



Operational Safety Instruction

De-icing Fluid Management Reporting and Operational Procedures

16th September 2026

ASEnv_OSI_057

Version 3.0

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 The purpose of this Operational Safety Instruction (OSI) is to make De-icing Service Providers (DSPs) aware of their responsibilities with respect to de-icing media usage, supply, communication and storage.
- 1.2 Heathrow has legislative duties to monitor and regulate its operation, as listed in Section 14 of this OSI. The collection of de-icing fluid usage data contributes to a database relating to de-icing fluid management at Heathrow, including daily and monthly records.
- 1.3 In addition, this document also seeks to remind all airport companies of their responsibilities and the minimum requirements in relation to the prevention of chronic pollution incidents.
- 1.4 This OSI should be read in conjunction with the reference documents as stipulated therein, if applicable. All current OSIs can be found via the link [here](#) or via the Quick-response (QR) code below.



- 1.5 Red bars have been added to the left-hand side of this document to draw the reader's attention to where changes or clarifications have been incorporated.
- 1.6 In this document, Heathrow Airport Limited/HAL has been changed to Heathrow. To avoid repeated red bars, none are added for this change in this document.
- 1.7 ASEnv_OSI_057 De-icing Fluid Management and Operating Procedures v2.0 is hereby cancelled from the date of publication of this OSI.



2. Definitions

Abbreviation	Description
AOL	Airport Operations Licence
AOP	Airport Operations Plan
AS	Aerospace Standard
ATC	Air Traffic Control
DSP	De-icing Service Provider
GHSP	Ground Handling Service Provider
GOL	Ground Operations Licence
HADIP	Heathrow Aircraft De-icing Plan
MSDS	Material Safety Data Sheet
PCS	Pollution Control System
RTF	Radiotelephony
SAE	Society of Automotive Engineers

- 2.1** For this OSI, “*Closed*” refers to when a de-icing pad is not in use and is under the control of ATC.
- 2.2** For this OSI, “*Standby*” refers to when a de-icing pad is under the control of ATC, with de-icing vehicles present.
- 2.3** For this OSI, “*Open*” refers to when a de-icing pad is handed over from ATC to the control of the de-icing operator, with de-icing vehicles in the marked ‘Safety Zones.’

3. Overview

- 3.1** Heathrow is committed to minimising the impact of its business on the environment and local communities through the continuous improvement of environmental performance and by acting responsibly.
- 3.2** The chemicals used for all aircraft and most airfield de-icing practices are predominately glycol-based and after application to aircraft, shear off the applied surfaces into the airport surface water drainage system. They are fully bio-degradable but as they degrade, they remove oxygen from the water which can damage the aquatic ecosystem.
- 3.3** Heathrow operates a Pollution Control System (PCS) to treat and/or store surface runoff contaminated with de-icing fluid before it is discharged back into the waterways or sewers. The main part of the treatment process is the removal of de-icing fluid from water by the use of biological processes.



- 3.4** Under **The Water Resources Act 1991's Section 85**, all airport companies must be aware that it is now a criminal offence to cause or knowingly permit the pollution of rivers. A list of reference documentation can be found in **Section 14** of this OSI.
- 3.5** DSPs are required to work to the principles agreed upon in the Heathrow Airport De-icing Plan (HADIP). DSPs are also required to have signed the De-icing Code of Practice and should be aware of all relevant documents issued by Heathrow (and any subsequent amendments) relating to de-icing fluid use.
- 3.6** DSPs must provide evidence to Heathrow that they are compliant with SAE International Standards [AS6285F](#) (Aircraft Ground De-icing processes) and [AS6286D](#) (Training and Qualification Program for De-icing of Aircraft on the Ground).
- 3.7** The current HADIP and Heathrow Snow Plan - Airside are available from the Airside website:
www.heathrow.com/company/team-heathrow/airside/useful-publications/winter-operations.

4. Operational Awareness

- 4.1** DSPs must ensure they operate in accordance with their: -
- Heathrow GOL
 - Operating procedures
 - Airline's requirements
- 4.2** In case of an emergency occurs during the de-icing process, including at the pads (JEDI / VADER), or during de-icing on a stand, the DSPs must follow the relevant OSI ASEnv_OSI_059 Spillage and Incident Reporting Procedures to report the incidents or accidents.
- 4.3** The person responsible for the de-icing process must be clearly designated, trained and qualified. Whenever a need for de-icing an aircraft is initiated, either by this designated person or the Pilot-in-Command, this person is responsible for the correct and complete de-icing treatment of the aircraft. The final responsibility for accepting the aircraft after de-icing rests, however, with the Pilot-in-Command.

5. Remote Pad De-icing Facilities JEDI and VADER

- 5.1** The planned use of JEDI or VADER will be promulgated through the Heathrow Operational Conference Call (HOCC) and AOP.
- 5.2** Free-ranging through JEDI or VADER **must not take place** when the pad is 'open' or in 'standby' which includes being occupied by aircraft and/or de-icing vehicles. This includes times when the de-icing vehicles are present in the marked 'Safety Zones'.



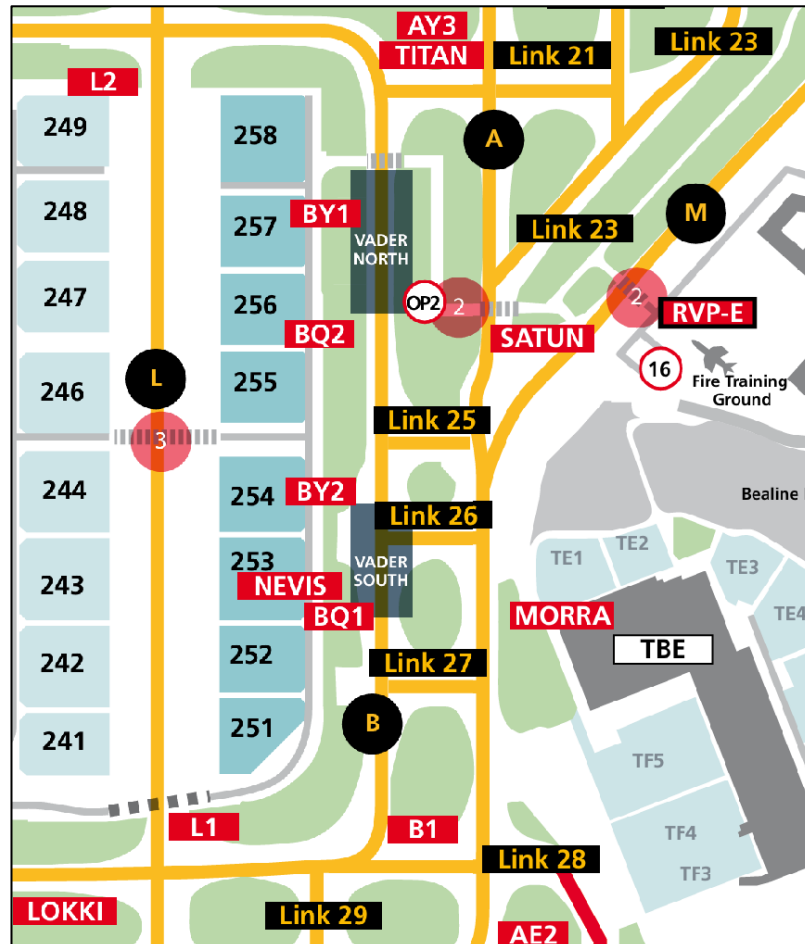
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- This map illustrates the proposed Airside Road Tunnel and its connection to the existing road network. The tunnel is shown as a grey structure labeled 'Airside Road Tunnel' and 'JEDI SOUTH'. It connects to the 'JEDI DELTA' area. The map includes various road links and stations:
- Link 36** (Red line) connects to **Link 35** (Yellow line).
 - Link 35** (Yellow line) connects to **Link 36** and **Link 37** (Red line).
 - Link 37** (Red line) connects to **Link 38** (Red line).
 - Link 38** (Red line) connects to **Link 39** (Red line).
 - Link 39** (Red line) connects to **Link 40** (Red line).
 - Link 40** (Red line) connects to **Link 41** (Red line).
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 - Link 42** (Red line) connects to **Link 43** (Red line).
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 - Link 44** (Red line) connects to **Link 45** (Red line).
 - Link 45** (Red line) connects to **Link 46** (Red line).
 - Link 46** (Red line) connects to **Link 47** (Red line).
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 - Link 48** (Red line) connects to **Link 49** (Red line).
 - Link 49** (Red line) connects to **Link 50** (Red line).
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 - Link 51** (Red line) connects to **Link 52** (Red line).
 - Link 52** (Red line) connects to **Link 53** (Red line).
 - Link 53** (Red line) connects to **Link 54** (Red line).
 - Link 54** (Red line) connects to **Link 55** (Red line).
 - Link 55** (Red line) connects to **Link 56** (Red line).
 - Link 56** (Red line) connects to **Link 57** (Red line).
 - Link 57** (Red line) connects to **Link 58** (Red line).
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 - Link 59** (Red line) connects to **Link 60** (Red line).
 - Link 60** (Red line) connects to **Link 61** (Red line).
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 - Link 62** (Red line) connects to **Link 63** (Red line).
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 - Link 69** (Red line) connects to **Link 70** (Red line).
 - Link 70** (Red line) connects to **Link 71** (Red line).
 - Link 71** (Red line) connects to **Link 72** (Red line).
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 - Link 97** (Red line) connects to **Link 98** (Red line).
 - Link 98** (Red line) connects to **Link 99** (Red line).
 - Link 99** (Red line) connects to **Link 100** (Red line).
- The map also shows various stations and landmarks:
- Station A** (Black circle with 'A')
 - Station B** (Black circle with 'B')
 - Station C** (Black circle with 'C')
 - Station D** (Black circle with 'D')
 - Station E** (Black circle with 'E')
 - Station F** (Black circle with 'F')
 - Station G** (Black circle with 'G')
 - Station H** (Black circle with 'H')
 - Station I** (Black circle with 'I')
 - Station J** (Black circle with 'J')
 - Station K** (Black circle with 'K')
 - Station L** (Black circle with 'L')
 - Station M** (Black circle with 'M')
 - Station N** (Black circle with 'N')
 - Station O** (Black circle with 'O')
 - Station P** (Black circle with 'P')
 - Station Q** (Black circle with 'Q')
 - Station R** (Black circle with 'R')
 - Station S** (Black circle with 'S')
 - Station T** (Black circle with 'T')
 - Station U** (Black circle with 'U')
 - Station V** (Black circle with 'V')
 - Station W** (Black circle with 'W')
 - Station X** (Black circle with 'X')
 - Station Y** (Black circle with 'Y')
 - Station Z** (Black circle with 'Z')
- The map also shows various landmarks and features:
- Landmark 1** (Red rectangle with '1')
 - Landmark 2** (Red rectangle with '2')
 - Landmark 3** (Red rectangle with '3')
 - Landmark 4** (Red rectangle with '4')
 - Landmark 5** (Red rectangle with '5')
 - Landmark 6** (Red rectangle with '6')
 - Landmark 7** (Red rectangle with '7')
 - Landmark 8** (Red rectangle with '8')
 - Landmark 9** (Red rectangle with '9')
 - Landmark 10** (Red rectangle with '10')
 - Landmark 11** (Red rectangle with '11')
 - Landmark 12** (Red rectangle with '12')
 - Landmark 13** (Red rectangle with '13')
 - Landmark 14** (Red rectangle with '14')
 - Landmark 15** (Red rectangle with '15')
 - Landmark 16** (Red rectangle with '16')
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 - Landmark 27** (Red rectangle with '27')
 - Landmark 28** (Red rectangle with '28')
 - Landmark 29** (Red rectangle with '29')
 - Landmark 30** (Red rectangle with '30')
 - Landmark 31** (Red rectangle with '31')
 - Landmark 32** (Red rectangle with '32')
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 - Landmark 37** (Red rectangle with '37')
 - Landmark 38** (Red rectangle with '38')
 - Landmark 39** (Red rectangle with '39')
 - Landmark 40** (Red rectangle with '40')
 - Landmark 41** (Red rectangle with '41')
 - Landmark 42** (Red rectangle with '42')
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 - Landmark 51** (Red rectangle with '51')
 - Landmark 52** (Red rectangle with '52')
 - Landmark 53** (Red rectangle with '53')
 - Landmark 54** (Red rectangle with '54')
 - Landmark 55** (Red rectangle with '55')
 - Landmark 56**

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5.6 The VADER De-icing Pads' locations are: -

5.6.1 'VADER North' – Bravo (East) Taxiway between Link 21 and Link 25

5.6.2 'VADER South' – Bravo (East) Taxiway between Link 25 and Link 27



5.6.3 Appendix D of this OSI shows the locations of VADER in more detail.

6. Pre-Season / In-Season Reporting

6.1 All DSPs undertaking de-icing operations must complete the 'Operation Specification Sheet,' (see Appendix A of this OSI), prior to the winter season starting. They must confirm with Heathrow which airline(s) they will be handling for the winter season as well as the following details:

- 6.1.1 De-icer type to be used
- 6.1.2 Product Specification Sheet
- 6.1.3 Material Safety Data Sheet (MSDS)
- 6.1.4 Control of Substances Hazardous to Health (COSHH) Risk Assessment
- 6.1.5 Where appropriate, the airline/aircraft owner in receipt of the de-icing service

6.2 This information and any subsequent changes to the operation must be communicated to Heathrow at airside_environment@heathrow.com.



7. De-icing Operational Reporting

- 7.1 Any de-icing operation undertaken must be reported on the Aircraft De-Icing Report Form - see **Appendix B** of this OSI.
- 7.2 The completed form must be e-mailed on a monthly basis to Heathrow via airside_environment@heathrow.com. Failure to submit this data may result in a licence infringement notice to the DSPs against their GOL.

Note: When using any products, Heathrow requires the volume in Litres for fluids/liquids.

- 7.3 De-icing fluid recovery operations will be recorded daily by the Airfield Duty Manager (AfDM).

8. Environmental Responsibilities

- 8.1 DSPs are reminded that it is their sole responsibility to ensure familiarity with the safe and proper use of any hazardous materials and processes for de-icing. They must also take necessary precautionary measures to ensure the health and safety of all personnel involved in this process.
- 8.2 It is prohibited to dispose of waste de-icing fluid into the surface or foul water drainage systems. This applies to both neat and diluted products. To support the removal of waste de-icing fluid, a specialist hazardous waste contractor should be engaged.
- 8.3 All practical steps should be taken to avoid and minimise the risk of pollution by means of training, awareness of legislation, good maintenance of equipment and best practices.

9. Storage and Fluid Stock Requirements

- 9.1 DSPs are to remain compliant with the GOL regarding storage and fluid stock levels.
- 9.2 DSPs are responsible for the provision of correct storage facilities inclusive of adequate containment/bunding capable of holding 110% of the total capacity of the storage vessel or self-bunded tanks. DSPs must ensure that the fluid is stored in bunded vessels (not road trailers) which are compliant with the Control of Pollution (Oil Storage) (England) Regulations 2001 and have been approved by Heathrow. All de-icing fluid storage vessels must be positioned at the designated areas approved by Heathrow. The selection of these sites shall include access for safe delivery and dispensing, consideration of drainage and, the risk of impact damage to storage containers. Should additional storage be required, contact should be made to airside@heathrow.com.



10. De-icing Communications on JEDI/VADER

- 10.1** Matrix boards should be used to communicate with the flight crew. If matrix boards are not available, standard ICAO hand signals and/or RTF should be used as an alternative.
- 10.2** After de-icing completion and prior to moving the aircraft, the flight crew must receive an “all clear” signal from the ground crew indicating that all de-icing related equipment is away from the aircraft.

11. Emergency Procedures

- 11.1** In the event of loss of communication with the flight crew, DSP personnel must be able to communicate via recognised ICAO hand communication signals.
- 11.2** If contact is made between the de-icing equipment and the aircraft, the DSP must inform Heathrow via 222 (Heathrow’s internal phone) or 0208 759 1212 (external phone) and the Pilot-in-Command immediately to provide specific information about where the contact was made. Pilot-in-Command will inform ATC of the contact. The equipment involved shall remain in position until an investigation can occur to inspect the affected area for damage.
- 11.3** For more information on Heathrow’s incident and accident reporting procedure, reference should be made to ASSMS_OSI_067 Airside Incident Reporting.

12. Compliance

- 12.1** DSPs must attend all Aircraft De-icing Working Group meetings, before, during and after the winter season.
- 12.2** DSPs/Airlines/Ground Handlers must comply with all normal operating procedures relating to the use of time stamps via the AOP system. All de-icing time stamps must be accurately maintained and updated dynamically when changes occur. Failure to update timestamps accurately could result in inaccurate Target Start-up Approval Time (TSAT).
- 12.3** Each GHSP/Airline should include a training programme for flight crew, dispatchers and ground personnel in de-icing procedures. The operator should ensure that these personnel are familiar with procedures and other required information. The training programme itself should have a Quality Assurance (QA) system to maintain a high level of competence following the guidelines and recommendations published in SAE [AS6286D](#) – “Training and Qualification Program for De-icing of Aircraft on the Ground”.



13. Enquiries

Any questions regarding the contents of this instruction or the subject matter should be referred to the Heathrow Airside Operations team at airside@heathrow.com and for coordination of operation and other critical matters should be referred to airfield.duty.manager@heathrow.com.

14. References

- 14.1 [The Control of Pollution \(Oil Storage\) \(England\) Regulations 2001](#)
- 14.2 [The Environment Act 2021](#)
- 14.3 [The Environmental Permitting \(England & Wales\) Regulations 2016](#)
- 14.4 [The Water Industry Act 1991](#)
- 14.5 [The Water Resources Act 1991](#)
- 14.6 ASEnv_OSI_059_Spillage and Incident Reporting Procedures
- 14.7 ASEnv_OSI_056_Pollution Prevention
- 14.8 [Ground Operations Licence](#) (including all schedules)
- 14.9 [Heathrow Aircraft De-icing Plan \(HADIP\)](#)
- 14.10 [ICAO document 9640 Manual of Aircraft Ground De-icing/Anti-icing Operations](#)
- 14.11 SAE International standard [AS6285F](#) (Aircraft Ground De-icing/Anti-icing processes)
- 14.12 SAE International standard [AS6286D](#) (Training and Qualification Program for De-icing/Anti-icing of Aircraft on the Ground)





15. Appendices

Appendix A – Operation Specification Sheet

Operation Specification Sheet	
Company Name:	
Contact Name(s):	
Position(s):	
Address:	
Office Telephone:	
Mobile Number(s):	
e-mail(s):	

I _____ (Contact name), do hereby make known the intention that from:			
_____ (date) _____ (Company name) will commence de-icing practice			
Types of de-icing			
Third Parties in receipt of de-icing service			
De-icing Company:		Date:	
I also enclose the following: (please tick)			
Product Specification Sheet		Material safety	
COSSH risk assessment		De-icing code of practice	
Signed:		Date:	
_____		_____	
Please return to Heathrow Airside Operations at: airside_environment@heathrow.com			



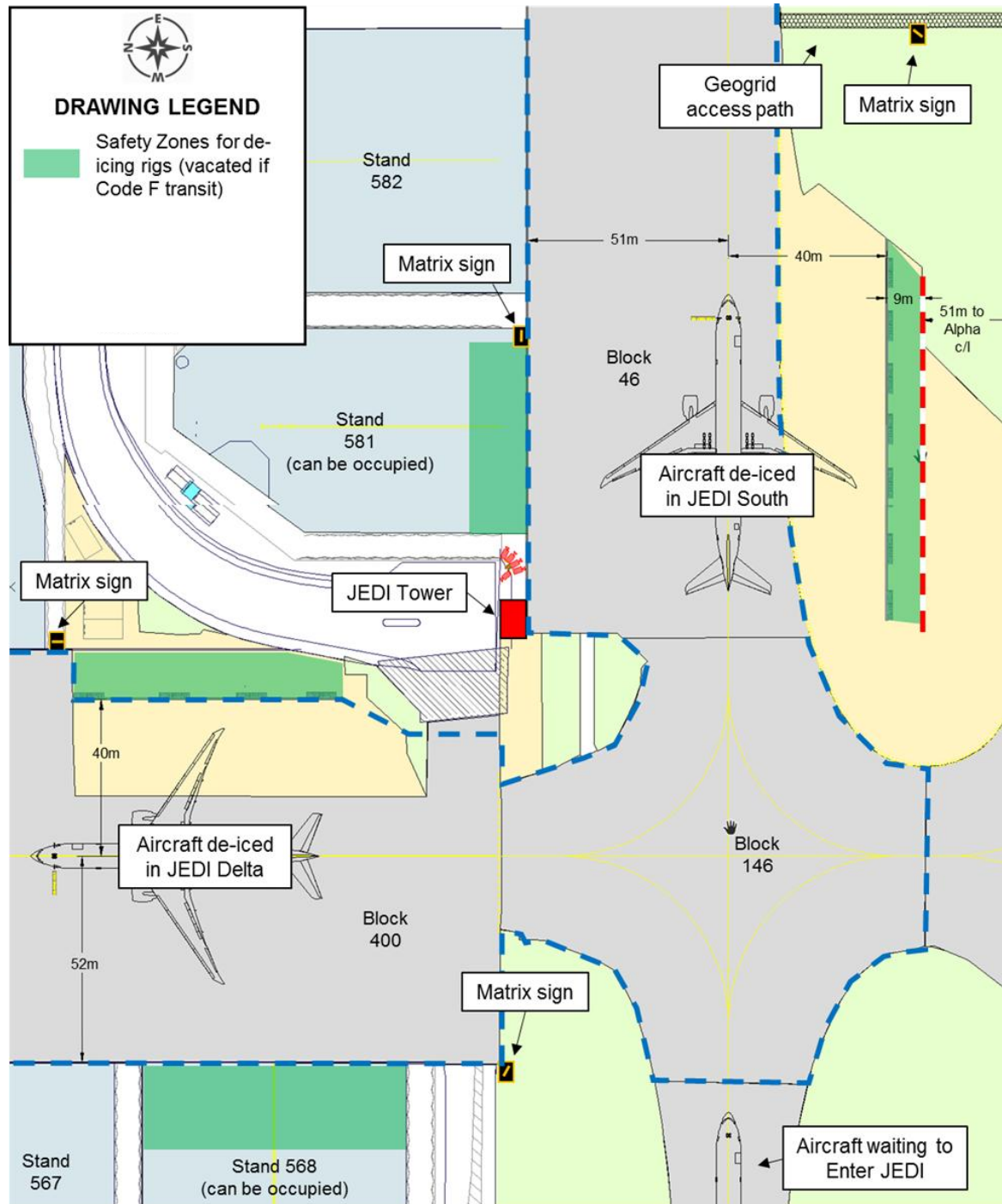
Appendix B – Monthly Aircraft De-icing Report Form

E-mail to: airside_environment@heathrow.com

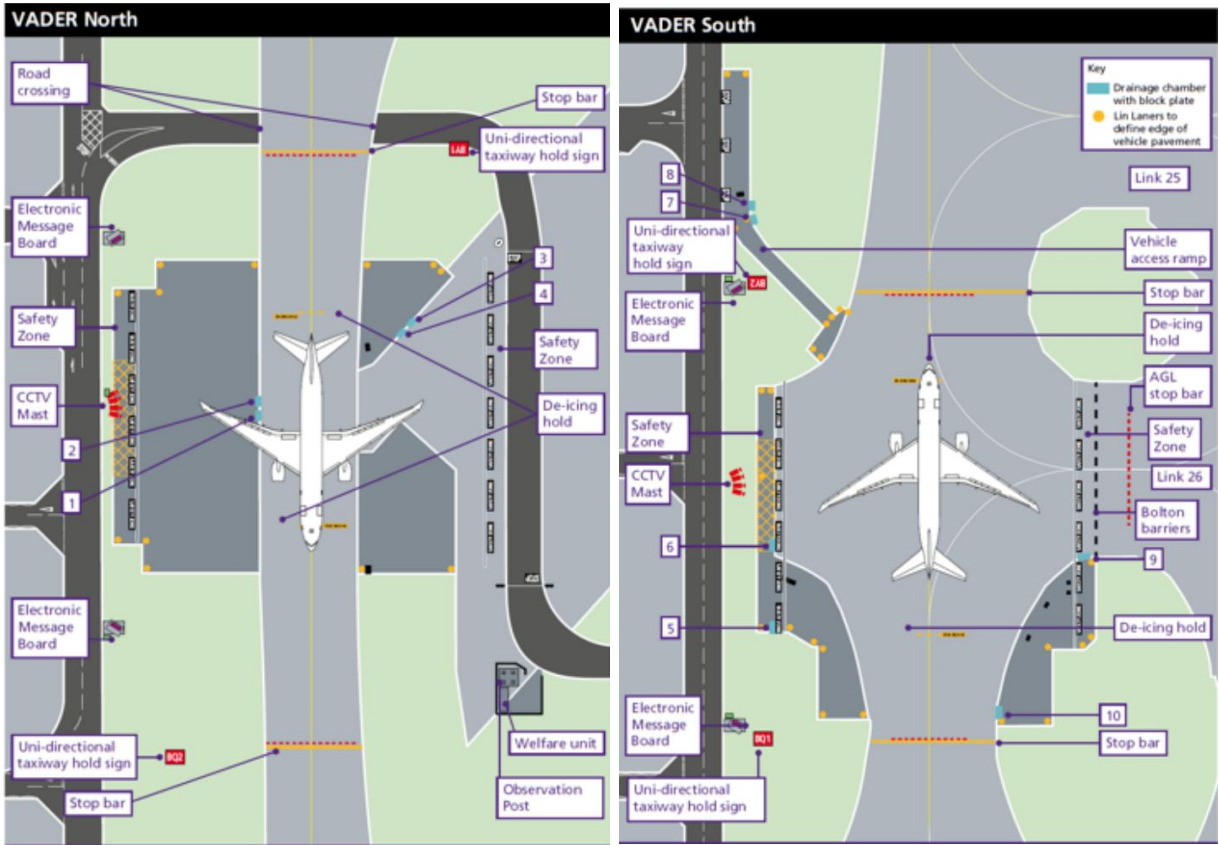
Monthly Aircraft De-icing Report Form			
De-icing Company		Month and Year	
Terminal	Quantity	2 Stage / 2 Step Percentage Mix	Mix
e.g. Terminal 2	2200	2 stage	30:70



Appendix C – JEDI Aircraft De-icing Pad Locations



Appendix D – VADER Aircraft De-icing Pad Locations



Document History

Revision	Description of Change	Date
v1.0	Initial version	7 th April 2017
v2.0	Full review of the document, including operational awareness, de-icing facilities JEDI and VADER operational reporting, maps, de-icing communication and emergency procedures.	7 th September 2023
v3.0	HAL changed to Heathrow throughout the document, closed/standby/open statuses of de-icing pads defined, Grammatical and clarification improvement throughout the document, Updated references for SAE documents, JEDI and VADER description amalgamated, map markings of all pads updated.	16 th September 2026

