90
Footpath Palma Ave	1.50	World Way roundabout	0.10
Footpath Sydney Ave	0.10	Palma Ave	1.40
T2 Forecourt arrivals	0.30	Palma Ave/Sydney Ave Roundabout	0.10
T2 Forecourt departures	0.30	Sydney Ave	0.10
Melbourne Ave (leading to T2 dept)	0.20	MSCP East Top floor	0.40
		Meet and Greet T2	0.20
		MSCP West top floor	0.40
		T2 Forecourt arrivals	0.20
		T2 Forecourt departures	0.20
		Jet Parks 1	0.50
		Staff West	0.40

Total Mileage	**4.90**		**6.40**

Terminal 2 Travel

Travel to load	2.50
Travel return	2.40
Number of trips	5.00
Total Travel Mileage	**24.50**

Terminal 3

Hand Grits - Inbound & Outbound	**Mileage**	**Vehicle - Inbound &Outbound**	**Mileage**
Footpaths outside Terminal 3 leading to OH	0.10	Top floor midstay **(Viaform)**	0.20
Bus Stops T3	0.10	Ground Floor Midstay	0.30
Meet and Greet T3	0.10	Top floor MSCP 3	0.30
Entrances/outside MSCP 3	0.20	Ringway Road	0.60
Memorial Gardens inc stops	0.10	Domestic Approach	0.30
Euro Gardens	0.10	Hotel Road	0.10
Bus Stop Drop & Go	0.10	Taxi Feeder	0.10
Footpaths Drop & Go	0.10	Car Rental village/transporter area	0.20
Footpaths Midstay carpark	0.20	Drop & Go top floor **(Viaform)**	0.50
Footpath Hotel Road/Air House	0.10	Drop & Go Bus stop	0.10
Footpaths Ringway Road	0.20	A1 car park top floor **(Viaform)**	0.30
Taxi feeder inc steps into cabins	0.10	Woodhouse Lane	0.40
Car Rental footpaths	0.20	Drop off T3	0.20
Police station footpaths and carpark	0.10	Pick Up T3	0.20
Footpaths Domestic Approach	0.40	Meet and Greet T3	0.10
Footpaths International Approach	0.20	Drop off T1	0.10
Footpaths Olympic House	0.10	International approach	0.20
Compactor/Service Yard T3	0.10		
Tower Road Service yard inc all areas in quad	0.10		
Total Mileage	**2.70**		**4.20**

Terminal 3 Travel

Travel to load	2.50
Travel return	2.40
Number of trips	4.00
Total Travel Mileage	**19.60**

Western Maintenance

Hand Grits - Inbound & Outbound	Mileage	Vehicle - Inbound &Outbound	Mileage
Motor Transport Carparks	1.00	Pinfold Lane	1.50
Aeroco Carpark	0.20	Hangar 4/MT	0.20
		Aeroco	0.10
		Reservoir	0.20
		Fire Station North	0.20
		Nats Carpark	0.10
		RVP	0.50
		Jet Parks 3 (GMP Dog kennel access)	0.30
		Road leading to Staff East	0.20
		Staff East	0.40
		Jet Parks Ringway	0.30
		Jet Parks Shadow Moss	0.30
		CTOC	0.20
		D'Nata Roadway	0.10
		Waste Facility West Gate	0.30
		Staff South (2020/2021 NHS Test Centre)	0.30
		Hasty Lane (Meet & Greet Storage)	0.10
		Fire Station (South)	0.10
		Runger Lane - M&G storage	0.10
		Western maintenance roads	1.00
Total Mileage	**1.20**		**6.50**

Western Maintenance Travel

Travel to load	2.50
Travel return	2.40
Number of trips	5.00
Total Travel Mileage	**24.50**

Viaform & Reloader

Hand Grits - Inbound & Outbound	Mileage	Vehicle - Inbound &Outbound	Mileage
Hand spreading Top floor midstay	0.20	Top floor midstay **(Viaform)**	0.20
Hand spreading top floor Drop & Go	0.50	Drop & Go top floor **(Viaform)**	0.50
Hand spreading top floor A1 car park	0.30	A1 car park top floor **(Viaform)**	0.30
Total Mileage	**1.00**		**1.00**

Viaform & Reloader Travel

Travel to load	2.50
Travel return	2.40
Number of trips	1.00
Total Travel Mileage	**4.90**

Mileage Totals

Areas	Hand Grit Mileage	Vehicle Grit Mileage	Travel Mileage
T1	3.10	3.60	14.70
T2	4.90	6.40	24.50
T3	2.70	4.20	19.60
Western Maintenance	1.20	6.50	24.50
Viaform & Reloader	1.00	1.00	4.90
Total Mileage	11.9	20.7	88.20
Hand Grit, Vehicle & Travel Mileage	120.80		

Appendix 2 – Grit bin locations - landside

Terminals	**Car Parks**
T1 Terminal Rd South Retail Bay	T1 Arrivals Decked Top Deck Pedestrian walkway
T1 Arrivals Road under link near zebra crossing	T1 Arrivals Decked Mid Deck Pedestrian walkway
T1 Arrivals Road near cycle shed	T1 Arrivals Decked Ground Floor
T1 Up Ramp near Sub Station / Cycle Park	T1 Arrivals Decked Ground Floor
T1 Malaga Ave - Junction to Toronto Ave	Mid Stay Entrance
T1 Terminal Road North near crossing	Mid Stay Decking West Viaform
T1 Skylink South End Meet and Greet Reception	Mid Stay Decking East Viaform
T1 Skylink North End	Drop & Go Top Deck Viaform
T1 Meet and Greet Wash Area	Drop & Go Car Entrance
T1/T2 Chicago Ave	Drop & Go Bus Stop
T2 World Way	MSCP 1 Level 13
T2 Palma Ave Bus Stops	MSCP 1 Level 13 Down Ramp West
T2 Coach Drop Off	MSCP 1 Level 13 Down Ramp East
T2 Arrivals Road East (Entrance)	MSCP 1 Level 12
T2 Arrivals Road West (near Car Rental Bus Stop)	MSCP 1 Top of Short Ramp
T2 Forecourt Exit	MSCP 2 East Level D
T2 Melbourne Ave/Roundabout	MSCP 2 East Level D Centre Lift lobby
T2 Service Yard rear of compactors	MSCP 2 East Level D East
T3 Service Yard	MSCP 2 West Ground Floor Pedestrian entrance
T3 East near Service Yard Entrance	MSCP 3 Level 5 North Side
T3 Meet and Greet Reception	MSCP3 Level 5 South Side
T3 Forecourt on Drop Off Bend	MSCP A1 Top Deck Viaform
T3 Forecourt on Drop Off Near HV Barrier	Jet Park 1 Reception
T3 Forecourt Olympic House/GMP	Jet Park 2 Reception
T3 Exit Zebra Crossing near GMP	Jet Park 3 Bend West of South Zone
T3 Outwood Lane West	Jet Park 3 Ramp to West Zone
T3 Pick Up Zone East	Jet Park 3 West Zone South West
T3 Pick Up Zone West	Jet Park 3 West Zone South East
Police Station car park Supplied and Stocked by GMP	Jet Park 3 West Zone North East
Olympic House (North Side) Near Tower Rd	Jet Park 3 West Zone North West
The Station Forecourt	Staff East Bussing Rest Room
Bus Station Stand A	Staff East Near Exit Barriers
Bus Station GTI Service Yard Gate	Staff South Barriers
Aviation Viewing Park	Car Rental Village Reception Island
Entrance	Car Rental Village Reception West
Skips	Car Rental Village Next to Car Wash
Monarch Plane	Taxi Feeder
Entrance to Car Park	Security West Gate
Path to External Toilets	Security Little West Gate
West Viewing Hill	Security North Gate
Middle Viewing Hill	Bussing Facility Wash Exit
East Viewing Hill	Hangar 4 Motor Transport Wash

Coffee Bar
Side of Toilets near Shop

Appendix 3 – Decision Matrix

<table>
<tr><th rowspan="2">Road Surface Temperature (RST)</th><th rowspan="2">Precipitation</th><th colspan="3">Predicted Road Conditions</th></tr>
<tr><th>Wet</th><th>Damp</th><th>Dry</th></tr>
<tr><td>May fall below 1°C</td><td>No rain
No hoar frost
No fog</td><td rowspan="3">Pre-treat prior to RSTs < 1°C</td><td rowspan="2">Pre-treat prior to RSTs < 1°C</td><td rowspan="2">No action needed – continue to monitor (see Note A)</td></tr>
<tr><td rowspan="4">Expected to fall below 1 °C</td><td>No rain
No hoar frost
No fog</td></tr>
<tr><td>Hoar frost forecast
Fog forecast</td><td colspan="2">Pre-treat prior to RSTs < 1°C (see Note B)</td></tr>
<tr><td>Rain forecast prior to RSTs > 1°C</td><td colspan="3">Treat after rain stops but prior to RSTs < 1°C (see Note C)</td></tr>
<tr><td>Rain forecast whilst RSTs > 1°C</td><td colspan="3">Treat prior to rain, as required during rain and immediately after rain stops (see Note D)</td></tr>
<tr><td>Rain possible
Hoar frost possible Fog possible</td><td colspan="2">Pre-treat prior to RSTs < 1°C</td><td>Monitor weather conditions</td></tr>
<tr><td>May fall below 1°C</td><td>Snow forecast</td><td colspan="3">Pre-treat prior to snowfall and post snowfall if required</td></tr>
<tr><td>Expected to fall below 1 °C</td><td>Snow forecast</td><td colspan="3">Pre-treat prior to snowfall and post snowfall if required</td></tr>
</table>

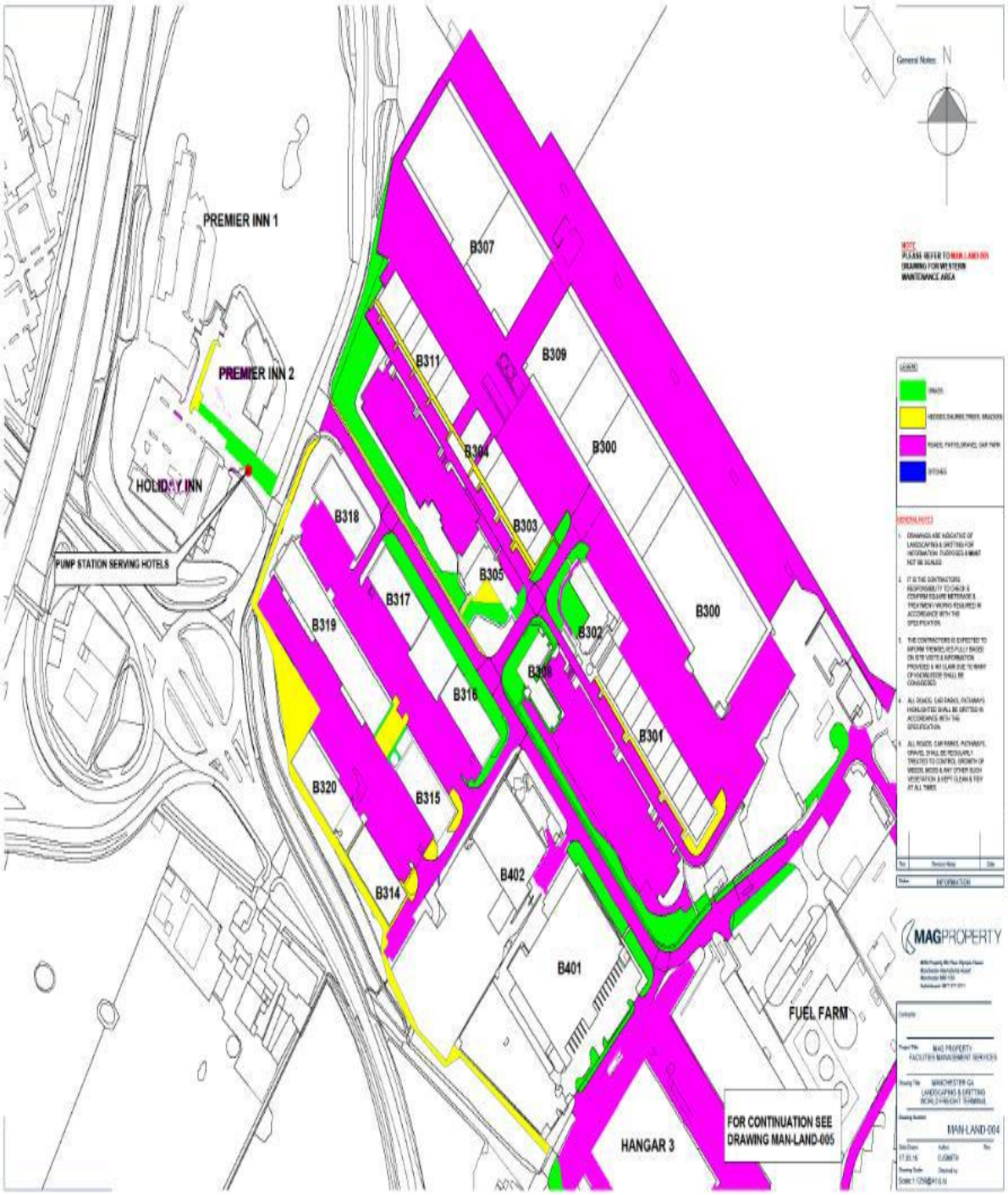
- Particular attention should be given to the possibility of water running across carriageways and other running surfaces, particularly after periods of heavy, sustained rainfall. Such locations should be closely monitored and may require 'spot' treating in the evening, morning and possibly on other occasions should conditions dictate.

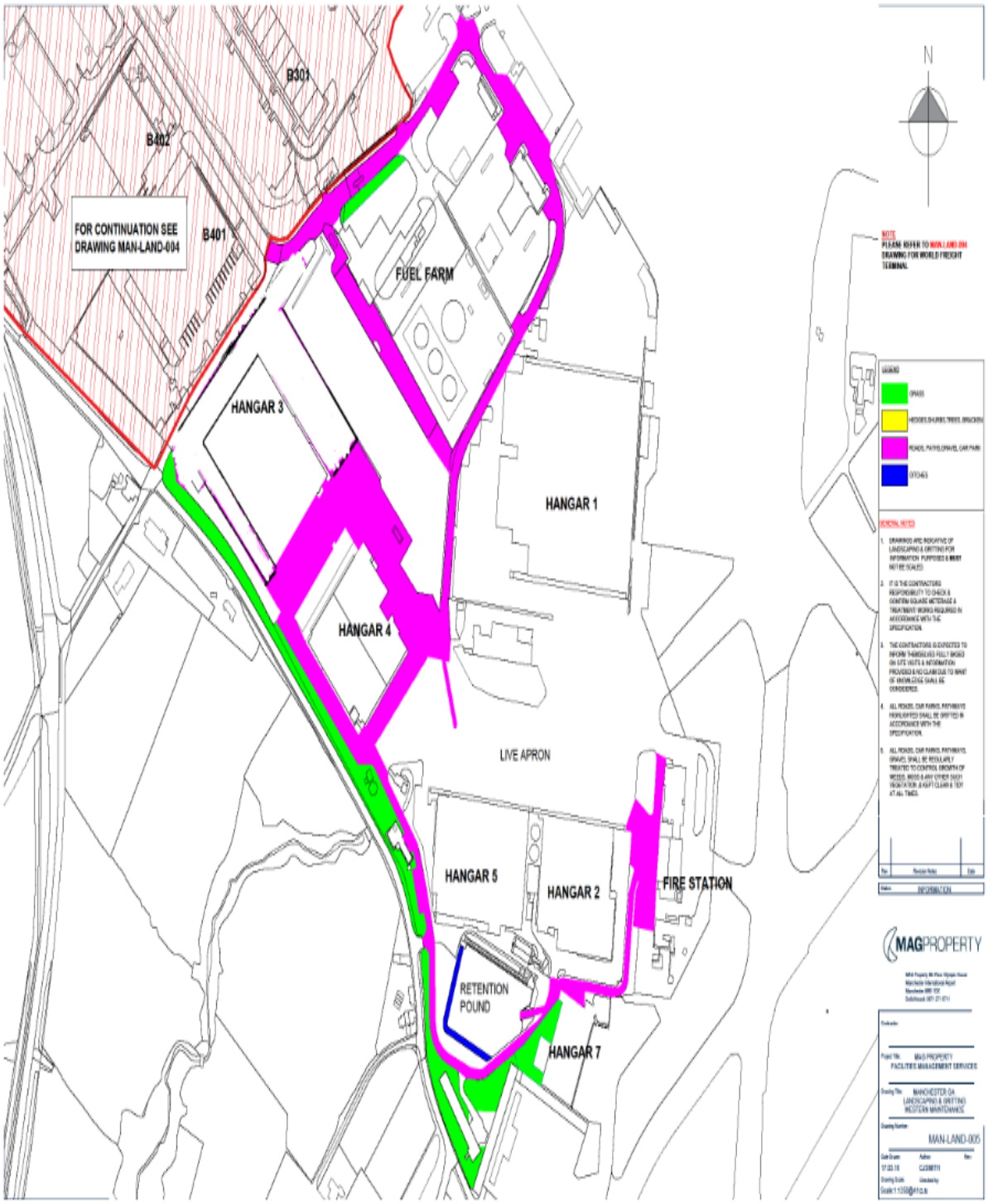
- When a weather warning contains reference to expected hoarfrost, considerable deposits of frost are likely to occur. Hoarfrost usually occurs in the early morning and is difficult to cater for because of the probability that any salt deposited on a dry road too soon before its onset may be dispersed before it can become effective. Close monitoring is required under this forecast condition and ideally the route should be treated just as the hoarfrost is forming. Such action is usually not practicable, and salt may have to be deposited on a dry road prior to and as close as possible to the expected time of the condition. Hoarfrost may be forecast at other times in which case the timing of salting operations should be adjusted accordingly.
- If, under these conditions, rain has not ceased by early morning, crews should be called out and action initiated as rain ceases.
- Under these circumstances, rain will freeze on contact with running surfaces and full pre-treatment should be provided, even on dry roads. This is a most serious situation and weather conditions should be monitored closely and continuously throughout the period when such conditions are forecast to occur.

Appendix 4 – Recommended Spread Rates

Weather Conditions Road Surface Conditions Road Surface Temperatures	Air Temperature	Recommended Spread Rate (g/m2)
Frost or forecast frost RST at or above –2oC		10
Frost or forecast frost RST below –2oC but above –5oC		20
Frost or forecast frost RST below –5oC but above –10oC and dry or damp road conditions		20
Frost or forecast frost RST below –5oC but above –10oC and wet road conditions (existing or anticipated)		2 x 20
Light Snow Forecast (<10mm)		20
Medium / Heavy Snow Forecast		2 x 20
Ice formed (minor accumulations)	Above – 5oC	20
Ice formed	At or below –5oC	2 x 20
Snow covering > 30mm		20 – 40 (successive)
Hard Packed Snow / Ice	Above – 8oC	20 – 40 (successive)
Hard Packed Snow / Ice	At or below –8oC	

Appendix 5 – World Cargo Centre and Cargo Clearance Routes

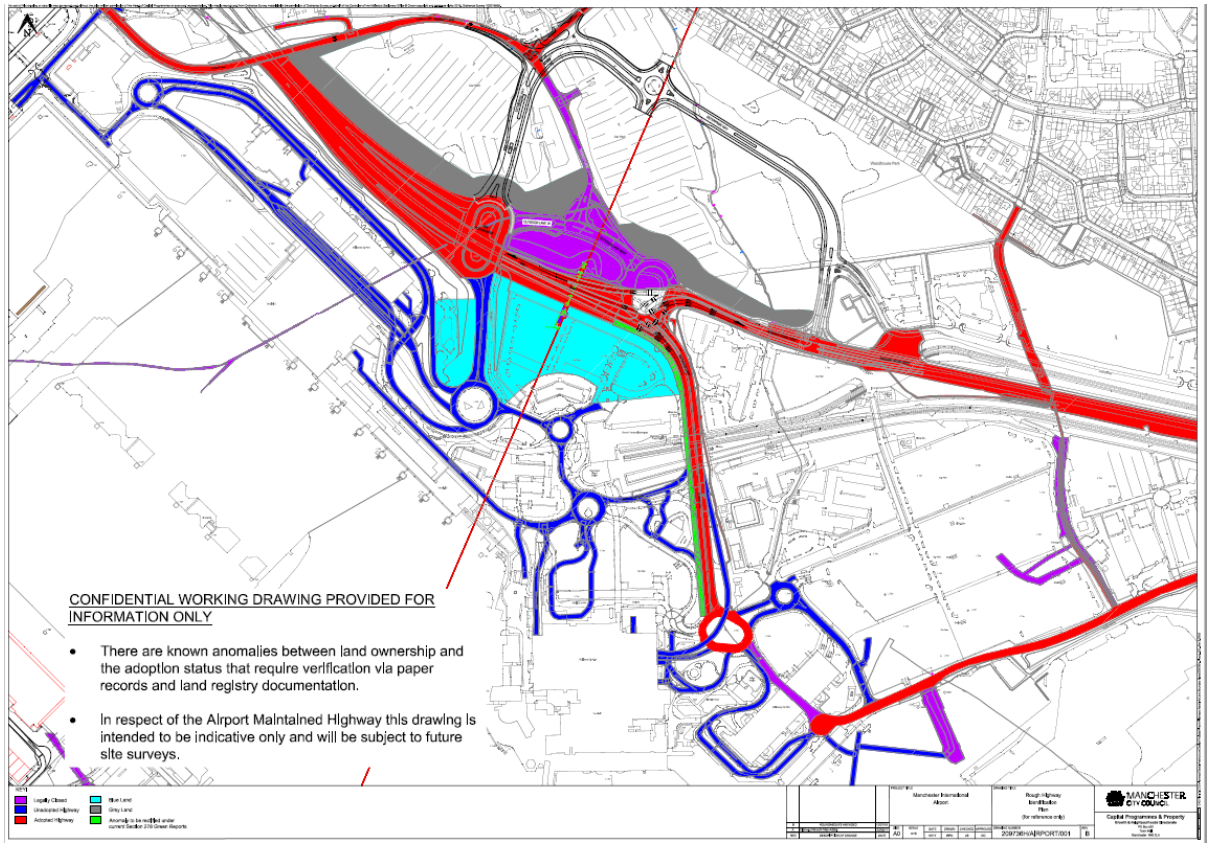




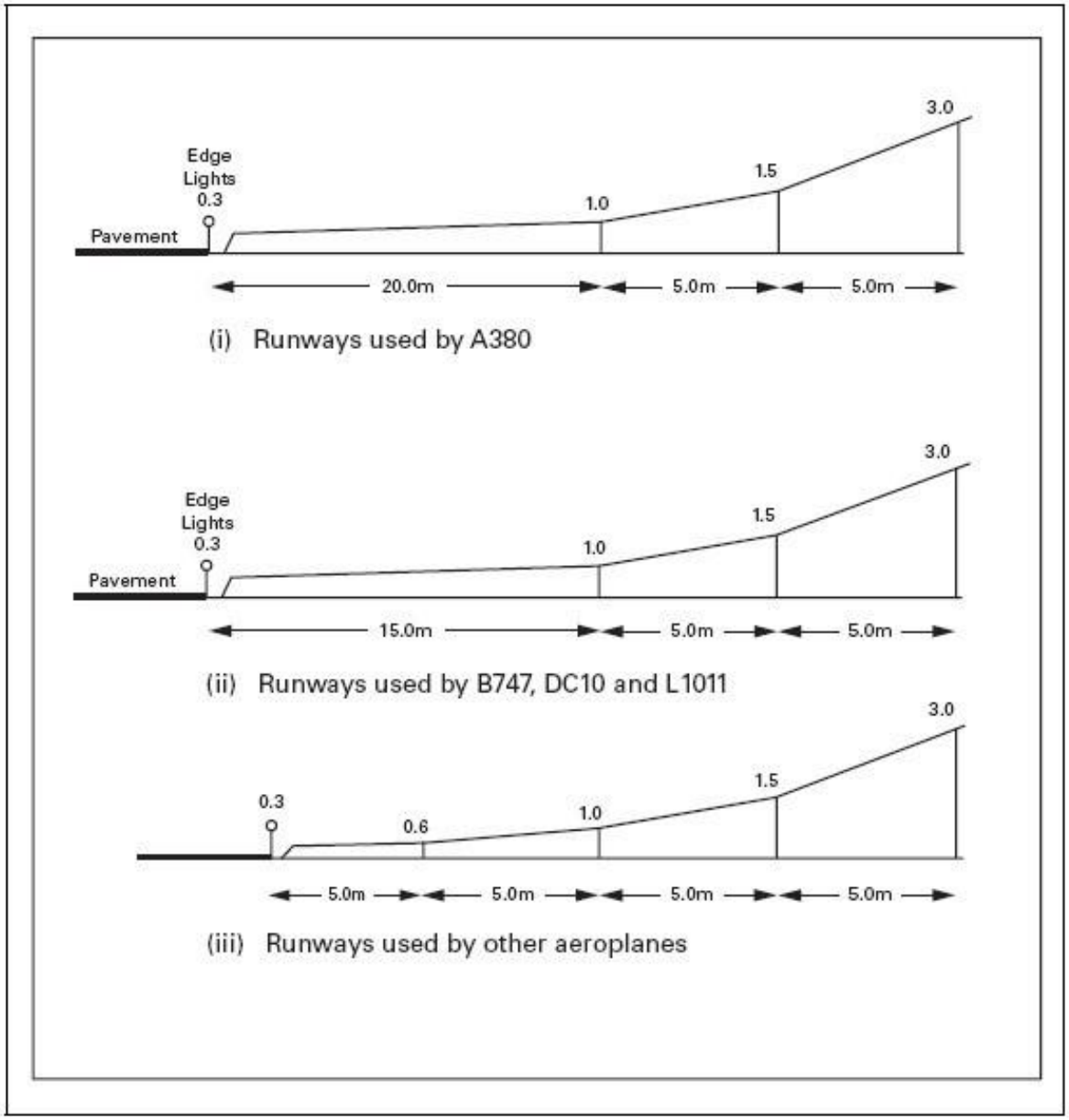
Appendix 6 – Car Park Diversionary Capacity Plan

Car Park At Capacity	First Divert	Secondary Divert	Third Option
T1 MSCP	Mid Stay	T3 Multi	JP3/JPR
T1 SS	T1 MSCP	T3 MSCP	Mid Stay
Midstay	T3 Multi	T1 Multi	JP3/JPR
T2 East	T2 West	JP3/JPR	
T2 West	T1 SS	JP3/JPR	
T3 MSCP	T1 Multi	Mid Stay	JP3/JPR
JP3	JPR	T1 MSCP	T2 West
JPR	JP3	T1 MSCP	T2 West
Drop & Go	T3 M&G	T3 MSCP	Midstay
T1 M&G	T1 MSCP	T1 SS	D&G
T2 M&G	T2 West	D&G	
T3 M&G	D&G	T3 MSCP	Midstay

Appendix 7 – Specific Road Responsibilities



Appendix 8 – Snow Bank Profiles (Above)



Appendix 9 – Airside Snow Clearing Equipment

Snow Fleet		
M/C ID	**Machine Make/Use**	
Ice 3	Schmidt combi unit 6000 litres and solids	MA
Ice 1 (Sir Bruce Thaws Ice)	Schmidt ASP 12,00 litre De-Icer Spreader Unit	MA
Ice 2 (Clouey)	Schmidt ASP 12,00 litre De-Icer Spreader Unit	MA
CJS 1	Schmidt Compact Jet Sweeper	MA
CJS 2	Schmidt Compact Jet Sweeper	MA
CJS 3	Schmidt Compact Jet Sweeper	MA
CJS 4	Schmidt Compact Jet Sweeper	MA
CJS 5	Schmidt Compact Jet Sweeper	MA
CJS 6	Schmidt Compact Jet Sweeper	MA
CJS 7	Schmidt Compact Jet Sweeper	MA
CJS 8	Schmidt Compact Jet Sweeper	MA
CJS 9	Schmidt Compact Jet Sweeper	MA
Supra	Schmidt Supra 4002 Snow Cutter	MA
John Deere	Ramp Hog 16ft	Hired Tractor/ Cornthwaites
John Deere	Ramp Hog 16ft	Hired Tractor/Cornthwaites
John Deere	Ramp Hog 20ft	Hired Tractor/ Cornthwaites
John Deere	Ramp Hog 20ft	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted Snow Brush (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted Snow Brush (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted Snow Brush (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted Snow Brush (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted 10ft Snow Plough (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted 10ft Snow Plough (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted 10ft Snow Plough (Stands)	Hired Tractor/ Cornthwaites
John Deere	Tractor Mounted 10ft Snow Plough (Stands)	Hired Tractor/ Cornthwaites
John Deere	ATV with Automatic Prill Spreader and Snow Plough	MA
JCB 1	Telehandler With Bucket	Hired/Cornthwaites

JCB 2	Telehandler With Bucket	MA
Grit 1	Tractor Rock Salt Spreader	Hired/Cornthwaites
Trailer 1	Dump Trailer	Hired Attch Tractor when Required
Trailer 2	Dump Trailer	Hired Attch Tractor when Required
Trailer 3	Dump Trailer	MA
OV 1	Overaasen 200 Towed snow brush with front plough	MA TR22
OV 2	Overaasen 200 Towed snow brush with front plough	MA TR23
EM1	Emergency Tractor	Hired Tractor/ Cornthwaites
EM2	Emergency Tractor	Hired Tractor/ Cornthwaites
EM3	Emergency Tractor	Hired Tractor/ Cornthwaites
EM4	Emergency Tractor	Hired Tractor/ Cornthwaites

The Manchester airport fleet dedicated to the delivery of Aerodrome anti-icing fluid consists of:

2x Abei Schmidt ASP sprayers complete with, 12,000L tank, nozzle spray system, 15-40g/m2 @ 15-45km/h, 17m to 30m bi-foldable booms, spray width 3.7m

1x Abei Schmidt spinner nozzle hybrid Liquid/Solid

The three machines are calibrated to the specific gravity of the associated anti icing media product, in the case of Safegrip® EC20 the specific gravity is 1.40

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