



Adverse Weather



Airside Operational Plan Heathrow Snow Plan Airside

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Season: Winter 2019/20

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1. Introduction

The Heathrow Snow Plan Airside, endorsed by the Executive Committee at Heathrow Airport Limited, describes the approach that Heathrow Airport provides in response to snow events. This document will be reviewed annually prior to each winter season. It may also be reviewed on an 'as needed' basis throughout the year subject to fundamental impacts for which a review is necessary.

The aim of the Heathrow Snow Plan Airside is to provide a synopsis of the approach that the business will implement as a result of the weather forecast.

The objectives of the Heathrow Snow Plan Airside are to:

- Meet the regulatory requirements
- Minimise the disruption to the operation
- Provide adequate response (personnel, equipment and materials) to enable the continued and safe operation of the airfield, even if conditions require this to be at a reduced capacity
- Optimise the resources that can be called upon through the initialisation of the snow plan
- Promulgate information on the responsibilities of Heathrow Airport and stakeholders during a winter event

This Heathrow Snow Plan Airside supersedes all previous Airside Snow Clearance Orders and plans. It is effective from 15th October 2019 to 15th April 2020. The Heathrow Snow Plan Airside is issued with the agreement of National Air Traffic Services and other key stakeholders through stakeholder engagement sessions.

Any enquiries concerning the Heathrow Snow Plan Airside should be addressed to the Aerodrome Accountable Manager, Chief Operating Officer contactable through airsidewinter_operations@heathrow.com

1.1 Regulatory Requirements

This document is published in accordance with the requirements of Regulation (EU) No 139/2014), Annex IV — Part-ADR.OPS SUBPART B — Aerodrome Operational Services, Equipment and Installations (ADR.OPS.B), ADR.OPS.B.035, AMC1 ADR.OPS.B.035 and GM1 ADR.OPS.B.035 to ED Decision 2014-012-R AMC & GM to Authority, Organisation & Operations for Aerodromes. All snow clearance procedures will comply with the Acceptable Means of Compliance (AMC) for Operations in winter conditions.

AMC1 ADR.OPS.B.035 Operations in winter conditions

GENERAL

(a) The aerodrome operator should prepare, in collaboration with air traffic services provider and other relevant parties, procedures for winter maintenance (snow plan). The procedures should include requirements for inspections, criteria for snow-clearing, priorities for snow-clearing, criteria for preparation of operational surfaces, requirements for marking of snow-covered operational surfaces, and methods for



assessing and reporting the surface conditions. The criteria specified in the winter maintenance procedures should be minimum criteria for maintaining safe aerodrome operations, including criteria for suspension of runway operation.

(b) The aerodrome operator should ensure that snow, slush, ice, standing water, and other contaminants are removed from the surface of a paved runway, as rapidly and completely as possible, to minimise accumulation.

(c) The aerodrome operator should, as adequate, avoid harmful effects on environment, aircraft or pavements when using chemicals to remove snow, slush, ice, and other contaminants from operational surfaces.

GM1 ADR.OPS.B.035 Operations in winter conditions AERODROME SNOW PLAN

(a) The aerodrome snow plan should be published and made available to all concerned in snow clearance.

(b) Details of the equipment available at the aerodrome should be published in the Aeronautical Information Publication (AIP).

(c) The aerodrome snow plan should include the following:

- (1) the Snow Committee members and the person in charge of the snow clearance operation, with a chain of command giving a breakdown in duties;
- (2) methods of communication between aerodrome operations, air traffic control, and the Meteorological Office;
- (3) the equipment available for snow clearance. This should include equipment for ploughing, sweeping, and blowing snow;
- (4) priority of surfaces to be cleared, and clearance limits for aircraft using the aerodrome;
- (5) collection of information for SNOWTAM and dissemination of this information;
- (6) designated snow dumping or melting areas to avoid confusion during the actual clearance operations;
- (7) an alerting system in order that sufficient warning is given to all bodies concerned;
- (8) the manpower available, including staff for equipment maintenance arrangements for shifts, and call out procedures;
- (9) deployment of equipment and tactical approaches to be used;
- (10) general principles to be followed in deciding when to close runways for snow clearance and designation of management personnel authorised to make the decision;
- (11) methods of assessing and reporting the surface conditions; and
- (12) criteria for the suspension of runway operations.



2. Definitions

Abbreviation	Description
AfCR	Airfield Control Room
AfDM	Airfield Duty Manager
AIRT	Airside Incident Response Team
AOM	Airport Operations Manager
AODM	Aircraft Operations Duty Manager
AOP	Airport Operations Plan
AOU	Aircraft Operations Unit
APOC	Airport Operations Centre
ASD	Airside Safety Department
ATC	Air Traffic Control
ATT	Airside Tactical Team
BA	British Airways
BAU	Business as Usual
DvC	Demand versus Capacity Balancing Tool
DSP	De-icing Service Provider
HADACAB	Heathrow Airport Demand and Capacity Balancing Group
HADIP	Heathrow Aircraft De-icing Plan
HAL	Heathrow Airport Limited
HOCC	Heathrow Operational Conference Call
HOEC	NATS Heathrow Operational Efficiency Cell
HSPA	Heathrow Snow Plan Airside
HSRF	Heathrow Snow Response Forecast
HTC	NATS Heathrow Traffic Coordinator
IRT	HAL Incident Response Team
IT	Information Technology
MET	Weather data (meteorology)
NATS	NATS Holdings
OC	AOU Operations Controller
RAG	Red, Amber, Green
SMS	Short Message Service (text message)
SOC	AOU Senior Operations Controller
WOM	Winter Operations Manager



3. Command and Control

Operationally disruptive events of any nature will require an activation of Heathrow's Command and Control response, whether this response is in a localised or airport wide capacity, is dependent on the nature of the event. The format that is adhered to is a recognised standard of Bronze, Silver and Gold command and control structure.

During winter events, the Heathrow Command and Control structure has a defined remit to ensure that its responsibilities do not overlap with that of the Winter Operations Teams.

3.1 Airport Wide Command and Control

3.1.1 Gold Command

Provides strategic direction and support. The objective of Gold Command is to maintain a strategic overview of the impact on the wider airport operation and, where necessary, engage with airport stakeholders at a senior level. Gold Command is led by the Gold Commander and is based in the Executive Boardroom at the Heathrow Compass Centre.

3.1.2 Silver Command

Provides tactical coordination, reporting to Gold Command, if activated. Silver Command is led by the Silver Commander and is based in the Silver Command Room at the Heathrow Compass Centre.

3.1.3 Bronze Command (Lead)

Provides direction, reporting to Silver Command, if activated. Bronze Command is led by the Airport Operations Manager (AOM) and is based in the Bronze Command Room at the Heathrow Compass Centre.

3.1.4 Incident Response Teams (Operational Bronze)

To support the Airport Wide Command and Control structure, business units have Incident Response Teams that may be activated during an operationally disruptive event.

3.1.5 Airside Tactical Team

The Airside Tactical Team comprises of the AfDM and the AODM with a purpose of providing tactical guidance on the implementation of the Heathrow Snow Plan Airside to the AOM.

The Airside Tactical Team is responsible for managing tactical capabilities throughout an event and provide the Airside Incident Response Team with the relevant information to disseminate to the airport stakeholders. It is imperative that all stakeholders (external and internal) link at the appropriate level, into the command and control structure. Circumventing this structure may cause confusion and constrain Heathrow's efficiency in a winter event.



4. Key Roles within the Heathrow Snow Plan Airside

4.1 AOM

The AOM is primarily based in APOC during a winter event and provides support and direction to the operational teams within the airside, terminal, security and passenger experience sectors. They collate and disseminate winter event information that is applicable for business continuity of the relevant teams and/or stakeholders.

4.2 AIRT

During events that will affect normal operations, the Airside Incident Response Team (AIRT) will be activated by the AOM, if deemed necessary, through risk assessment. If activated the AIRT will be based in APOC.

The AIRT will provide support to the operational teams, where deemed necessary, or when support is requested. The AIRT may also offer challenge to the operational teams to ensure the best possible outcome.

During a winter event the AIRT are responsible for the collation of information for stakeholder briefings, to include a summary of the Heathrow Snow Plan Airside response and any influencing factors to maintain an effective operation.

4.3 Head of Airside Operations

Accountable for Winter Operations Airside and the engagement of the plan. They will monitor key operational components in relation to Airside Operations and the winter events and will provide instruction and support during a winter event.

4.4 Winter Operations Manager

Responsible for the creation of the Heathrow Snow Plan Airside, ensuring readiness for winter events throughout the season. Responsible for instilling the required competence/learning opportunities for all involved in the plan. Will provide instruction and support during a winter event.

4.5 Manager Airside Operations

Responsible for the operational team's involvement during winter events, ensuring the safe operation during and in all areas of operation. Will provide support and instruction to operational teams in both winter and airside operations.

4.6 AfDM

The Airfield Duty Manager is based airside during an event and is responsible for managing and coordinating clearance of the Manoeuvring Area. They are also to report information regarding the status of Manoeuvring Area Clearance to the AOM.

The Airfield Duty Manager works in conjunction with the Aircraft Operations Duty Manager and the Logistics Manager to ensure that issues are escalated and managed appropriately to achieve the aim and objectives of the Heathrow Snow Plan Airside.



4.7 AfDM Support

The Airfield Duty Manager Support is based airside during an event and is responsible for managing operations that enable aircraft to operate in line with agreed standardised operating procedures. The role supports the AfDM during winter operations.

4.8 AODM

The Aircraft Operations Duty Manager is based in APOC during an event and is responsible for reporting information regarding the status of Stand Availability to the AOM.

The AODM works in conjunction with the AfDM, who is responsible for the clearance objectives, and the Logistics Manager who is responsible for resourcing the plan, to ensure that issues are escalated and managed appropriately to achieve the aim and objectives of the Heathrow Snow Plan Airside.

4.9 Logistics Manager

The Logistics Manager is based in the Airfield Operations Facility during an event and is responsible for managing resource, all aspects of welfare, vehicle availability and providing information to the Airside Incident Response Team in the absence of the Airfield Duty Manager.

Note; all roles that are appointed within this document, and where they are not able to fulfil their operational role will appoint a deputy if necessary.



5. Activation

A weather forecast will determine Heathrow Airport's response to a winter event. Throughout the winter season if a winter event is shown on the forecast this information is promulgated daily to Heathrow, airline operators and ground handlers at the HOCC to discuss the latest weather forecast and Heathrow Airport's planned response to the forecast event. The Airside Tactical Team will review the weather forecasts in conjunction with the Winter Operations Manager and the Head of Airside Operations and an agreed response level will be initiated.

Once an event is considered likely to cause disruption to the operation, the Heathrow Snow Response Forecast (HSRF) is created. The HSRF will provide the following;

- Estimated time of onset and cessation
- Probability of Snow falling in %
- Probability of Snow accumulation in cm
- Type of Snow (Wet/Dry)
- Wind Direction/Temperature and timing of Ice risk, if applicable
- Summary

6. Response Levels

There are eight response levels that can be initiated providing the operation with flexibility of commanding the resource that is commensurate to the weather forecast. The likely onset, accumulation and duration of the forecasted event will be considered when a decision is made on which response level is to be instigated.

Timely activation is important to ensure that the Winter Operations Teams are mobilised to prepare, in readiness for a winter event. It is intended that Winter Operations Teams will be activated and in place, prior to the start of a winter event; nevertheless, it should be recognised that the actual weather on the day may differ from that forecasted.

It is Heathrow's objective to always be cautious regarding a winter event and resource may be stood up and stood down without any snowfall. However, there is always uncertainty with weather forecasting and resource may be initiated closer to the event start time.

Once a decision has been made to activate the Heathrow Snow Plan Airside and dependant on the severity of the forecast event, either Demand vs Capacity or HADACAB may be employed.



7. Demand vs Capacity

The Heathrow Capacity Constraints Policy contains four possible levels of tactical intervention that may be invoked to address poor schedule performance caused by disruptive events [1].

The Level 2 process is known locally as 'DvC' and regardless of the time of year or cause, the procedures will be enacted if the following conditions are met or exceeded:

- An arrivals flow regulation of 36 or less for 4 hours or more (but less than 24 hours) is forecast; and
- Forecast demand exceeds the declared capacity in excess of 10 flights occurring during the Night Quota Period (2300-0600L).

Airport Community [2] alerts will be issued by the AODM to the airlines included in the DvC intervention policy providing the date, time and dial in details of the required intervention call. During the call the AODM will recommend the proposed level of cancellations as a percentage of the flight schedule and the period of applicability to the Aircraft Operators who participate in the DvC process. Airlines will then decide which flights the intervention will affect and voluntarily cancel them.

8. HADACAB

The HADACAB process was established in October 2011 in response to a recommendation made by the Begg enquiry after the snow event which impacted Heathrow in December 2010. It provides for a higher level of intervention where an event is expected to last longer than 24 hours, possibly over several days, and/or leading to the loss of significant infrastructure such as airspace, runways or terminals. In terms of its practical application it is the same as the DvC process except that the conference call can be instigated at any time, it is chaired by the Director of Operations (or nominated deputy) and the level of pre-tactical cancellations that have been calculated and promulgated on the call are mandatory – airlines must adhere to the governance of the outcome.

Further Information is available in the Heathrow Capacity Constraints Document (Nov2017)

9. Information Management and Communication

Information is designed to flow up and down the Heathrow organisational structure, as set out in the Command and Control section. Ultimately, all decisions will pass through the Heathrow organisational structure to a role with the relevant authority to provide guidance or take action.

[1] The full set of interventions is described by the Heathrow Capacity Constraints Policy dated 16 November 2017.

[2] For the initial part of the winter season text message alerts will continue to be sent to airport stakeholders, however in the medium term a new airport-wide operations and communication mobile device application will be implemented.



10. Communication Tools

The Heathrow Snow Plan Airside communication plan will utilise the existing airport telephone and radio system. Airside's response to a winter event will be managed through the airside radio system, using five talk groups that are dedicated to Winter Operations. These talk groups will become operational and utilised on the activation of the Winter Operations Teams.

The allocated talk groups are;

- Winter Ops 1 -Logistics Team
- Winter Ops 2 -Manoeuvring Area Clearance Team
- Winter Ops 3 -T2 and T3 Apron Clearance Teams
- Winter Ops 4 -T4 Apron Clearance Teams
- Winter Ops 5 -T5 Apron Clearance Teams

11. Conference Calls

11.1 Internal Conference Calls Prior to and During Events

To facilitate the flow of information and situational awareness, conference calls will take place at planned periodically, as the dynamics of the plan require. Internal conference calls will be chaired by the AOM or nominated responsible role and will require the following in attendance or their deputy:

- Aircraft Operations Duty Manager
- Airfield Duty Manager or Airfield Duty Manager Support
- Logistics Manager (if activated)
- Airside Incident Response Team (if activated)
- Head of Airside Operations (optional)
- Winter Operations Manager (optional)
- Manager Airside Operations (optional)

The internal conference call schedule and dial in details will be promulgated at the start of each event and can be adjusted accordingly should the operational commitments dictate. It is the responsibility of the AOM in conjunction with the Airside Tactical Team, to establish an appropriate call schedule in the preparation stage of a winter event. However, the following are considered essential during a winter event:

At Snowfall T-4 hours, a conference call should be held between the Airside Tactical Team and the Airside Incident Response Team. This call should follow a prescriptive format but should include at a minimum weather, capacity of resource and operational updates. The AODM will provide the necessary information relating to impact on operations.



A further conference call should be held between the Airside Tactical Team and the Airside Incident Response Team, prior to the onset of snowfall to provide an update on the ability to deliver the Heathrow Snow Plan Airside. This call must take place once resources have been confirmed or it has become apparent that there is a risk to the resourcing of the plan. This should be no later than two hours after the initial Snowfall T-4 conference call.

11.2 External Conference Calls

During winter events, Heathrow Operations Conference Call (HOCC) schedule will continue throughout. The AODM may schedule additional conference calls to update the airlines and ground handlers on the snow clearance progress.

External Conference Call Log In Details

HOCC Telephone Number	Log in code
0800 376 8452	201434#

11.3 Promulgation of Information

The AOM is responsible for providing information to the Heathrow Communications department who will cascade via the appropriate channels.

12. Personnel

The amount of personnel that are stood up in response to a winter event is dictated by the potential impact. This support is made up of Heathrow direct employees and third-party contractors.

13. Facilities

Facilities are stood up in support of the winter event and are commensurate to the number of responding personnel that are responding. These are a combination of Welfare and Standby areas and are strategically located around the airfield.

14. Vehicles

The equipment utilised in the plan shall be serviced and maintained in accordance with manufacturer requirements, however to carry out any unforeseen maintenance, the full complement of equipment may not be available for deployment during a winter event.

Vehicles are prepositioned at Plant Call Forward Points where the operational teams conduct duty inspections. All snow equipment is a priority fault when reported during a winter event. Any defects throughout an event will be tracked by the Vehicle Coordinator who will report deficiencies to the Logistics Manager.



14.1 Snow Vehicles for Winter 2019 – 2020

The vehicles listed within this index are to be used at the discretion of the Airside Tactical Team and whilst every measure will be taken to maximise efficiency, all vehicles may not be employed at the same time.

Type of Vehicle	Quantity available
Manoeuvring Area	
Plough Sweep Blow (Primary Snow Clearing Vehicle)	23
Boom Anti/De-icer (Liquid)	8
Fastrac Tractor (Sweep)	4
Snow Cutter	2
Apron Area	
Stand Tractor (Plough Sweep)	14
Blade Tractor (Medium Plough)	12
Gator (Small Plough)	10
Combi De-icer (Liquid/Solid)	9
MultiHog (Plough/Media Sprayer)	9
Ramp/Cat Hog (Large Blade/Bucket)	8
Baggage Tractor (Small Plough)	6
Gritter	4
Support Vehicles (Logistics/people movers)	45

15. Winter Operations Teams

All personnel activated to facilitate the Heathrow Snow Plan Airside, both Heathrow and contractors, receive the necessary training to meet their role requirements. Training records will be held by Heathrow Airside Operations and the relevant contractors.

At an operational level there are five teams that are defined within a response to a winter event, they are:

- Winter Operations Event Team
- Manoeuvring Area Clearance Team
- Apron Clearance Team (Inclusive of roads/footpaths and other areas)
- Logistics Team
- Snow Dump Team

15.1 Winter Operations Event Team

The Winter Operations Team Plan Airside's response to winter events and communicate this through the publication and implementation of the Heathrow Snow Plan Airside and supporting documentation.



The Winter Operations Manager will work closely with the Airside Tactical Team to ensure that an appropriate response has been deployed with updates on resource and applications from third parties.

The Winter Operations Event Team consists of the Head of Airside Operations, Winter Operations Manager, Manager Airfield Operations and:

15.1.1 Winter Operations Support Managers

Responsible for ensuring readiness for a winter event. This is achieved by all year round learning opportunities, maintaining competence, planning and continuous improvement.

15.1.2 Resource Manager

Responsible for ensuring that all resources are in place in preparation for a winter event.

15.1.3 Resource Support Team

Responsible for supporting the Resource Manager to ensure that all resources are in place in preparation for a winter event.

15.1.4 Media Manager

Responsible for ensuring that sufficient media stocks are held on site. Responsible for the restocking during an event and monitoring throughout the season.

15.2 Manoeuvring Area Clearance Team

The Manoeuvring Area Team is led by the Airfield Duty Manager (AfDM) and will manage and coordinate the clearance and treatment of the manoeuvring area. The AfDM will plan and implement the best approach for the clearance of the Manoeuvring Area, in doing so they will consider the current operation and other influencing factors.

The Manoeuvring Area Clearance Teams consists of:

15.2.1 Runway Team (Manoeuvring Area Team 1)

To maintain aircraft operations and to maximise operational effectiveness during a winter event, each runway will be prioritised in succession to facilitate clearance and treatment. After receiving clearance from Air Traffic Control, the AfDM will instruct the team to start the procedure of clearing Runway 09L/27R (Northern Runway) first, unless the operation determines otherwise.

Once 09L/27R (Northern Runway) has been cleared and anti-icing media applied, it is envisaged that the Runway Team, subject to operational dynamics, will move to clear 09R/27L (Southern Runway), clearing a number of connecting taxiways whilst transiting to the relevant threshold. After clearing runway 09R/27L (Southern Runway) the Runway Team will proceed back to their reporting point for 09L/27R (Northern Runway), clearing the connecting taxiways along their way in readiness for further instruction from the AfDM.



The systematic clearance of each runway will be maintained until both runways are clear of contamination and it has been decided that tolerances are within given parameters. It must be recognised that continuous operation over a prolonged period will become more restrictive due to the refuelling and replenishment process and the welfare of the individuals operating the plant. Heathrow will endeavour to provide resilience, however there will be a point in which Heathrow will have to succumb to force majeure when all operational options have been exhausted.

15.2.2 Taxiway Teams (Manoeuvring Area Teams 2-5)

The taxiway clearance procedure is similar to the runway; however, to minimise clearing times and operational disruption, there can be up to four teams that are dedicated to the task. Each taxiway team is responsible for clearing and anti-icing a specified route. Each route includes a number of control points, at which the Team Leaders must request permission from Air Traffic Control before proceeding into the next area.

Where possible, the convoys plough the snow to both sides of the taxiways during taxiway clearance. If there are stands on only one side of the taxiway, the snow is ploughed to the opposite side. If there are stands on both sides, the snow is ploughed to one of the sides or to both sides, and then removed with a dedicated vehicle.

15.2.3 Fastracs

Fastracs support the Taxiway Teams and aircraft by exposing the taxiway centreline markings and lighting.

15.2.4 Snow Cutters

Snow Cutters are used to remove or manage snow stockpiles to ensure compliance with the snow bank profiles. They may also be used to load snow into trucks for removal from the manoeuvring area.

15.3 Apron Clearance Team

The Apron Clearance Team is coordinated by the AODM based on the operational objectives of the AfDM and will maintain an overview of the clearance and treatment of the apron area.

The Apron Clearance Team consists of:

15.3.1 Stand Teams

Up to fourteen Stand Teams are dispersed throughout the airfield and can clear snow from vacant or occupied stands (including inter-stand clearways), if clearing snow from an empty stand, then the stand must be closed. They also clear the tug area and hand workers will clear the head of stand area if they are not required to clear under the aircraft.

15.3.2 Blade Teams

Up to six Blade Teams can clear snow from vacant stands only, there is no need for the stand to be closed.



15.3.3 Combi De-Icers

Up to nine Combi De-Icers treat either vacant or closed stands with a mixture of liquid and solid anti-icer.

15.3.4 Head of Stand Teams

Up to six Head of Stand Teams clear and treat the head of stand areas enabling equipment and vehicle access.

15.3.5 Hogs

Up to eight Hogs clear snow ridges left by the Taxiway Teams at the back of stands ensuring that the double white lines (demarcation between the manoeuvring and apron area) at the back of the stands are clear and visible.

15.3.6 Baggage Teams

Up to six Baggage Teams are responsible for ensuring that baggage facilities and routes are kept clear of snow and ice.

15.3.7 Road Teams

Up to three Road Teams clear and treat the airside roadways.

15.3.8 Tunnel Teams

Up to three Tunnel Teams clear and treat the tunnel inclines along with other identified areas.

15.3.9 Footpath Teams

Up to six Footpath Teams are responsible for clearing snow and ice from footpaths.

15.4 Logistics Team

The Logistics Team is led by the Logistics Manager and is responsible for ensuring that adequate resource levels are available to deliver the Heathrow Snow Plan Airside.

The Logistics Team consists of:

15.4.1 Welfare Team

The Welfare Team check individuals in, issue equipment and are responsible for overseeing the welfare of all persons involved in an event. They implement the welfare strategy to ensure that all Heathrow and contractor staff have breaks.

15.4.2 Vehicle Team

The Vehicle Team ensure that vehicles and plant are available for operation. They are responsible for having an oversight of the current serviceability levels of all vehicles.

15.4.3 Logistics Support Team



The Logistics Support Team supports the Logistics Manager and wider team as required.

15.4.4 Snow Dump Team

Snow Dump Teams collect snow and transport it to either a Temporary or Permanent Snow Dump.

All activities involved in the removal of snow from the different parts of the airfield will be compliant with the provisions of GM2 ADR.OPS.B.035 as published in CAP 1168 regarding snow bank profiles.

16. Priority Areas

The priority of the HSPA is to provide a facility to which Airlines and Ground handlers can operate in a safe manner. Due to the nature of a winter event, not all areas can be cleared of snow and/or ice simultaneously, so there must be priority areas. The priority areas identified for continuous operation are;

16.1 Runways and Turnoffs/Entry points

The aim is to provide a manoeuvring area team to clear the Northern and Southern Runways in succession. However dependent on the amount of wintery precipitation this may not be possible, and the Airside Tactical Team will make an operational decision on which runway is to be maintained.

16.2 Taxiways

The priority will be to keep the taxiways adjacent to the runways available at all times whilst the runway/s are in operation. Taxiways for stand access will be maintained by manoeuvring area teams and will either be at set routes or on a dynamic basis.

16.3 Ramp areas

These will be cleared in a methodical manner or on an 'as when available' basis. Stand availability is determined by a number of factors, with the more in demand stands being prioritised to maintain and efficient operation.

16.4 All other areas

Other areas will be serviced by teams on a route basis. Teams will follow prescribed routes, enabling the clearance of footpath, roads, access and service areas.

These areas will include but are not limited to;

RVP's

Fire Station Forecourts

Emergency access areas

Note: the above areas can be requested ad-hoc and will be cleared, ensuring all emergency responses are not hindered.



17. Media

Consumable product levels will be monitored by the Media Manager. It is Heathrow's policy to hold 100% stock levels prior to an event. During a winter event, deliveries will be scheduled to coincide with anticipated usage to maximise stock levels. Mechanisms are in place to report usage and these will provide the necessary information on the requirement to re-stock.

The following products will be used to anti-ice/de-ice/pre-treat when necessary:

17.1 Liquid Anti-icing Media

Liquid Anti-Icing is commonly referred to as 'Glycol' or 'Konsin'. Liquid Anti-Icer is a glycol-based, water-soluble, anti-icing fluid, with a comprehensive corrosion inhibitor package.

Liquid Anti-Icer is particularly suited to runway anti/de-icing and will prevent the settling of ice or snow or will quickly remove any ice that has formed by converting it into a Liquid Anti-Icer/water solution with a markedly lower freezing point.

17.2 Solid De-icing Media

Solid De-Icer is commonly referred to as 'Prill' or 'Clearway 6S' (Trade Name) and is a sodium acetate. Solid De-Icer melts ice by depressing the freezing point of water and is active at temperatures to -15° C.

Due to its irregular granular shape, it will remain where spread. It can be used pre-wetted in combination with corresponding liquid de-icers to obtain a rapid initial de-icing effect. It can also be applied to snow and ice with a liquid additive to give a long residual de-icing effect under extreme weather conditions.

Note: This product must not be considered as a pre-event preparation anti icing product unless it is pre-wetted.

17.3 Aviation Grade Grit

Aviation Grade Grit is commonly referred to as 'Grit'. It is a product that is considered to be safe to use in an airside environment and it contains no sodium, which is corrosive to aircraft. Aviation Grade Grit is dispensed onto the airside road network to provide traction, it may also be put down on footpaths and other areas by hand or spreader barrow.

17.4 Rock salt

Rock Salt is a sodium chloride and is only used to treat water points or areas of standing water, it is not to be used in the vicinity of aircraft operating areas.



18. Environmental and Energy Policy

The Environment and Energy Policy is available on the Heathrow Airport website.

https://www.heathrow.com/file_source/Company/Static/PDF/Communityandenvironment/Environment%20and_Energy_Policy.pdf

19. Anti-Icing of Airfield Surfaces

Anti-icing of surfaces may occur at any time throughout the winter period to counter hoar-frost and/or ice. Anti-icing may not necessarily be linked to a forecast of snow. In these circumstances, the anti-icing treatment of operating surfaces will be carried out using the operational teams with additional resource allocated if applicable.

19.1 Anti-Icing of the Manoeuvring Area

Up to five anti-icing teams will be deployed to pre-treat the manoeuvring area along dedicated routes.

19.2 Treatment of Airside Roads and Tunnels

When a winter event is forecasted, pre-treatment will be carried out on the airside road network along pre-defined routes which is inclusive of ramps to the Airside Road Tunnel (ART), Cargo Tunnel, Eastern Apron Access Road Tunnel (EAART), Northern Apron Access Road (NAAR) and the Southern Apron Road (SAR). Fire station forecourts will also be treated.

19.3 Anti-Icing of Rendezvous Points

When a winter event is forecasted, pre-treatment of Rendezvous points will be anti-iced to ensure safe access and egress points for the emergency services.

19.4 Anti-Icing of Aircraft Stands

When a winter event is forecasted pre-treatment of all available aircraft stands will be carried out using a number of dedicated anti-icing vehicles.

19.5 Anti-Icing of Footpaths

Pre-treatment of airside footpaths will be carried out prior to a forecasted winter event.

20. Remote Aircraft De-Icing

Dedicated areas are available at Heathrow for the remote de-icing of aircraft, this is a collaborative process that involves Heathrow, Airlines with associated support functions and De-icing Service Providers. It is imperative that the relevant disciplines are engaged in providing the necessary resource for aircraft anti/de-icing to take place.

The procedures and processes relating to Aircraft De-Icing are detailed in the Heathrow Aircraft De-icing Plan (HADIP).



21. Aerodrome State and Conditions of Movement Area

Snow bank profiles must meet the provisions of CAP1168 at UKGM2 ADR.OPS.B.035 Operations in winter conditions

21.1 Runway State Assessment

Information on the runway surface conditions and operational availability will be gathered by the Airfield Operations Department during operational activities. Runway friction measurements will not be attempted on a contaminated runway. Runway condition assessments on all runways will be managed accordingly during snowfall. The results of the condition assessment will be reported by the AfDM for the issuing of a SNOWTAM.

Regardless of air traffic movements, the assessment will cover the promulgated runway length and width. Account will be taken of the cleared width of the runway in the case of contamination. The assessed area will be divided up into equal thirds and reported as Touch Down, Mid-Point and Stop End.

The AfDM will use the 'Estimated Braking Action Matrix' to decide the information to be passed onto ATC and published within the SNOWTAM.

Estimated Braking Action Matrix

Depth	Water	Slush	Snow (Wet)	Snow (Dry)	Compacted Snow (Any Depth)	Ice/Rime	Frost
>19mm	Flooded	STOP*	STOP*	STOP*	Warmer than -15°C		
19mm to >13mm	Flooded	STOP*	STOP*	STOP*	Medium		N/A
13mm to >3mm	Medium Poor	Medium Poor	Medium	Medium	<15°C and colder =	Poor	
3mm to 0mm	Good	Good	Good	Good	Good to Medium		Good
Dry	The runway is not affected by water, slush or snow						

*A new assessment must be made whenever conditions are likely to have changed, consideration must be taken for the '3-Kelvin Spread Rule'.

The Nature of Surface Covering



The following terms will be used to describe deposits on the surface of an aerodrome:

1. Ice – water in its solid state, it takes many forms including sheet ice, hoar frost and rime;
2. Dry snow – a condition where snow can be blown if loose or, if compacted by hand, will fall apart again upon release;
3. Compacted snow – snow which has been compressed into a solid mass, that resists further compression and will hold together or break-up into chunks if picked up;
4. Wet snow – a composition which, if compacted by hand, will stick together and tend to, or does, form a snowball;
5. Slush – a water saturated snow which, with a heel and toe slap down action with the foot against the ground, will be displaced with a splatter;
6. Associated standing water – standing water produced as a result of melting contaminant in which there are no visible traces of slush or ice crystals.

21.2 Taxiway State Assessment

Information on the taxiway surface conditions and operational availability will be gathered by the Airside Safety Department - Operations during operational activities. The assessment of the taxiway surface conditions will be made against the RAG Matrix. This will be included in the published SNOWTAM.

RAG Matrix

Grey – Closed (short-term - Temp use for snow stockpiling)

Red – Limited access

Amber – Usable with caution (cleared but not treated)

Green – Usable with caution (cleared and treated)

21.3 Stand State Assessment

Following clearance of a stand a Terminal Supervisor or Blade Team Leader will attend the stand and conduct a stand status assessment against the RAG Matrix. The stand status will be updated on the Situational Awareness Map (SAM).

RAG Matrix

Black – Closed (long-term – Work site)

Grey – Closed (short-term - Temp use for snow stockpiling)

Blue – Clearance/treatment operations are in progress

Red with hatching – Not available

Red – Limited access

Amber – Usable with caution (cleared but not treated)

Green – Usable with caution (cleared and treated)

Purple – De-iced but not cleared



21.4 Other Areas State Assessment

Terminal Leads will support Airfield Operations in patrolling and monitor all other areas within their work areas and will ensure that operational effectiveness of the areas is maintained. The assessment of the surface conditions will be made against the RAG Matrix.

RAG Matrix

Grey – Closed (short-term - Temp use for snow stockpiling)

Red – Limited access

Amber – Usable with caution (cleared but not treated)

Green – Usable with caution (cleared and treated)

22. Dissemination of Information

Internally, the information on surface conditions in which aircraft and support vehicles use, will be provided by request from the AIRT. The AIRT will be informed by the Airside Tactical Team on the current state of progress of a winter event.

Externally, information on current surface conditions at Heathrow Airport will be disseminated by SNOWTAM in accordance with the rules contained in UK AIP GEN 3.1 Aeronautical Information Services and the Eurocontrol SNOWTAM Harmonisation Guidelines.

SNOWTAM information will include:

- The cleared length and width of runways if less than the published length
- Types and depths of contaminants present on runway surfaces
- Estimated breaking action
- Presence of critical snowbanks
- Availability and condition of associated taxiways and aprons.

The maximum validity of a SNOWTAM is 24 hours. A SNOWTAM should be issued whenever there is a significant change in conditions. The following changes relating to runway conditions are considered as significant:

- A change in the co-efficient of friction of about 0.05;
- Change in depth of deposit greater than the following:
 - 20 mm for dry snow;
 - 10 mm for wet snow;
 - 3 mm for slush;
- A change in the available length or width of a runway of 10 per cent or more;
- Any change in the type of deposit or extent of coverage which requires re-classification in items F to T of the SNOWTAM;



- When critical snow banks exist on one or both sides of the runway, any change in height or distance from the centre line,
- Any change in the conspicuousness of runway lighting caused by obstructing of the lights; and
- Any other conditions known to be significant according to experience or local circumstances

SNOWTAMs will be sequentially numbered from the commencement of each Winter Season and therefore reset annually on the 1st October.

23. Memorandum of Understanding and Self Help

It is the responsibility of Airlines and Ground Handlers to clear away their equipment from stands prior to a winter event commencing. To assist with efficient clearance activities the Airlines and Ground Handlers will be requested to carry out this function prior to the onset of the event, and in accordance with information on the forecasted weather being cascaded either via email, airport communicator or phone/conference call.

Airlines and Ground Handlers are also required to co-operate with pushing back aircraft off stand if requested by Heathrow, in enabling full stand clearance activities to proceed; this may include both facilitating pushback and brake riding responsibilities.

Airlines should liaise with their Stand Planning Team (Terminal Coordinator) who will be a member of the Aircraft Operations Unit and will be working in conjunction with the Operations Controllers, regarding the tactical and commercial importance of each stand. For example, an occupied stand with an immediate requirement will take priority over any other occupied stand.

23.1 Self Help

To support a safe and efficient operation, Heathrow will provide anti/de-icing media and tools for stakeholders to use, enabling them to self-help with clearing equipment, equipment parking areas, pedestrian areas and an aircraft's immediate footprint. This will enable safer working areas for stakeholders and provide safe passage for passengers.

Stillage areas and areas given over for parking equipment are the responsibility of the relevant stakeholder. These areas are currently under evaluation and efficiencies are being worked upon.

Heathrow has strategically placed modular units for the sole use of stakeholders. These units contain equipment including shovels, brooms, manual ploughs, hand scoops to aid clearance of snow, and one anti-icing hand delivery trolley for the prevention of the build-up of ice and snow.

The modular units also provide solid de-icer to be used where there is snow or ice present and Aviation Grade Grit to be used to enhance ground friction for both footpath and road users.



Stakeholders should use the equipment and media provided throughout the winter event as necessary. As a minimum, gloves should be worn when handling solid de-icer. It is recognised the level of self-help support is subject to operational circumstances and time of day.

Modular units are easily identifiable and are strategically placed around the airfield: Note the placements of these units are based on the operational requirements and effectiveness. If service improvements are necessary, then locations and number of units may change. A list of locations will be published in the relevant Operational Safety Instruction (OSI).

Each Modular Unit should contain the following:

Equipment	Quantity available
SnoDozer (Manual Plough)	2
Ergonomic Shovel	2
Large Shovel	2
Wide Brush	1
Ice Scraper	1
Scoop	1
Bucket	2

Each Modular Unit should also be flanked by a dispenser/s that are there to provide solid anti/de-icing media and Aviation Grade Grit.

NOTE: Every individual is responsible for maintaining the required Health and Safety standards whenever working airside during a winter event.



24. Deactivation

Following the completion of clearance operations due to the cessation of snowfall, through a positive forecast from the meteorological providers and in consultation with the Airside Tactical Team, the Airport Operations Manager will take the decision to cease the Wider Heathrow Snow Plan.

Heathrow contingency teams and equipment will remain on shift until the airfield is:

- fully operational;
- all snow is clear from operating surfaces;
- the snow dumps operation has been concluded, equipment and resources are checked and made ready in preparation for any subsequent event.

Staff will not be released until authorised by the Airside Tactical Team, Winter Operations Manager and Head of Airside Operations.

Dependant on the amount and volume of snow on the airfield, snow removal activities may continue for some days after the cessation and may involve areas being temporarily unavailable, enabling the safety of those clearing the remainder of the snow.



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