



Ground Operations

11th August 2026

ASGrOps_OSI_026

Version 4.0

Operational Safety Instruction

Aircraft Towing 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 This Operational Safety Instruction (OSI) sets out the rules and procedures for aircraft towing operations at Heathrow Airport.
- 1.2 For aircraft pushback procedures, reference should be made to ASGrOps_OSI_093 Aircraft Arrival, Turnround and Departure Procedures on Stand.
- 1.3 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.



- 1.4 This document is completely reviewed and restructured; therefore, no red bars have been added to indicate the change.
- 1.5 ASGrOps_OSI_026 version 3.0 is hereby cancelled from date of publication of this OSI.



2. Definitions

Abbreviation	Description
AfCR	Airfield Control Room
AIP	Aeronautical Information Publication
AOF	Airside Operations Facility
AOT	Airside Occurrence Ticket
APBB	Aircraft Passenger Boarding Bridge
A-SMGCS	Advanced Surface Movement Guidance and Control System
ATC	Air Traffic Control
FEGP	Fixed Electrical Ground Power
FMC	Flight Management Computer
FOD	Foreign Object Debris
GPU	Ground Power Unit
GSE	Ground Support Equipment
ID	Identification
MARS	Multi Aircraft Ramp System
MCA	Multiple Choice Apron
'M' ADP	Manoeuvring Airside Driving Permit
'R' ADP	Runway Airside Driving Permit
RTF	Radiotelephony

2.1 In this document, runway stop-bar also means runway guard bar.

3. Aircraft Towing Training Requirements

- 3.1** Aircraft tug crew operating under positive ATC control must be appropriately trained and competent in RTF. Guidance can be found in the supplement to CAP 413 - Radiotelephony Manual, and standard RTF phraseology must be used for all verbal communications between ATC and the aircraft tug crew.
- 3.2** In addition to initial training, operators holding an 'M' ADP or 'R' ADP must be subject to periodic competency checks in accordance with the requirements of ASDRVE_OSI_006 Airside Driver Training and the Airside Driver Permit, including assessment of RTF knowledge and practical communication skills.
- 3.3** In-house training must be provided by the company to ensure that the operator is familiar with the manoeuvring area layout at Heathrow.



- 3.4 All companies must ensure that their operators have received training on the type of aircraft tug that they are operating.
- 3.5 Operating an aircraft tug on the taxiway system and runway requires a corresponding ADP, i.e. “M” for operating on the manoeuvring area excluding runways and “R” for the manoeuvring area including runways. For details of ADP requirements, reference should be made to ASDRVE_OSI_006 Airside Driver Training and the Airside Driver Permit.
- 3.6 Heathrow reserves the right to review and audit all the training materials and records of individual companies as included in this section.

4. Before Towing

- 4.1 The aircraft tug and tow bar (if required) must be serviceable and free from damage. The tug crew must conduct a FOD check of the stand, inspect the aircraft for damage, and ensure all ground equipment is cleared and correctly parked.
- 4.2 Before requesting ATC clearance, the tug crew must:
 - 4.2.1 Ensure that any personnel on board are seated during the tow
 - 4.2.2 Know the correct ATC frequency, aircraft type and registration/callsign, as well as the towing destination
 - 4.2.3 Have serviceable two-way communication with the brake rider (if required)
 - 4.2.4 Ensure tug, aircraft lighting, and transponder are serviceable and correctly set
 - 4.2.5 Carry the latest airfield map as required by ASDRVE_OSI_005
- 4.3 When requesting ATC clearance, the tug crew must provide aircraft identification, departure stand/location, and destination stand/location.
- 4.4 All chocks and other stand equipment must be returned to their designated areas before ATC clearance is requested. Prior to the pushback, the aircraft anti-collision light must be switched on, with minimal delay (as reasonably practicable) before vacating the stand.

5. Aircraft Towing Operation Procedures on Taxiways

- 5.1 Throughout the aircraft towing process, the aircraft tug crew must maintain situational awareness and listening watch on the appropriate ATC frequency.



- 5.2** Notwithstanding any ATC instruction or clearance, responsibility for the safe movement of an aircraft under tow remains with the aircraft tug driver. As wingtip clearance is not assured on the aerodrome, the tug driver must ensure that sufficient clearance exists at all times and that the aircraft does not collide with any vehicle, aircraft, building, infrastructure, or other obstruction. Where there is any doubt regarding safe clearance, the aircraft must be brought to a safe stop immediately and ATC advised.
- 5.3** Aircraft tug crew should adopt '**sterile cockpit**' conditions, minimising distractions and unnecessary conversation. Communication between the aircraft tug crew regarding the route and traffic information is encouraged to maximise situational awareness.
- 5.4** Operators are reminded (as per OSI 093, section 5.7.2) that prior to towing onto any aircraft stand, they must not proceed to park until the following checks have been completed:
- 5.4.1** A stand check must be carried out prior to towing onto the stand and must include:
 - 5.4.1.1** A FOD check
 - 5.4.1.2** A check to ensure that no GSE or vehicles are parked within the stand footprint
 - 5.4.1.3** A check to ensure that APBBs are parked correctly for the stand configuration (MARS/ MCA operations)
 - 5.4.2** If any of the above checks identify a discrepancy that may prevent the aircraft from parking safely, ATC must be advised of the delay and Airside Operations contacted.
- 5.5** Aircraft tug drivers without a valid 'R' ADP **MUST NOT** cross a runway unless under a leader escort from Heathrow's Airfield Operations Team.
- 5.6** Aircraft under tow **must only** enter the Bealine Base via the taxiway centreline (marked as a solid yellow line and lit during the hours of darkness). Aircraft under tow must not deviate from this centreline until inside the Bealine Base.
- 5.7** For Code F aircraft towing operations:
- 5.7.1** Some areas of the taxiway system are **not suitable for Code F** aircraft movements. All available routes for Code F operations are detailed in the airfield maps and AIP entry for Heathrow Airport. The updated Heathrow airfield maps are available in the link below:



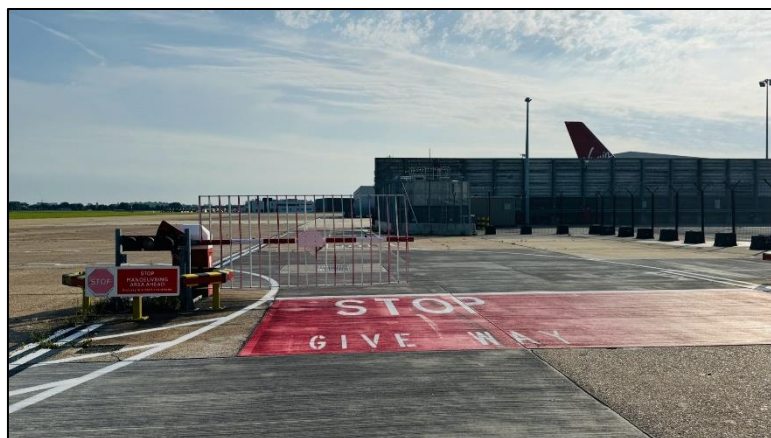
<https://www.heathrow.com/company/team-heathrow/airside/useful-publications/airfield-maps>

- 5.7.2** All aircraft tug drivers towing a Code F aircraft **MUST** ensure that when communicating with ATC, they append the word “Super” to the end of their call sign to identify themselves as a Code F aircraft movement e.g. “Bealine Echo Alpha Super”.
- 5.7.3** Taxiway Mike Taxiway Mike is designed to accommodate aircraft up to **Code E** in size. However, Heathrow and ATC have implemented an operating protocol that permits the towing of **Code F** aircraft on Taxiway Mike. To safeguard the aircraft, airfield infrastructure, and road users, the following uncontrolled crossings must be closed before the towing operation commences: -

5.7.3.1 Barrier 1 to AOF across Mike taxiway (controlled through AfCR).



5.7.3.2 Barrier 2 to Eagle Road across Mike taxiway (controlled by AfCR on-site)



5.7.3.3 Barrier 3 to Eagle Road across Alpha taxiway (controlled by AfCR on-site)



5.7.3.4 For a map of the uncontrolled crossing closures, refer to **Appendix A** of this OSI.

- 5.7.4** The aircraft tug crew are no longer required to report when they are correctly parked on stand (cleared of an active taxiway). The aircraft tug crew shall **only** report being parked on stand or clear of active taxiways when specifically requested by ATC. If the towed aircraft is not fully parked on stand (any part of the aircraft is still on an active taxiway due to any reason on the stand or technical), ATC **must** be informed without delay.

6. Aircraft Towing Operations across Runway

- 6.1** This section covers additional requirements for aircraft towing across a runway at Heathrow. All personnel must also adhere to the requirements for aircraft towing operations on taxiways as detailed in Section 4 of this OSI.
- 6.2** Aircraft towing across or onto a runway must be performed by an aircraft tug driver holding a valid “R” ADP unless they are under escort by a leader vehicle provided by Heathrow’s Airfield Operations Team.
- 6.3** Whenever a leader vehicle escort across a runway is required, the aircraft tug crew must wait until the leader vehicle has arrived at the origin stand before a pushback request is made. In some circumstances (such as loss of communication), enroute escort would also be available.
- 6.4** The leader vehicle escort will normally end after the runway crossing, where the aircraft tug crew will take over radio telecommunications with ATC to continue their



transit to the destination stand. However, the leader vehicle escort can be conducted all the way to the destination stand if necessary.

- 6.5** In addition to 5.3 and 5.4 above, the aircraft tug crew **MUST** monitor the correct ATC frequency throughout the leader vehicle escort. If the leader vehicle escort ends right after runway crossing, ATC will provide onward towing instructions to the aircraft tug crew. Upon hearing the readback from the aircraft tug crew, the leader vehicle escort will end, and the aircraft tug crew must proceed as instructed by ATC under positive control.

7. Approaching a Runway and Crossing Requirements

- 7.1** All runway entrances are indicated by runway designators, guard lights, runway stop-bar (also known as runway guard bar) markings, taxiway enhanced centreline markings, "RUNWAY AHEAD" paint markings, and red illuminated stop bars. **Under all circumstances, an illuminated red stop-bar means "STOP".** The aircraft tug crew must not allow any part of the aircraft or the aircraft tug beyond the stop-bar until it is suppressed, and ATC permission has been received.



- 7.2** Whilst waiting for permission from ATC to cross a runway, the aircraft tug crew must always maintain situational awareness including a listening watch over the frequency. This is to ensure that their positioning will not cause any conflict with other traffic. If in doubt, the aircraft tug crew should confirm with ATC. Tug drivers must always ensure that the stop bar has been fully suppressed before crossing under instruction from ATC. This is a particular consideration during bright weather conditions, as shown in the photo below: -



- 7.3** While runway crossing is in progress, the aircraft tug crew should proceed across with caution while maintaining situational awareness including a listening watch over the frequency and must ensure they maintain sufficient speed to complete the crossing without delay.
- 7.4** After vacating the runway, i.e. all parts of the aircraft and aircraft tug have cleared the runway stop-bar marking, ATC must be advised in the first instance. The aircraft tug crew should then switch to the appropriate ATC frequency as per ATC's instruction.

8. Use of Transponders

- 8.1** Prior to requesting pushback or towing from the aircraft stand, the transponder must be "ON" with squawk code 2000 selected and the flight ID from the FMC cleared by the towing aircraft to show its registration on A-SMGCS. This is to ensure that ATC can see the location of the towing aircraft to avoid ground movement conflict.
- 8.2** The incorrect use and setting of transponders during towing operations will pose a significant safety risk to aircraft ground movement. During reduced visibility, this



risk increases as ATC may depend on the correct transponder setting on all aircraft to control aircraft ground movement safely and effectively.

- 8.3 When the towing procedure is completed and the aircraft is parked on the stand, the transponder shall be set to either “OFF” or “STANDBY”.
- 8.4 If the transponder could not be set due to technical reasons before pushback or if a fault develops during towing, ATC must be notified in the first instance. Heathrow Airfield Operations Team will then be notified to provide assistance.
- 8.5 If an aircraft tug is fitted with A-SMGCS compatible transmitters, they must be **switched off** when connecting to an aircraft to avoid the A-SMGCS receiving two overlapping signals.
- 8.6 Any non-compliance in relation to transponder operations will be addressed as soon as possible by Heathrow and/ or NATS which may lead to AOT issuance against the individual or the company involved as a result.

9. Failure of Aircraft Lighting

- 9.1 If there is a fault with a navigation or anti-collision light before leaving the aircraft stand, the towing operation should be cancelled until the fault is rectified. Alternatively, Heathrow Airfield Operations may provide a leader escort, at the discretion of the Airfield Operations Team, if the stand needs to be cleared or if the fault cannot be rectified.
- 9.2 In case there is a fault with a navigation or anti-collision light during towing, the aircraft tug crew must inform ATC immediately and wait for further instructions. During the hours of darkness and under low visibility conditions, a leader escort will be provided by Heathrow Airfield Operations.

10. Emergency Procedures

- 10.1 In case of emergency during towing, the aircraft tug crew must inform ATC immediately while it is safe to do so and include the following information as a minimum:
 - 10.1.1 Aircraft call sign
 - 10.1.2 Aircraft location
 - 10.1.3 Nature of the problem



- 10.2** All companies must have emergency handling procedures for aircraft towing in place and must ensure that such information is widely promulgated amongst their operators. Heathrow reserves the right to conduct audit of training records and aircraft towing emergency handling procedures.
- 10.3** Whenever an incident occurs such as medical emergency or traffic accident, in addition to contacting ATC, it must also be reported immediately via 222 (Heathrow internal) or 0208 759 1212 (external).

11. Enquiries

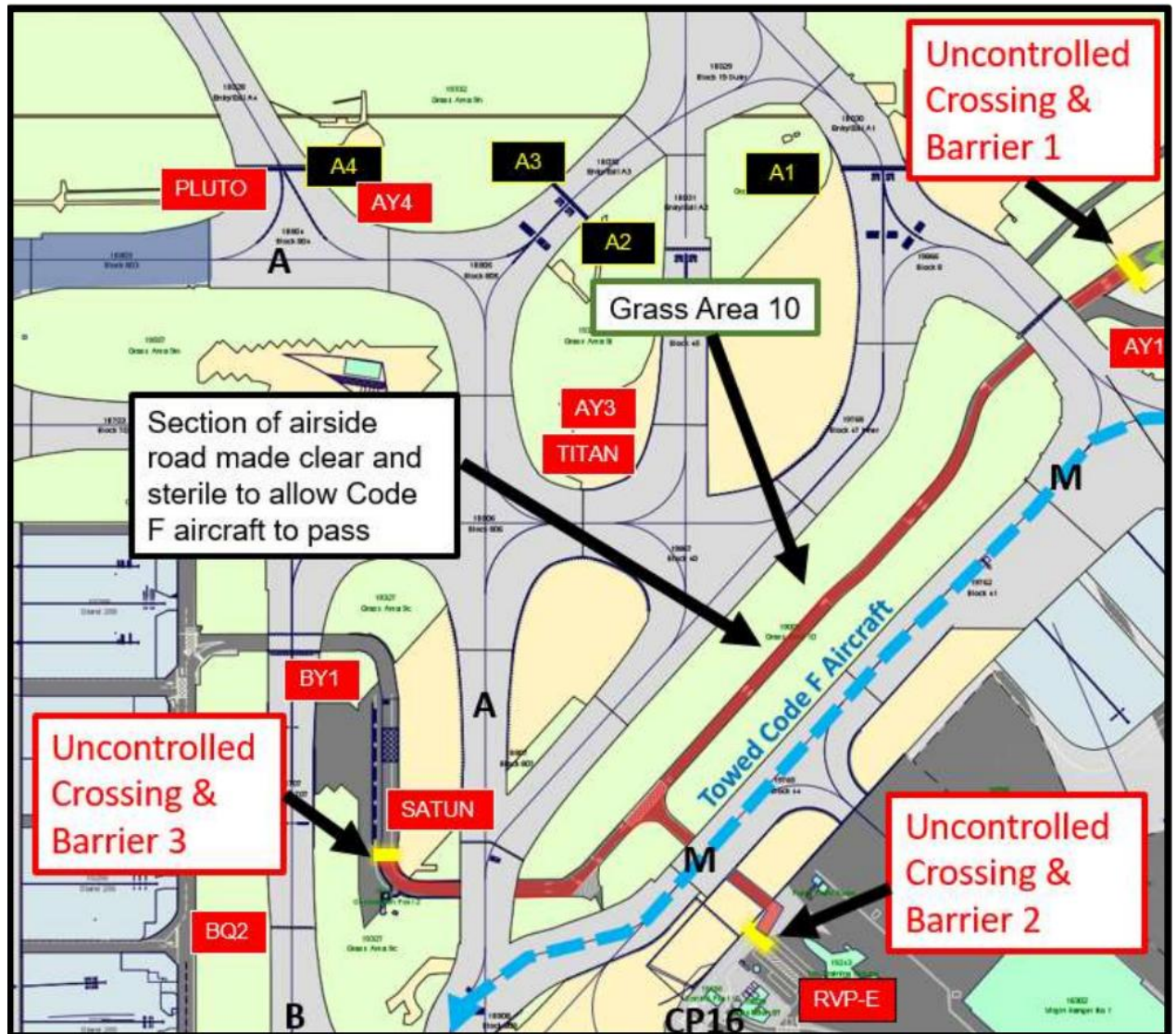
Any questions concerning this instruction should be addressed to the Heathrow Airfield Duty Manager (AfDM) by telephone at 020 8745 7373 or by email to airfield.duty.manager@heathrow.com.

12. References

- 12.1** ASDRVE_OSI_005 Vehicles and Equipment Airside – Operation
- 12.2** ASDRVE_OSI_006 Airside Driver Training and the Airside Driver Permit
- 12.3** ASDRVE_OSI_010 ATC Radio Frequencies Control of Vehicles on the Manoeuvring Area
- 12.4** ASEnv_OSI_078 Use of Aircraft Auxiliary Power Units
- 12.5** ASGrOps_OSI_093 Aircraft Arrival, Turnround and Departure Procedures on Stand
- 12.6** UK Aeronautical Information Publication (AIP)
- 12.7** CAP 413 - Radiotelephony Manual



Appendix A: Uncontrolled Crossing Closure during Code F Aircraft Movement on Taxiway M



Document History

Revision	Description of Change	Date
v1.0	Transferred to new template	30 th June 2017
v2.0	Updated to include access to Bealine Base and Code F aircraft on Mike taxiway	20 th April 2020
v3.0	Rename and full review of the document, updates of safety procedures, use of transponders and failure of aircraft lighting, add contents of before towing, towing across runways and emergency procedures	7 th March 2023
v4.0	Full review of the document. HAL changed to Heathrow. Clarified aircraft towing responsibilities, runway crossing procedures and runway entry controls. Added requirements for stand checks prior to parking, Code F towing operations, transponder management, aircraft lighting failures, Radiotelephony competency, and aircraft towing emergency procedures. Updated terminology, references, added photographs, and general wording for clarity and operational resilience	11 th August 2026



