



## Aerodrome Safeguarding

24<sup>th</sup> April 2024

ASSG\_OSI\_050

Version 3.0

# Operational Safety Instruction

## Drones at Heathrow

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 unauthorised operation of Remotely Piloted Aircraft Systems (commonly known as Drones) at airports, or in the surrounding areas, presents a significant safety hazard to aircraft and passengers. The purpose of this Instruction is to provide guidelines on reporting of unauthorised Drone activity, as well as the approvals required should organisations wish to use a Drone within Heathrow's Flight Restricted Zone (FRZ). More detail regarding the FRZ can be found in Appendix A of this document.
- 1.2 Drone technology has advanced significantly since the previous issue of this document. Drones are increasingly becoming safer and more reliable to operate, thus being adopted by many organisations to great effect. It is therefore imperative that operations within the boundary of the Heathrow FRZ, are suitably assessed and any identified hazards are mitigated as far as reasonably practicable.
- 1.3 Heathrow Airport recognises there are times when an operator requires the use of a Drone within the Heathrow FRZ and the means to which the flight may be permitted are outlined in this document.
- 1.4 Red bars have been added to the side of the document to draw the reader's attention to where changes have been made.
- 1.5 ASSG\_OSI\_050 V2.0 is hereby cancelled.



## 2. Definitions

Abbreviation	Description
APOC	Airport Operations Centre
CAA	Civil Aviation Authority
FRZ	Flight Restricted Zone
HAL	Heathrow Airport Limited
IFP	Instrument Flight Procedure
NATS	National Air Traffic Services
OLS	Obstacle Limitation Surface
RPZ	Runway Protection Zone
RPAS	Remotely Piloted Aircraft Systems
TOI	Temporary Operating Instruction

## 3. Safety Procedure

### 3.1 Reporting of Identified Drone use on and off the Airport

- 3.1.1** Anyone witnessing the use of a drone on or in the immediate vicinity of the airfield must report it, stating time, location, colour of drone, direction of travel and estimated height to the Airport Operations Centre (APOC) by dialling 222 or 020 8759 1212 as appropriate.
- 3.1.2** If it is safe to do so, capture videos or photos of the identified drone.

### 3.2 Drone Operation Requests: Off Airfield Permit

- 3.2.1** The Drone operator must complete a Non-Standard Flight application via the NATS website in advance of their planned operations: [Non-Standard Flight applications - NATS](#).
- 3.2.2** The applicant should make this submission **at least 14 days** prior to their desired flight date. Any submissions received with less than 14 days' notice are unlikely to be authorised.
- 3.2.3** The Aerodrome Compliance Team will then contact the drone operator requesting further information:
- Proof of CAA authorisations (Operator ID, A2 Certificate of Competency or General VLOS (Visual Line of Sight) Certificate/Operational Authorisation) as applicable,
  - Flight Controller Serial Number,
  - Drone Serial Number,
  - Latitude and Longitude coordinates for each corner of the boundary around the drone flight path,



- Details on how the drone flight will be operated (manually controlled, preloaded flight path, etc.),
- Alternative contact number if drone controlled via telephone.

**3.2.4** Once this information has been received, the application will be processed.

**3.2.5** Safeguarding assessments will ensure that the height of the drone flight does not infringe the Obstacle Limitation Surfaces' (OLS) and Instrument Flight Procedures' (IFP). If the requested drone flight does infringe any surfaces safeguarded by Heathrow, the drone operator will be contacted and advised on the restrictions that will be placed on the drone permit, e.g. restriction to height.

**3.2.6** The drone operator is responsible for managing any geofencing restrictions. If this is required, the operator must contact the Aerodrome Compliance Team immediately, upon receipt of their authorised permit. Authorisation will be provided in the form of an email letter attachment and will match the dates of the permit only.

**3.2.7** Providing the restrictions are agreed, the permit will be issued.

### **3.3 Drone Operation Requests: On Airfield Permit**

**3.3.1** The Drone Operator must contact [drones@heathrow.com](mailto:drones@heathrow.com), requesting permission to carry out drone activity on the airfield, **at least 14 days** prior to their desired flight date. Any submissions received with less than 14 days' notice are unlikely to be authorised.

**3.3.2** On Airfield flights are encouraged to take place during non-operational hours, 23:30-04:30. Daytime hours can be requested, but restrictions will be placed on the permit to ensure the flight safety of commercial aviation is not compromised.

**3.3.3** The following flight details are required:

- Proof of CAA authorisations (Operator ID, A2 Certificate of Competency or General VLOS (Visual Line of Sight) Certificate/Operational Authorisation) as applicable,
- Flight Controller Serial Number,
- Drone Serial Number,
- Latitude and Longitude coordinates for each corner of the boundary around the drone flight path,
- Details on how the drone flight will be operated (manually controlled, preloaded flight path, etc.),
- Alternative contact number if drone controlled via telephone,
- Proposed flights areas,
- Proposed flight heights, dates/times,



- Requirement for Leader In attendance, arranged by HAL Aerodrome Compliance Team,
- Requirements for Security Passes, arranged by Drone Operator or HAL Sponsor,
- Requirements for Work Permits, arranged by HAL Aerodrome Compliance Team,
- Requirement for TOI's, arranged by NATS.

**3.3.4** A meeting will be arranged between Heathrow representatives, NATS and the Drone Operator, including the lead pilot to discuss proposals and restrictions. Depending on the complexity of the proposed drone flight, further meetings might be required, prior to final approvals.

**3.3.5** Providing all parties are happy with the proposal and restrictions, a permit will then be finalised and issued.

**3.3.6** The drone operator is responsible for managing any geofencing restrictions. If this is required, the operator must contact the Aerodrome Compliance Team immediately, upon receipt of their authorised permit. Authorisation will be provided in the form of an email letter attachment and will match the dates of the permit only.

**3.4 No drone operations should commence until written approval is obtained from Heathrow.** All compliance authorities, including Heathrow Airfield Operations must obtain prior permission before deploying a drone within Heathrow's FRZ, unless responding to high priority incidents. In all instances, the Air Traffic Control Supervisor must be contacted to discuss the operational impact and flight viability, who will then coordinate with the Airfield Duty Manager.

#### 4. Enquiries

Any enquiries relating to this procedure should be addressed to the Aerodrome Compliance Team at [drones@heathrow.com](mailto:drones@heathrow.com).

#### 5. References

- 5.1 CAP 722 Unmanned Aircraft System Operations in UK Airspace – Guidance.
- 5.2 Air Navigation Order 2016 (ANO)
- 5.3 [www.caa.co.uk](http://www.caa.co.uk)
- 5.4 NATS Request to fly a Drone or Model Aircraft
- 5.5 <https://nsf.nats.aero/drones-and-model-aircraft/>

#### 6. Forms

Form #	Form	Responsibility
001	Drone Operations Permit	Aerodrome Compliance Coordinators
002	Request to fly a Drone or Model Aircraft	NATS



## Appendix A

Appendix A shows Heathrow's FRZ and RPZ.

The Flight Restricted Zone is an area of 2.5 nautical mile radius centred on existing Aerodrome Traffic Zone position, extending to 2,000 feet above ground level.

512839.30N 0002740.86W

The Flight Restricted Zone also includes the Runway Protection Zones, which extend out 5 kilometres from each notified Runway Threshold and is 1.5 kilometres wide, extending to 2,000 feet above ground level.

09L : 512839.00N 0002906.05W

27R : 512839.63N 0002559.74W

09R : 512753.25N 0002856.41W

27L : 512753.83N 0002602.68W



## Document Data

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## Document History

Revision	Description of Change	Date
V1.0	Initial Issue	04 <sup>th</sup> July 2017
V2.0	<ul style="list-style-type: none"> <li>Added Map of FRZ, including changed approval procedure for drone operations within the FRZ to be approved by NATS.</li> <li>Changed responsibility of on Airfield authorisation of drone flights to Works &amp; Safeguarding Manager.</li> <li>Added Request to fly a Drone or Model Aircraft to list of forms.</li> <li>Added coordinates for FRZ and RPZ</li> </ul>	18 <sup>th</sup> December 2020
V3.0	<ul style="list-style-type: none"> <li>Full review, including a step-by-step process on how a drone permit is processed for either an Off Airfield Permit or an On Airfield Permit. This document also clarifies the wording between “Drone” and “Remotely Piloted Aircraft Systems”.</li> <li>Updated the Appendix A, Enquiries, References and Forms section.</li> </ul>	24 <sup>th</sup> April 2024

