

Low Visibility Procedures

Airside Operational Instruction 21

1. Introduction
2. Movement area safety
3. Airfield Operations Follow Me
4. Works in Progress
5. Rescue and Fire Fighting Service
6. Physical characteristics of the runway environment, including pre-threshold, approach and departure areas
7. Obstacle limitation surfaces
8. Surveillance and maintenance of visual aids
9. Safeguarding of non-visual aids essential to low visibility procedures
10. Secondary power supplies

AOI Owner – Airfield Operations



1. Introduction

- a. To ensure the safety of personnel, aircraft and vehicle operations during periods of low visibility and/or low cloud, procedures will be implemented that protect and control aircraft operations. These procedures also provide additional control measures to prevent the inadvertent incursion by aircraft on to the runway restricted area and by vehicles on to the aircraft manoeuvring area.
- b. In Low Visibility Procedures (LVPs) all non-essential activities on the airfield shall be suspended and vehicles and personnel recalled.
- c. As weather conditions deteriorate, the airfield is readied for LVPs. The procedures required to maintain a safe operation are referenced in:
 - i. Aerodrome Manual / Airside Operational Instruction 21
 - ii. Aerodrome Emergency Plan
 - iii. Manual of Air Traffic Services (MATS) Part 2
 - iv. Airside Driver Training Courses
 - v. Departmental Procedures
- d. ATC procedures are contained within MATS Part 2, ATC have additional Reduced Aerodrome Viability Procedures (RAVPs) for aircraft movements only, for use in situations where LVPs cannot be achieved, these are detailed in MATS Part 2.

2. Movement Area Safety.

All personnel operating airside as a pedestrian or driver must be aware of the following procedures.

2.1 Communication of Weather Warnings:

- a. The Met Office issues a weather warning whenever inclement weather/periods of low visibility are expected. The Airport promulgates this information to operators via:
 - a. A message on Chroma Fusion visible in a banner at the top of the screen display.
 - b. Illuminated warning signs and lights at airfield entry points.
 - c. Radio Transmission (RT) by ATC.
 - d. Airfield Operations Email Notification.

2.2 Reporting the status of aerodrome facilities:

ATC are responsible for the instigation and cessation of LVPs. When Met or IRVR visibility falls to **1500m** and/or the cloud ceiling lowers to **300ft** and either is expected to fall further safeguarding of the aerodrome commences.

1. Commencement

- a. ATC broadcast a message by way of RT, add a message to Chroma Fusion and notify the Operations Control Room by way of telephone.
- b. Operations Control Room notify the Airport Duty Manager (ADM), Airfield Operations and Rescue and Fire Fighting Service (RFFS).

- c. Airfield Operations activate the illuminated warning lights and all signs, confirming when fully completed via RT to ATC.
- d. Airfield Operations complete a perimeter track check between the Eastern and Western entry points to confirm all vehicles and personnel have vacated, confirming when completed via RT to ATC.
- e. RFFS record the status of specific technology utilised by ATC and RFFS with ATC, by way of RT. This includes:
 - i. Confirmation that the RFFS are on LVP standby.
 - ii. A check of the RFFS vehicle handheld thermal image cameras (TIC).
 - iii. Ascertain if the Surface Movement Radar (SMR) is serviceable.
 - iv. Activation of Airfield Operations/RFFS building beacon lights.

These actions must be taken to ensure that LVPs as appropriate can be implemented by the time that the weather conditions deteriorate.

2. Cessation

- a. ATC broadcast a message by way of RT, remove the message from Chroma Fusion and notify the Control Room by way of telephone.
- b. Operations Control Room notify the ADM, Airfield Operations and RFFS.
- c. Airfield Operations deactivate the warning lights and sign at the access points.
- d. RFFS confirm with ATC, by way of RT of standdown.
- e. Deactivation of Airfield Operations/RFFS building beacon lights.

2.3 Aircraft Towing

- a. During Low Visibility Procedures, essential tow movements are permitted in exceptional circumstances which is at the discretion of the Airfield Operations Duty Manager.

Essential aircraft tow movements are classified as:

- i. Where an aircraft has become immobilised and requires urgent assistance from the ground crew.
 - ii. Where an aircraft has become AOG and stand capacity may have a detrimental impact to the operation.
 - iii. Aircraft has become operational and has a departure time within 4-hours or less of the requested tow.
- b. All towed aircraft movements in LVPs are to be requested via the Operations Control Room (OCR) following the standard aircraft towing notification process. The OCR will liaise with the Airfield Operations Duty Manager and Airfield Safety and Compliance Officer passing on the requested aircraft ground movement details of the tow. The AODM and ASCO has the overall responsibility of approving tows during LVPs. Aircraft tows may be declined based on operational restrictions such as works in progress, air traffic movements and follow me vehicle availability.
- c. All aircraft tows during LVPs require the use of a follow me vehicle. Aircraft must display exterior navigation lights and anti-collision lights. Aircraft unable to conform to these lighting requirements will be declined an aircraft tow movement number.

- d. Where the AODM or ASCO determine that a towed movement is essential, they will be responsible for coordinating a suitable time with ATC for when the towed movement will cause the least disruption to the airport and ATC operation. This time window will be passed back to the OCR who will liaise with the towing operator.
- e. Aircraft tows on the runway during Low Visibility Procedures are strictly forbidden unless in line with point i.) or in line with the Airport Emergency Plan.

2.4 Pedestrians

Signage is in place at pedestrian access points to the apron to advise when LVPs are in force. These signs are accompanied by a red flashing warning light.

When operating in LVPs all pedestrians must:

- a. Only undertake essential journeys.
- b. Utilise walkways, where a walkway is not available pedestrians should walk along the head of the aircraft stands.
- c. Ensure hi visibility garments are worn as required and are securely fastened at all times.

2.5 Driving

Signage is in place at all vehicle access points to the apron to advise when LVPs are in force, repeater signs can also be found in around the airfield. These signs are accompanied by a red flashing warning light.

All drivers should:

- a. Only undertake essential journeys on the apron.
- b. Proceed with extreme caution operating with dipped headlights, and where fitted, fog lights.
- c. Be alert to the sudden appearance of an aircraft entering a stand and be prepared to give way accordingly.

2.5.1 A Permit Holder

- a. The commencement of LVPs will be notified on Chroma and by the illuminated red warning lights and a sign at all vehicle access points to airside and repeater signs located on the aprons.
- b. Uncontrolled Crossings
 - i. Drivers must have sufficient visibility to ensure that their vehicle can safely complete a full crossing without endangering themselves, other vehicles or aircraft that may be manoeuvring or about to manoeuvre.
 - ii. Drivers must be able to visually confirm there is no aircraft taxiing / pushing in the vicinity of the uncontrolled crossing.
 - iii. In conditions where the driver cannot clearly see the exit of the uncontrolled crossing, drivers must **not** enter, and the uncontrolled crossing should be treated as closed to apron traffic. In this situation, drivers must contact Airfield Operations for an escort and may only use the uncontrolled crossing under the control of a member of Airfield Operations who will be in radio contact with ATC.
- c. Vehicle Breakdown
 - i. If the vehicle is drivable, move the vehicle to a safe location.
 - ii. If the vehicle is immobile, leave the lights on where possible and proceed to the nearest Emergency Contact point to inform Airfield Operations.

2.5.2 M and R Permit Holder

- a. All vehicle and personnel engaged in non-essential activities must cease operations and request ATC permission to vacate the airfield if on the manoeuvring area.
- b. All drivers undertaking essential activities, as detailed within the AOI, must contact ATC for onward clearance i.e. Airfield Operations, Airfield Ground Lighting and RFFS.
- c. Own look out approvals are suspended, vehicles operating on own look out are to inform ATC of their location and intention.
- d. The Perimeter Track red guard lights are set to solid red, clearance from ATC must be obtained before proceeding beyond the lights.
- e. Controlled Crossing
 - i. The controlled crossings that links the Central and West Aprons, crossing the November, Mike and Kilo taxiway are closed to all traffic.
 - ii. Vehicles should take an alternative route via the gatehouses and landside roads.
 - iii. Airfield Operations will only provide an escort for essential activities, vehicles must wait to be escorted at either 'West Link November' or 'West Link Kilo 2'. No vehicle should proceed past these holding points without escort.
- f. In the event a driver is unsure of their position during low visibility operations, you should report to ATC by RT that you are unsure of your current location and await instructions.
- g. In the event of a radio failure whilst operating in the manoeuvring area drivers must:
 - i. Establish a safe position and where able, leave the vehicle lights on.
 - ii. If communication is lost while within the runway strip, aircraft movement area or ILS critical or sensitive area you should continue to the last position for which you have ATC clearance, then wait for assistance. Do not move any further than the position for which you have ATC clearance.
 - iii. If on the perimeter track, outside the runway strip, aircraft movement area or the ILS critical or sensitive area, the vehicle is to remain outside of these areas and proceed by the safest route off the manoeuvring area and directly to the nearest Emergency Contact Point and report clear of the manoeuvring area to ATC.
 - iv. If in possession of a mobile phone contact the Operations Control Room to inform them of radio failure and your location. This will be relayed to ATC and a vehicle will be dispatched to escort you to a safe position.
- h. In the event of a vehicle breakdown drivers must report the location and the nature of the breakdown to ATC and await instructions.
 - i. The driver must, where able leave the vehicle lights on.
 - ii. If the breakdown results in radio failure and the driver is in possession of a mobile phone, contact the Control Room to inform them of the breakdown. The Control Room will liaise with ATC and Airfield Operations to provide instruction.
 - iii. If no alternative means of communication are available, remain with the vehicle and await assistance.

3.0 Airfield Operations Follow Me

Where visibility falls below 300m, only if considered necessary by ATC or on request of the Pilot, departing and arriving aircraft may be led by vehicle between the taxiway or allocated stand. Only Airfield Operations are permitted to provide a 'Follow Me'.

- a. For arrivals on Runway 27, the Follow Me vehicle will position at Alpha 10 or Alpha 9.
- b. For Runway 09, the vehicle will position at A3.

4.0 Works in Progress

In LVPs all non-essential activities on the airfield shall be suspended and vehicles and personnel recalled, therefore all works in progress shall cease. The workforce of established WIP sites should closedown, make the area safe and request permission from ATC to return to the Apron.

Where closedown is expected to take a prolong period or is not possible ATC must be informed.

5.0 Rescue and Fire Fighting Service (RFFS)

All **Vehicle Managers** will monitor radio channels and RFFS personnel will be restricted to the Fire Station.

- a. The response to a Domestic (such as AFA and Medical) and Utility (such as spillages) request during LVPs will be assessed by the Officer in Charge (OIC) to determine if a response can be made pending aircraft movements.
- b. RFFS specific procedures are contained within the RFFS Standard Operating Guidance (SOGs).
- c. The Aerodrome Emergency Plan details the procedures for responding to an emergency in LVP's.

6.0 Physical characteristics of the runway environment, including pre-threshold, approach and departure areas

- 6.1 Runway 27 is the preferred runway in weather conditions which are close to or below CAT 1 minima. Runway 09 will therefore only be used in conditions which preclude the use of runway 27.
- 6.2 LVPs are established to support the following aircraft flight operations:
 - a. Departure operations in Runway Visual Range conditions less than a value of 400m but not less than 75m
 - b. CAT II and III approach and landing operations;
 - c. Lower Than Standard (LTS) CAT I approach and landing operations.
- 6.3 Whenever CAT II/III approaches are available on Runway 27 or LTS CAT I approaches are available on Runway 09, the term LVPs shall be used to describe the procedures in use to safeguard aircraft and vehicle movements.
- 6.4 While CAT II or III landing operations are taking place no vehicles or personnel are allowed to enter or remain within the Runway Strip, Runway End Safety Areas, clearways or ILS Critical/Sensitive areas, as delineated with red topped marker pegs.
- 6.5 The runway is protected by a ring of red, which is a series of illuminated stopbars located at the CAT II or III holding points controlled by ATC.
- 6.6 As the perimeter road passes through the localiser sensitive areas and DME safeguarded area, red guard lights are activated by ATC in LVPs, and vehicles may only be permitted to proceed

around the perimeter road under ATC Control during periods when neither the localiser or DME are in use.

- 6.7 At the Maintenance area / Alpha taxiway intersection (“Mike 3”) and also Mike Alpha/Mike taxiway intersection, additional control is provided by a red stop bar and illuminated signs.

7.0 Obstacle limitation surfaces (OLS)

Details regarding the OLS can be found in the Aerodrome Manual, Part D, Section 2.

8.0 Surveillance and maintenance of visual aids;

- 8.1 Surveillance of visual aids is conducted via an AGL Control and Monitoring System which covers light fittings and signage, the system activates and alerts if a fault is identified.
- 8.2 In LVPs all non-essential activities on the airfield shall be suspended, this includes the suspension of all routine maintenance.
- 8.3 Maintenance or repairs required to visual aids essential to the safe operation of the aerodrome will be permitted on the approval of ATC in conjunction with the relevant department.

9.0 Safeguarding of non-visual aids essential to low visibility procedures.

Only activities determined by ATC in consultation with Air Traffic Engineering and Airfield Operations to be essential to the safe operation of the airport will be permitted. They include but are not restricted to:

- i. Safety critical repairs/maintenance to navigational aids, radar and equipment required for provision of LVPs.
- ii. Runway / Taxiway surface inspections
- iii. Wildlife Control
- iv. RFFS in an emergency
- v. 'Follow me' vehicles.
- vi. Essential activities to ensure the Security of the Critical Part

10.0 Secondary Power Supplies

Upon initiation of LVPs diesel standby generators will provide power in the event of a mains failure, as detailed in MATS Part 2.

INTENTIONALLY LEFT BLANK