



Adverse Weather

Operational Safety Instruction

Adverse Weather

28th January 2020

ASWeather_OSI_054

v2.0

It is the responsibility of all employers to ensure that relevant OSIs are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in any doubt should consult their Supervisor or Manager.

1. Introduction

- 1.1** This Instruction sets out the precautions to be taken by members of the Airside community before, and during, adverse weather conditions. The purpose of these precautions is for the protection of aircraft and the safety of staff working on the movement area.
- 1.2** It is expected that all operating companies will produce their own procedures in support of this Instruction.
- 1.3** This Instruction covers the following weather conditions;
- 1.3.1** Strong winds;
 - 1.3.2** Extremes of temperature (Heat / Ice)
 - 1.3.3** Heavy rain / Thunderstorms.
- 1.4** In addition, there are existing OSIs which provide further information on some of the subjects covered in this instruction. These are;
- 1.4.1** ASWeather_OSI_053 Winter Hazards and the Aerodrome Snow Plan
 - 1.4.2** ASEnv_OSI_057 De-icing Fluid Management Reporting Procedures
 - 1.4.3** ASWeather_OSI_052 Low Visibility Operations
- 1.5** ASWeather_OSI_054 v1.0 is hereby cancelled.



2. Definitions

Abbreviation	Description
ASD	Airside Safety Department
AOP	Airport Operating Plan (Formerly ACDM)
FOD	Foreign Object Debris
ULD	Unit Loading Device

3. Safety Procedure

3.1 Communication of Weather Warnings

3.1.1 A weather warning will be issued by the Met Office when the conditions are, or are expected to be;

3.1.1.1 Strong Winds – mean wind speed of 20kts and/or gusts of 28kts.

3.1.1.2 Gale – mean wind speed of 34kts and/or gusts of 43kts.

3.1.1.3 Ground and Air Frost – surface and air temperatures of zero or lower, and appropriate air conditions for frost formation.

3.1.1.4 Thunderstorm Warning Level MODERATE – when thunderstorms are occurring within a 40km radius of Heathrow Airport.

3.1.1.5 Thunderstorm Warning Level HIGH – when thunderstorms are expected to affect the airport within 5 nautical miles within the next 15 minutes.

3.1.1.6 Heavy Rain – risk of seeing 15mm or more rain in a 12-hour period

3.1.2 Heathrow will communicate weather warnings to the Airside community via the following methods;

3.1.2.1 A message will be placed on the AOP, detailing the weather warning(s) and the times of validity.

3.1.2.2 ASD will contact directly large ground handlers (or airlines if self-handling) and service providers to inform them of the warning.

3.1.2.3 The Heathrow Met Office will present weather warnings, when forecast, on the Heathrow Operational Conference Calls, chaired by the Aircraft Flow Manager, at 0900, 1330 and 2030.

3.1.2.4 A generic text message/email will be sent to the community.



3.2 Strong Winds

- 3.2.1** Strong winds can cause unsecured items to be moved in an uncontrolled manner. This can lead to the possibility of significant damage being caused to aircraft on the manoeuvring area or on stand. The normal expected precautions against FOD damage become all the more critical in adverse weather situations.
- 3.2.2** Loose items also present a serious engine ingestion risk during strong wind conditions. The potential impact on an aircraft, particularly during critical phases of flight (take-off and landing) is highly significant.
- 3.2.3** When a strong wind warning has been issued, or when strong wind conditions are experienced, the following actions must be taken by Airside users;
- 3.2.3.1** Extra vigilance must be exercised to prevent accumulations of FOD. This means that all loose items should be removed and/or safely stowed. Plastic bags and sheeting are a particular threat to engines and should have particular attention paid to them.
 - 3.2.3.2** All covers should be closed, where possible, on waste containers. Any containers which are full and at risk of losing materials should not be used and reported to the ASD without delay.
 - 3.2.3.3** All ground equipment and vehicles airside which are not in immediate use, must be parked in areas provided, with the parking brake applied. Consideration should be given, where possible, to parking vulnerable equipment (such as mobile steps) facing into wind, or in a sheltered position.
 - 3.2.3.4** Equipment in use on stand must be secured and have parking brakes applied, particularly before raising hi-lifts or steps. Equipment without parking brakes should be chocked.
 - 3.2.3.5** All ULD's must be secured. If there is a requirement for ULD's to be left on the ground it must first be approved by the Airside Standards Team.
 - 3.2.3.6** All loose items in construction work sites must be secured or removed. Light stored materials may need relocated into sheltered storage on exposed worksites.



- 3.2.3.7** Staff observing any obstruction, loose materials, or equipment moving in the wind, should report this without delay to the Airside Operations on 020 8745 0802, irrespective of ownership. If safe, and possible to do so, staff should also take action to secure it.
- 3.2.3.8** Ground operators should take extra care when towing aircraft and should refer to the operating company's respective operations manual for more specific guidance.
- 3.2.3.9** Aircraft rubbish and equipment which tends to be unsecured, such as bagged cabin waste, headsets and blankets, must be taken immediately from the aircraft to its final destination (bin/vehicle) and not placed on the ground.
- 3.2.3.10** All aircraft must be chocked as appropriate to the wind conditions and in accordance with the operating company's operating procedures.
- 3.2.3.11** Adaptation of standard policy should be implemented to ensure cones do not create a safety issue during periods of adverse weather. Each operating company should use cones in accordance with their respective strong wind policy.
- 3.2.3.12** Due to the operating limits of Heathrow's airbridges, some or all may be withdrawn from service during very strong winds (limits vary between 41kts and 54kts). Heathrow's Engineering Teams will stabilise the bridge and turn them, where possible, towards the building. If airbridge operations are not available, a message will be placed on the AOP to this effect.
- 3.2.3.13** Heathrow recommends that extra caution should be taken if using pre-conditioned air facilities when strong wind warnings are in effect. Ground handlers should assess the associated risk and not attach the unit if risks are too high.
- 3.2.3.14** Drivers of large or high sided vehicles are reminded to take particular care when driving on exposed airside roads or on uncontrolled crossings.



3.3 Thunderstorms/Heavy Rain

3.3.1 Thunderstorms can cause significant disruption to operating schedules, and represent a hazard to airport operations due to the potential for;

- 3.3.1.1** Lightning bolts striking aircraft, vehicles, buildings or persons
- 3.3.1.2** Very heavy rain or hail
- 3.3.1.3** Poor visibility
- 3.3.1.4** Strong, gusty winds
- 3.3.1.5** Interference with radio transmissions or compasses

3.3.2 When a thunderstorm warning is issued, the following actions must be taken by Airside users;

- 3.3.2.1** Consideration should be given to the strong wind warning requirements in section 3.2 above.
- 3.3.2.2** Operators should expect interruptions to refuelling operations and some ground handling activities whenever lightning is in the vicinity of the airfield.
- 3.3.2.3** During or immediately after heavy rain drivers should be aware that longer braking distances will be required and that paint markings may not be as visible.
- 3.3.2.4** Staff observing any hazards such as flooding or damage to infrastructure should report this to the Airside Operations on 020 8745 0802 without delay.
- 3.3.2.5** All companies should ensure that their risk assessments for operating in adverse weather are fit-for-purpose. These must be made available to Airside Operations upon request.



3.4 Extremes of Temperature

3.4.1 Winter weather brings extra hazards. During extreme cold periods where ice or snow is a risk, the following actions must be taken by Airside users;

- 3.4.1.1** Pedestrians and drivers should be aware that areas which have been treated with anti-icing or de-icing products will be more slippery than usual initially, particularly on painted areas. Extra care should be taken with an expectation that journey times may be increased.
- 3.4.1.2** Slippery areas should be addressed immediately using the 'self-help' facilities at the head of stand.
- 3.4.1.3** Staff should pay particular attention to vehicle daily inspections during cold weather. Check the operation of lights, battery and top up anti-freeze.
- 3.4.1.4** Do not leave vehicles unattended with engines running.
- 3.4.1.5** Take extra care when driving, especially at junctions and approach ramps to tunnels. Bear in mind that vehicles may require more distance in which to stop.
- 3.4.1.6** Operators of water-carrying vehicles should ensure that spillages are prevented.
- 3.4.1.7** Airside users must be familiar with the Aerodrome Snow Plan and its requirements. A copy is available via ASWeather_OSI_053 Winter Hazards and the Aerodrome Snow Plan.
- 3.4.1.8** Staff observing any hazard which they cannot treat themselves should report this to the Airside Operations on 020 8745 0802 without delay. During a snow event (i.e. when snow is falling or is imminent) hazards should be reported to the appropriate Incident Response Team – contact details are provided in ASWeather_OSI_Winter Hazards and the Aerodrome Snow Plan.



3.4.1.9 Hot weather also brings extra hazards. Staff should be aware that when driving vehicles, particularly heavy vehicles, asphalt surfaces may soften. Report any surface faults to Airside Operations on 020 8745 0802.

3.5 Enforcement

3.5.1 Heathrow Airside Operations (ASD or Airside Standards Team) will carry out regular patrols during adverse weather. Failure to comply with the requirements of this instruction, or failure to rectify (within a reasonable timescale) an unsafe condition when requested to do so by Airside Operations, will lead to penalties being issued under the Airside Occurrence Notice scheme.

3.6 Enquiries

3.6.1 All enquiries on this notice should be directed to the Heathrow AfDM on 020 8745 7373, airfield.duty.manager@heathrow.com



4. References

ASWeather_OSI_053 Winter Hazards and the Aerodrome Snow Plan

ASEnv_OSI_057 De-icing Fluid Management Reporting Procedures

ASWeather_OSI_052 Low Visibility Operations

