



Adverse Weather

13th April 2023

ASWeather_OSI_052

Version 2.1

Operational Safety Instruction

Low Visibility Operations

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** Using the Instrument Landing System (ILS), Heathrow Airport is equipped for low visibility operations to ICAO Category 3B limits. This allows suitably equipped aircraft with specially trained crews to continue operations with meteorological visibility down to 50 metres and the cloud base at ground level. Aircraft landing and departing in Category 2 and 3 limits require that the ILS Localiser Sensitive Area (LSA) and Glidepath Sensitive Area (GSA) are protected to ensure the integrity of the ILS signal. Therefore, during periods of low visibility, both aircraft and vehicle movements in the manoeuvring area are restricted to safeguard aircraft operations. Further details of Low Visibility Procedures (Category II/III Operations) are provided in the UK Aeronautical Information Publication (UK AIP).
- 1.2** All airside companies must ensure that staff who drive on the airside manoeuvring area understand the meaning of the term 'Low Visibility Operations'. Staff must understand the safety implications, the associated restrictions on them, and any special procedures or precautions that must be adopted when Low Visibility Safeguarding and Low Visibility Procedures are in force.
- 1.3** Red bars have been added to the side of the document to draw the reader's attention to where changes have been made.
- 1.4** ASWeather_OSI_052 v 2.0 is hereby cancelled.



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2. Definitions

Abbreviation	Description
AfDM	Airfield Duty Manager
ACE	Airport Control Engineer
AOP	Airport Operations Plan
AFRS	Airport Fire & Rescue Service
AODM	Aircraft Operations Duty Manager
AOU	Aircraft Operations Unit
APOC	Airport Operations Centre
ATC	Air Traffic Control
GSA	Glidepath Sensitive Area
ICAO	International Civil Aviation Organisation
ILS	Instrument Landing System
IRVR	Instrumented Runway Visual Range
LSA	Localiser Sensitive Area

2.1 For the purpose of this document, the use of the terms;

- i. 'Low Visibility Operations' is a general term used for airside operations in conditions of reduced visibility.
- ii. 'Low Visibility Safeguarding' is the process carried out by Heathrow at the request of ATC, which prepares the airfield for Low Visibility Procedures. This results in the introduction of restricted access to the manoeuvring area and the protection of the ILS, LSA and GSA.
- iii. 'Low Visibility Procedures' are the actions carried out by ATC in respect of aircraft operations. This results in further restrictions on access to the manoeuvring area, the protection of the ILS, LSA and GSA, and a reduced aircraft movement rate.

3. Criteria for Low Visibility Operations

3.1 Low Visibility Safeguarding will come into force when:

- i. The IRVR is 1000 metres and expected to fall below 600 metres or,
- ii. The cloud ceiling is 300 feet and expected to fall below 200 feet.
- iii. ATC may also initiate Low Visibility Safeguarding when the Meteorological Office forecast fog or when the observed weather indicates imminent LVP conditions.



3.2 Low Visibility Procedures will come into force when the IRVR is 600 metres or less.

4. Activation of Low Visibility Operations

ATC is responsible for the activation and cancellation of Low Visibility Operations.

5. Activation of Low Visibility Safeguarding

5.1 ATC will inform the following agencies when Low Visibility Safeguarding is requested;

- i. Heathrow AODM
- ii. Heathrow Airside Operations
- iii. Heathrow APOC Operations Lead Co-ordinator
- iv. Heathrow Airport Control Engineer
- v. Metropolitan Police (Heathrow)
- vi. Appropriate sections within NATS

5.2 The Heathrow APOC Operations Lead Co-ordinator will inform other APOC stakeholders and Heathrow AFRS.

5.3 Heathrow Airside Operations, Heathrow AOU & Heathrow Engineering Operations will then activate the processes necessary to 'safeguard' the airfield. This includes:

- i. Informing other nominated Heathrow airside departments and personnel.
- ii. Informing all airfield companies holding 'M' or 'R' category driving licenses that 'free ranging' on the manoeuvring area has been restricted (see section 6 below).
- iii. Works parties being asked to vacate the manoeuvring area, at the discretion of the Heathrow AfDM.
- iv. Entering a message on AOP stating 'Low Visibility Safeguarding in Force'.
- v. Carrying out a visual inspection to ensure that the runway is protected.
- vi. Setup the Heathrow power network for Low Visibility Procedures.

5.4 When Low Visibility Safeguarding is complete, Airside Operations will inform ATC.

Note: Low Visibility Safeguarding must be in place before Low Visibility Procedures commence.

5.5 Whilst Airside Operations implement Low Visibility Safeguarding, the ATC will make the following broadcast every 5 minutes until Airside Operations confirm that Low Visibility Safeguarding is in place:

'Restricted Free Ranging in force, all non-essential vehicles vacate the manoeuvring area.'



- 5.6** Vehicles other than those listed (see 7.1 below) must then make their way off the manoeuvring area at the earliest opportunity.
- 5.7** During periods of low visibility drivers must ensure that vehicle's dipped headlights are in use and not just daytime running lights or sidelights.
- 5.8** As part of the process to alert airfield users to the status of the airfield, Heathrow Campus Security will display signs stating 'Low Visibility Operations in Force' at all control posts that give access to the airfield.

6. Activation of Low Visibility Procedures

- 6.1** Low Visibility Procedures are introduced by ATC when the weather conditions fall below the criteria described in section 3 of this Instruction. When declaring Low Visibility Procedures, ATC will inform the following;
- i. Heathrow AODM
 - ii. Heathrow Airside Operations
 - iii. Heathrow APOC Operations Lead Co-ordinator
 - iv. Heathrow Airport Control Engineer (ACE)
 - v. Metropolitan Police (Heathrow)
 - vi. Appropriate sections within NATS
- 6.2** The Heathrow APOC Operations Lead Co-ordinator will inform other APOC stakeholders and Heathrow AFRS.
- 6.3** Heathrow Airside Operations and Heathrow AOU will then inform all relevant airfield companies that all remaining vehicles must vacate the manoeuvring area unless under positive ATC
- 6.4** When Low Visibility Procedures come into force, and at 10-minute intervals for 30 minutes, ATC will make the following broadcast;
- "All vehicles, except Airside Operations vehicles, must vacate the manoeuvring area immediately unless carrying out essential operational tasks under direct ATC control."*
- 6.5** Vehicles other than those operated by Heathrow Airside Operations must withdraw from the manoeuvring area immediately, unless under positive ATC control.



7. Low Visibility Safeguarding Restrictions

- 7.1** When Low Visibility Safeguarding is in force, 'free ranging' is suspended with the exception of those listed below;
- i. Heathrow Airside Operations
 - ii. Heathrow AFRS
 - iii. Airline/Ground Handlers Aircraft Tugs
- 7.2** All other vehicles must vacate the manoeuvring area unless carrying out essential operational tasks and are under direct ATC control.
- 7.3** Heathrow AFRS and Aircraft Tugs are restricted to the taxiways shown in Appendix A during Low Visibility Safeguarding.
- 7.4** The list of Heathrow vehicles approved to drive on the manoeuvring area during Low Visibility Operations is maintained by Airfield Operations.
- 7.5** Contractors, engineering, and survey teams will be withdrawn from the manoeuvring area when Low Visibility Safeguarding is implemented.
- 7.6** Uncontrolled crossings must not be used in visibility of less than 150 metres. As a general guide, a driver must not use an uncontrolled crossing if, when stationary at the double white lines, the buildings beyond the other side of the crossing cannot be seen clearly.
- 7.6.1** When necessary, an Airside Operations Leader vehicle will be provided at key uncontrolled crossings. Crossings without the required visibility but not manned by a Leader vehicle will be closed by Airside Operations using barriers.

8. Restrictions During Low Visibility Procedures

- 8.1** When Low Visibility Procedures are in force, further restrictions on 'free ranging' are imposed. All remaining vehicles except for specified Heathrow Airside Operations vehicles, must vacate the manoeuvring area unless carrying out essential operational tasks and under positive ATC control.
- 8.2** Aircraft remote holding is not permitted during low visibility procedures.
- 8.3** The continued deployment of Airside Operations vehicles will be kept under review by the Heathrow AfDM.



9. Runway Holding Points Restrictions During Low Visibility Safeguarding/Procedures

ATC will utilise CAT II/III holding points whenever Low Visibility Safeguarding or Procedures are in force.

10. Responsibilities of Airside Companies

All airside companies are to ensure that airside staff are trained and understand the requirements of Low Visibility Operations and that appropriate information is contained within Company Instructions/Manuals.

11. Cancellation of Low Visibility Operations

11.1 ATC will cancel Low Visibility Procedures when weather conditions improve on those detailed in section 3 of this Instruction and advise those referred to in section 5.1. Airside Operations, AOU & Heathrow Engineering Operations will reverse the actions carried out in section 7.

Note: The airfield may remain reverted to Low Visibility Safeguarding although Low Visibility Procedures are cancelled. ATC will inform Airside Operations by telephone whether safeguarding remains in force, and if so, whether Cat I or Cat II/III holding points will be in use.

11.2 ATC will request that Airside Operations cancel Low Visibility Safeguarding when weather conditions improve above those stated in section 3 of this Instruction, Airside Operations will reverse the actions carried out in section 5.

12. Enquiries

Any questions concerning this instruction should be addressed to the Heathrow AfDM by telephone 07771 838 052.

13. References

ICAO Category 3B limits

UK Aeronautical Information Publication, AD 2-EGLL

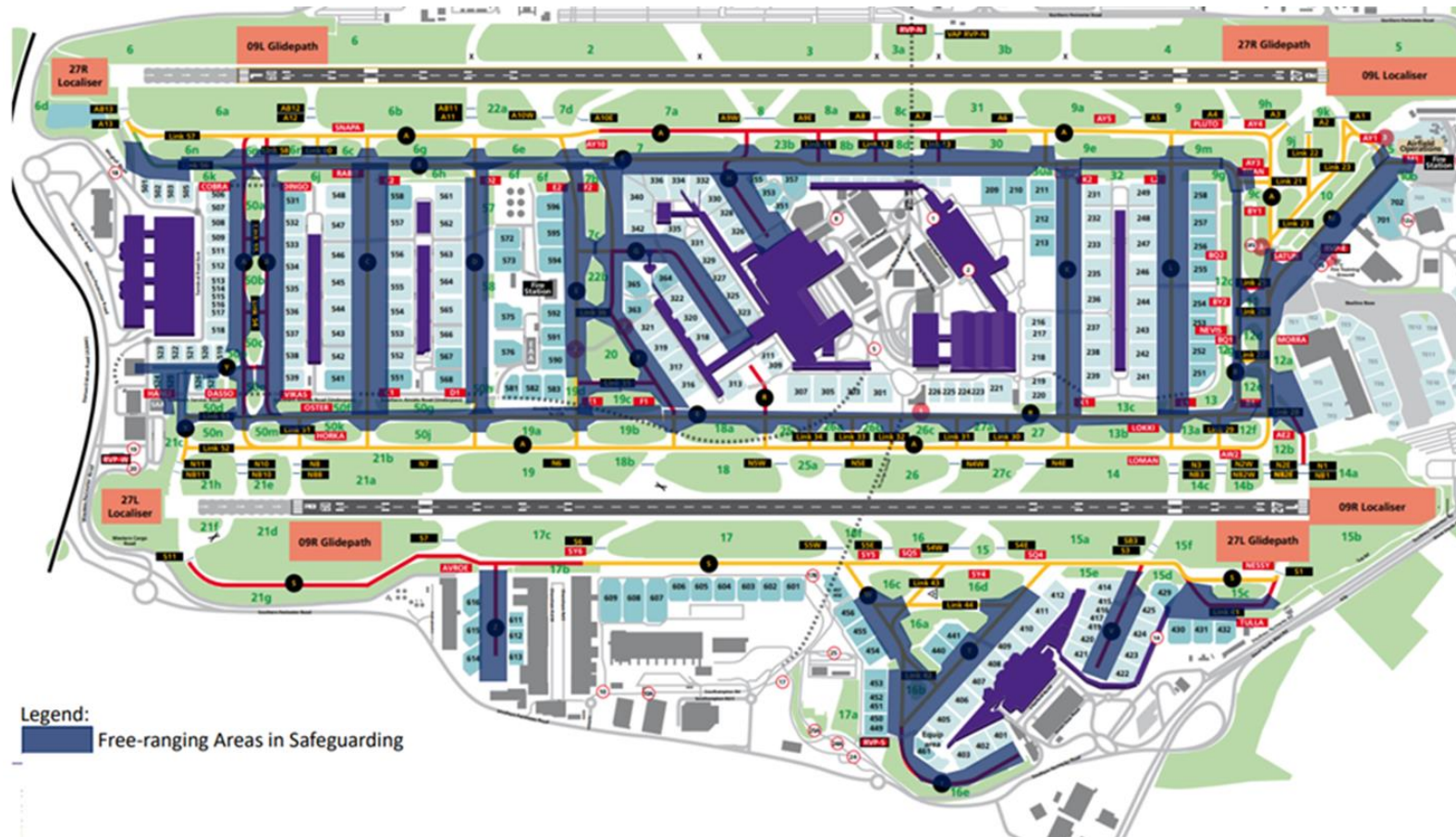


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14. Appendix A: Free-ranging Areas in Safeguarding

Visibility 600m – 1000m, cloud ceiling <300ft.

Free ranging suspended, with the exception of Heathrow Airside Operations, the Heathrow AFRS and airline/handlers' aircraft tugs. The AFRS are restricted to areas marked in blue unless they are responding to an emergency under blue lights. Aircraft tugs are restricted to areas marked in blue.



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Document History

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v1.0	Initial version	27 th October 2017
v2.0	Amendments to content including AOP addition and reference to driver taring/authorised vehicles	02 nd Sept 2020
v2.1	Updates on runway holding points restrictions during Low Visibility Safeguarding/ Operations and Appendix A	13 th April 2023

