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A. General

A.1 Administration and control of the aerodrome manual
1.1 Introduction & Statements of Compliance

The Aerodrome Manual forms an important part of the certification process required by the European Aviation Safety Agency (EASA) with respect to the operation of the aerodrome. This document complies with all applicable requirements as detailed in ADR.OR.E.005, and is in accordance with the terms of the aerodrome certificate.

The Manual and its associated documents contain information relevant to the safe operation of Heathrow’s airfield. It describes the aerodrome services and facilities, the airfield management structure and responsibilities, the aerodrome safety management system, and provides references to pertinent operational procedures and standards.

All users of the airfield are expected to follow the standards and operational procedures referred to in this document, in order to meet or exceed the minimum standards required by the terms of the certificate. Full operational safety instructions are available online at Heathrow.com/airside.

Heathrow Airport Limited gives safety the highest priority at all times. It is committed to ensuring the health and safety of employees, customers, business partners and members of the public, so far as is reasonable and practicable.

Heathrow welcomes and encourages the participation of airside users in the continuous improvement of the safety standards laid out in this manual.

Chris Garton
Chief Operating Officer
Accountable Manager
Heathrow Airport Limited.
1.2 Explanations, abbreviations and definitions of terms needed for the use of the manual

1.2.1 List of abbreviations;

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<th>Description</th>
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<td>AfDM</td>
<td>Airfield Duty Manager</td>
</tr>
<tr>
<td>AFS</td>
<td>Airport Fire Service</td>
</tr>
<tr>
<td>AGL</td>
<td>Airfield Ground Lighting</td>
</tr>
<tr>
<td>AIP</td>
<td>Aeronautical Information Publication</td>
</tr>
<tr>
<td>AIS</td>
<td>Aeronautical Information Service</td>
</tr>
<tr>
<td>ALP</td>
<td>Aerial Ladder Platform</td>
</tr>
<tr>
<td>ANO</td>
<td>Air Navigation Order (CAP 393)</td>
</tr>
<tr>
<td>AOC</td>
<td>Airline Operations Committee</td>
</tr>
<tr>
<td>AOM</td>
<td>Airport Operations Manager</td>
</tr>
<tr>
<td>APOC</td>
<td>Airport Operations Centre</td>
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<tr>
<td>APU</td>
<td>Auxiliary Power Unit</td>
</tr>
<tr>
<td>ASAM</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
<tr>
<td>ASD</td>
<td>Airside Safety Department</td>
</tr>
<tr>
<td>ASDA</td>
<td>Accelerate Stop Distance Available</td>
</tr>
<tr>
<td>ASO</td>
<td>Airside Systems Operations</td>
</tr>
<tr>
<td>ATC</td>
<td>Air Traffic Control</td>
</tr>
<tr>
<td>ATIS</td>
<td>Aerodrome Terminal Information Service</td>
</tr>
<tr>
<td>CAA</td>
<td>Civil Aviation Authority (Competent Authority)</td>
</tr>
<tr>
<td>CCTV</td>
<td>Closed Circuit Television</td>
</tr>
<tr>
<td>CAP</td>
<td>Civil Aviation Publication</td>
</tr>
<tr>
<td>FFFP</td>
<td>Film Forming Fluoro Protein</td>
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<tr>
<td>FOD</td>
<td>Foreign Object Debris</td>
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<tr>
<td>GMC</td>
<td>Ground Movement Control</td>
</tr>
<tr>
<td>HAL</td>
<td>Heathrow Airport Limited</td>
</tr>
<tr>
<td>HOEC</td>
<td>Heathrow Operational Efficiency Cell (NATS)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organisation</td>
</tr>
<tr>
<td>LDA</td>
<td>Landing Distance Available</td>
</tr>
<tr>
<td>ILS</td>
<td>Instrument Landing System</td>
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<tr>
<td>LFB</td>
<td>London Fire Brigade</td>
</tr>
<tr>
<td>MATS</td>
<td>Manual of Air Traffic Services</td>
</tr>
<tr>
<td>MOR</td>
<td>Mandatory Occurrence Report</td>
</tr>
<tr>
<td>MRS</td>
<td>Managing Responsibly System</td>
</tr>
<tr>
<td>NATS</td>
<td>National Air Traffic Services</td>
</tr>
<tr>
<td>NOTAM</td>
<td>Notice To Airmen</td>
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<tr>
<td>OCL</td>
<td>Obstacle Clearance Limit</td>
</tr>
<tr>
<td>OFZ</td>
<td>Obstacle Free Zone</td>
</tr>
<tr>
<td>OSI</td>
<td>Operational Safety Instruction</td>
</tr>
<tr>
<td>PAPI</td>
<td>Precision Approach Path Indicator</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>RESA</td>
<td>Runway End Safety Area</td>
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<tr>
<td>RFFS</td>
<td>Rescue and Fire Fighting Service</td>
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<tr>
<td>RT</td>
<td>Radio Telephony</td>
</tr>
<tr>
<td>SAU</td>
<td>Stand Allocation Unit</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<td>--------------------------------------------------</td>
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<tr>
<td>SEGS</td>
<td>Stand Entry Guidance System</td>
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<tr>
<td>SIS</td>
<td>Staff Information System</td>
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<tr>
<td>TODA</td>
<td>Take Off Distance Available</td>
</tr>
<tr>
<td>TORA</td>
<td>Take Off Run Available</td>
</tr>
<tr>
<td>UHF</td>
<td>Ultra High Frequency (radio)</td>
</tr>
<tr>
<td>VCR</td>
<td>Visual Control Room (ATC)</td>
</tr>
<tr>
<td>VDGGS</td>
<td>Visual Docking Guidance System</td>
</tr>
<tr>
<td>VHF</td>
<td>Very High Frequency (radio)</td>
</tr>
</tbody>
</table>
A.2 System of amendment and revision

2.1 Details of the persons responsible for the issuance and insertion of amendments and revisions

2.1.1 The HAL Aerodrome Safety & Assurance Manager (ASAM) is responsible for the issuance of this document, and the management of any amendments or revisions.

2.2 A record of amendments and revisions with insertion dates and effective dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Amendments / Revisions</th>
<th>Author</th>
</tr>
</thead>
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<tr>
<td>10/3/16</td>
<td>V0.1 – DRAFT for CAA Review</td>
<td>M.McKee</td>
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<tr>
<td>06/04/16</td>
<td>V1 – First Issue</td>
<td>M.McKee</td>
</tr>
<tr>
<td>06/07/16</td>
<td>V1.1 – Changes to management team &amp; structure</td>
<td>M.McKee</td>
</tr>
<tr>
<td>17/02/17</td>
<td>V2 – Various changes</td>
<td>M.McKee</td>
</tr>
<tr>
<td>15/05/17</td>
<td>V2.1 – Change of Airside Director; Change to various organisational structures; change to strip distances on various taxilanes.</td>
<td>M. McKee</td>
</tr>
<tr>
<td>08/08/17</td>
<td>V2.2 – Changes to management structure (SACM removed, ASAM added); temporary vacancy for Safety Improvement Director. Change to organisational structure to combine ramp assurance and safety under ASAM. Addition of Deputy Senior Airport Fire Manager role Amendment to SC for M.635 (missing centreline lights for 27L)</td>
<td>M. McKee</td>
</tr>
<tr>
<td>01/11/17</td>
<td>V2.3 – Change of accountable manager and tweaks to organisational structures.</td>
<td>M. McKee</td>
</tr>
<tr>
<td>01/04/18</td>
<td>V2.4 – Changes to management structure and nominated personnel. Amendments to SC in light of CS issue 4.</td>
<td>M. McKee</td>
</tr>
<tr>
<td>03/05/18</td>
<td>V2.5 – Changes to management structure and nominated personnel. Additions of/amendments to OSI and Airside Standards</td>
<td>M. McKee</td>
</tr>
<tr>
<td>12/09/18</td>
<td>V2.7 – Changes to management structure and nominated personnel.</td>
<td>M. McKee</td>
</tr>
<tr>
<td>03/05/19</td>
<td>V3.3 – Changes to management structure and nominated personnel. Additions of/amendments to OSI and Airside Standards</td>
<td>M. McKee</td>
</tr>
</tbody>
</table>

2.3 A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety

2.3.1 Handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interests of safety.

2.4 A description of the system for the annotation of pages or paragraphs and their effective dates

2.4.1 Throughout this manual, links are provided to other Heathrow documents which are
subordinate to the Aerodrome Manual, and may be referred to for further detail on a particular subject. These are annotated within the document thus;

**A RED border** indicates that one or more “Airside Standard” exists for a subject. These documents are predominantly aimed at the Heathrow Airside department, and are available upon request from the ASAM.

**A BLUE border** indicates that one or more “Operational Safety Instruction (OSI)” exists for a subject. These documents are issued to the whole Airside community and set out safety requirements for both Heathrow internally, and external stakeholders. OSIs are published on the Heathrow website – www.heathrow.com/airside

### 2.5 A list of effective pages or paragraphs

**2.5.1** Unless otherwise stated, all paragraphs in the manual are current.

### 2.6 Annotation of changes (in the text and, as far as practicable, on charts and diagrams)

**2.6.1** Changes to the text from the previous issue of the manual, both additions and removals, will be marked in the margin immediately adjacent to the text concerned.

### 2.7 Temporary revisions

**2.7.1** Temporary revisions (<6m duration) will be issued to the community by means of an Operational Safety Instruction, and to flight crews via the AIP, if applicable. Longer term temporary revisions (>6m) will be included within the Aerodrome Manual, with an appropriate annotation of the timescale involved.

### 2.8 Description of the distribution system and a distribution list for the aerodrome manual, its amendments and revisions

**2.8.1** The Aerodrome Manual is published in a number of formats;

- **World-Wide-Web;** the manual is published on Heathrow’s website and is accessible to the general public or aerodrome users, via www.heathrow.com/airside.

- **Electronic format (CD or via Email);** copies of the manual are available to aerodrome users (Airlines, Handling Agents, Service Providers, Control Authorities) via these methods upon request. All users are notified by means of an Operational Safety Instruction when a new version of the manual is issued.
3.1 Purpose and scope of the aerodrome manual

3.1.1 The principle purpose of the Aerodrome Manual ("The Manual") is to describe how the aerodrome management will discharge its safety responsibilities.

3.1.2 The Manual seeks to ensure that all staff (HAL and third party) are aware of the safety aims of the organisation, the chain of command, and their own responsibilities with respect to aerodrome safety.

3.1.3 The Manual sets out Heathrow's aviation safety policies. The Manual is Heathrow's primary aerodrome safety document; and provides the strategic basis for the development of tactical plans and operational procedures.

3.1.4 Aircraft operators at Heathrow are required, as part of the aerodrome ‘Conditions of Use’, to adhere to the safety obligations detailed in the Manual and its subordinate documentation.

3.1.5 The Manual will describe the relevant aerodrome management structure, and detail the safety accountabilities/responsibilities borne by each individual or group of staff.

3.1.6 The Manual will describe the aerodrome services and facilities, and set out the particulars of the aerodrome site, including any restrictions on operation or aerodrome availability.

3.1.7 Relevant Heathrow safety and environment policies and procedures are included or referred to within the Manual.

3.2 Legal requirement for an aerodrome certificate and the aerodrome manual

3.2.1 The ICAO requirement for member states to adopt a regulatory system for the Certification (i.e. Licensing) of Aerodromes used for international operations is set out in the Standards and Recommended Practices (SARPs) contained in Annex 14 Volume I to the Convention on International Civil Aviation (The Chicago Convention of 1944). Submission of an Aerodrome Manual by the applicant, as part of the approval/acceptance process for the granting of an Aerodrome Certificate, is included as a Recommendation.

3.2.2 The United Kingdom Civil Aviation Act of 1982 (the Act) makes provision for an Air Navigation Order (the Order) or ANO, which puts the provisions of the Chicago Convention and its Annexes into effect. The ANO is published in Civil Aviation Publication 393 ‘Air Navigation: The Order and the Regulations’ (CAP 393).

3.2.3 Within the Air Navigation Order (ANO), article 207 sets out the requirement for flights operated for the purposes of commercial transport (as detailed in article 208) to use only aerodromes certificated for the take-off and landing of such aircraft.

3.2.4 EC216/2008 is a European legislative regulation which builds on the provisions of the Chicago Convention, and establishes for European Member States the regulations for 'high and uniform protection of the European citizen’ in aviation safety. It mandates the formation of a European Aviation Safety Agency (EASA), and sets out the powers of EASA for regulating aviation safety in Europe. Article 8 of EC216/2008 requires operators involved in commercial transport to "demonstrate their capability and means of discharging the responsibilities associated with their privileges…” and therefore “…these capabilities and means shall be recognised through the issuance of a certificate”

3.2.5 Regulation EC139/2014 sets out the implementing rules and administrative procedures related to aerodromes as required by EC216/2008. ADR.OR.B.005 requires an
applicable certificate to be issued by the Competent Authority (the UK Civil Aviation Authority) in order to operate an aerodrome for commercial transport.

3.2.6 In addition, EC139/2014, paragraph ADR.OR.E.005 requires that each aerodrome operator establish and maintain an aerodrome manual, such that it “…contains or refers to all necessary information for the safe use, operation and maintenance of the aerodrome…”

3.2.7

3.3 Conditions for use of the aerodrome by its users

3.3.1 Heathrow issues an annual ‘Conditions of Use’ document, which sets out the obligations which are incumbent upon airline operators to use Heathrow’s facilities.

3.3.2 Section 5.1(b) sets out the requirement for Airline Operators to comply with the terms of the Aerodrome Manual.

3.3.3 The Conditions of Use also contain the current charges levied by Heathrow for the use of the aerodrome and associated facilities.

3.3.4 The Conditions of Use are reviewed and re-published annually. A copy of the document is available upon request from the Aerodrome Operator, or online at http://www.heathrow.com/company/partners-and-suppliers/conditions-of-use.

3.4 The obligations of the aerodrome operator, rights of the Competent Authority and guidance to staff on how to facilitate audits/inspections by the Competent Authority personnel.

3.4.1 In accordance with EC139/2014, paragraph ADR.OR.C.015, HAL will grant access to any person authorised by the Competent Authority, for the purposes of witness, inspection, test, assessment or exercise, to any facility or document relevant to HAL’s activities as a certificated aerodrome.
B. Aerodrome Management Qualification and Training Requirements

B.1 A description of the management system

1.1 Aerodrome organisation and responsibilities including the following: a description of the organisational structure, including the general organogram and other departments’ organograms. The organogram should depict the relationship between the departments. Subordination and reporting lines of all levels of organisational structure (Departments, Sections etc) related to safety should be shown.

1.1.1 Accountable Manager

1.1.2 Operations Directorate
1.1.3 Safety Improvement Directorate

Safety Improvement Director

H&S Improvement Manager - Airside

1.1.4 Engineering Operations Directorate

Engineering & Asset Management Director

Head of Engineering

Airside Engineering Manager

Airside Systems Department

Engineering Compliance Manager
1.1.5 Airfield Operations (Operational Services)

- Head of Airside Operations
  - Manager Airfield Operations
  - Winter Operations Manager
  - Airfield Duty Manager
  - Airside Works Approval
  - Airside Safety Department

1.1.6 Airfield Development & Strategic Planning

- Head of Planning, Performance and Transformation
  - Senior Airfield Transformation Manager
  - Airfield Transformation Managers
1.1.7 Airport Fire Service

- Director of Operations
  - Chief Fire Officer
  - Deputy Chief Fire Officer
  - Assistant Chief Fire Officer
  - Station Managers
    - Airport Fire Service

1.1.8 Aerodrome Safety & Assurance (Safety Services Office)

- Head of Airside Safety & Assurance
  (Compliance Manager)
  - Aerodrome Safety & Assurance Manager
    (Safety Manager)
      - SMS Manager
      - Compliance & Safeguarding Manager
      - Safety Investigation Managers
        - NATS Safety
1.2 Names, authorities, responsibilities and duties of management and nominated persons; responsibilities and duties of other operational, maintenance personnel, as well as the aerodrome safety committees and the Local Runway Safety Team and their functioning, should also be included.

1.2.1 Named Persons

(a) **Chief Operating Officer (COO) – Chris Garton**
    The Heathrow Airport Limited Chief Operating Officer has overall responsibility for the operation of the airport and holds the post of **Accountable Manager** with respect to the Aerodrome Certificate. Responsibility for ensuring the conditions of the Certificate are met is delegated to the Director of Operations.

(b) **Director of Operations – Kathryn Leahy**
    Reporting to the Chief Operating Officer, the Director of Operations is responsible for the day-to-day delivery of a cohesive airport operation. On the airfield, the role holder is responsible for the safe operation of the airfield, comprising all areas under the control of the airside team. This responsibility encompasses the development and implementation of the strategies and policies required to manage the airside operation, and includes the Airport Fire Service. The role is also responsible for ensuring that all airside development is planned and executed in a safe manner and with minimum impact on the operation.

(c) **Safety Improvement Director – Amanda Owen**
    Reporting to the Chief Operating Officer, the Safety Improvement Director is responsible for providing health and safety technical expertise and strategic leadership for business units.

(d) **Engineering & Asset Management Director – Gavin Payne**
    Reporting to the Chief Operating Officer, the Engineering & Asset Management Director is the nominated “Maintenance Manager” under ADR.OR.D.015(b) - responsible for the development of strategies and policies for the management of assets, including the maintenance of passenger facing assets including roads, tunnels, water systems, HVAC, HV/LV electrical systems and Passenger Safety Equipment.

    On the airfield, this includes maintenance of the Airfield Ground Lighting (AGL), Fixed Electrical Ground Power (FEGP), aircraft boarding bridges, stand entry guidance systems, apron lighting, as well as the maintenance of surfaces including runways, taxiways, grass areas, aprons and roads.

    Reporting to the Engineering & Asset Management Director; The **Head of Engineering** is responsible for the delivery of maintenance across the airport through managing teams of technicians and contracted support staff. The **Airside Engineering Manager** is responsible for the planning and completion of planning and maintenance activity to ensure airside assets are maintained to specified standards.

(e) **Head of Airside Operations – Trevor Waldock**
    The Head of Airside Operations is the nominated **Manager of Operational Services** under ADR.OR.D.015(b), and carries out those duties per applicable regulations. Reporting to the Director of Operations, the Head of Airside Operations is responsible for ensuring the safe operation of the airfield day-to-day, and the strategic management of Airfield Operations. The role is also responsible for the aerodrome snow plan. These responsibilities are exercised through the Manager Airfield Operations, Airfield Duty Managers (AfDM) and the staff of the Airside Safety Department. Snow planning is through the Winter Operations Manager.
(f) **Airfield Duty Manager (AfDM) – 24hr shift**
Reporting to the Manager Airfield Operations, the Airfield Duty Manager is responsible for the 24 hour safe operation, availability and status of the airfield.

The AfDM is the day-to-day manager of the Airside Safety Department and is also responsible for the operational liaison with ATC, the emergency services, airline management, and other HAL operational managers, to ensure the safe use of facilities at all times. The AfDM liaises directly with the Emergency Services Incident Officers to provide specialist airfield knowledge at an incident scene. The AfDM is responsible for the monitoring and control of all airside work, including the approval of permits to work.

(g) **Head of Airside Safety & Assurance – Ian Witter**
Reporting to the Director of Operations, the Head of Airside Safety & Assurance (HoS&A) is the nominated Compliance Manager under ADR.OR.D.005(b)(11), and carries out those duties in accordance with applicable regulations. The (HoS&A) is also accountable for the duties of the Safety Services Office. The HoS&A discharges these responsibilities through the Aerodrome Safety & Assurance Manager, and their team (“The Safety Services Office” under ADR.OR.D.005(b)(1))

(i) **Aerodrome Safety & Assurance Manager – Michael McKee**
The Aerodrome Safety & Assurance Manager is the nominated Safety Manager under ADR.OR.D.015(c).

Reporting to the Head of Airside Safety & Assurance, the Aerodrome Safety & Assurance Manager is responsible for the aerodrome SMS, aerodrome compliance, safety assurance, the safety reporting system, and safety investigation.

(j) **Chief Fire Officer – Gary Barthram**
Reporting to the Director of Operations is the Chief Fire Officer, whose role it is to provide advice and support on all RFFS related issues, to ensure that national standards, company standards, and statutory legislation is applied. The role also takes accountability for fire service learning solutions, integrating them into the HAL business and ensuring it meets regulatory requirements. The Chief Fire Officer is supported by the Deputy Senior Airport Fire Manager, who leads the Airport Fire Service Station Managers and Airport Fire Service.

The Chief Fire Officer and Deputy Senior Airport Fire Manager can also be used to provide resilience within the Airport Fire & Rescue Service.

(k) **Head of Planning, Transformation & Performance – Neil Pritchard**
Reporting to the Director of Operations, the Head of Planning, Transformation & Performance is responsible for ensuring that the airside development programme is aligned with Heathrow's strategy for safety, environment and operational objectives, and that specific new developments within the programme are both compliant with CAA regulations and operationally effective for current and future business requirements.

In addition, the Head of Operations Transformation is responsible for developing the ground handling strategy for Heathrow to include the standardisation and optimisation of the turnaround process and for development and delivery of Heathrow fleet and associated transformation and sustainability agenda. In addition, the Head of Planning, Transformation & Performance is responsible for the delivery and integration of key service transformation projects, targeted towards the operational improvement and increased efficiency of aircraft flow.
(I) **Head of Airport Operations – Mark Burgess**

Reporting to the Director of Operations, the Head of Airport Operations is responsible for leading the Airport Duty Manager team, and further the safe and effective management of the Airport Operations Centre (APOC). Stand planning & performance is delivered through the Aircraft Operations Manager, the Aircraft Operations Duty Manager (AODM) and the staff of the Aircraft Operations Unit (AOU – formerly Stand Allocations Unit). is responsible for the delivery of Air Traffic Control operations at Heathrow through Heathrow’s ATC service provider – NATS. The role is further responsible for monitoring the operational performance of the airfield and developing action plans to improve this in conjunction with NATS and airline customers. This is executed through the Flight Performance Team, who monitor airline compliance against environmental requirements such as noise and track keeping.

1.2.2 **Delegation of Responsibility**

In the absence of a member of the senior management team, responsibility for the 24 hour safe operation, availability and status of the airfield rests with the Airfield Duty Manager (AfDM).

1.2.3 **Changes to the role of Accountable Manager**

If Heathrow appoints a new Accountable Manager, the competent authority will be notified using the appropriate form, as stipulated in CAA IN-2015/030.

1.2.4 **Operational Sections**

(a) **Airside Safety Department (ASD)**

Reporting to the Airfield Duty Manager on shift, the role of the Airside Safety Department is to assure the safety and availability of the airfield on a 24hr basis. The staff are organised on a ‘watch’ basis with each watch consisting of several Senior Airfield Officers, Airfield Operations Officers and Airside Transport Officers.

The Airside Safety Department (ASD) is based in the Airfield Operations Facility (AOF) on the Eastern side of the airfield. The control room has direct telephone lines to ATC and the HAL Airport Fire Service. There is also a ‘listen out’ facility on the Emergency and Crash Lines from ATC. There are various computer systems which link to the wider Heathrow operational network. ASD carry out a series of inspections and patrols of the manoeuvring area (under the ‘3-Tier’ approach to inspections), checking surface and lighting conditions. ASD will carry out wildlife hazard management duties, monitor the safety of works areas, and attend all airside accidents/incidents.
In the event of an aircraft accident or incident requiring the attendance of non-Heathrow emergency services, the ASD will escort them from the nominated RVP or Control Post to the incident site.

The ASD provide a marshalling service where stand entry guidance systems are unserviceable or not installed, and provide ‘follow-me’ leader services for aircraft and other service vehicles across the manoeuvring area. The areas and distances to be covered on the airfield necessitate the use of vehicles. The vehicles are equipped with the HAL domestic trunk radio system which maintains a link between all staff and the Airside Safety Department control room. In addition, vehicles are equipped with airband VHF radios, and staff are either under the active control of ATC (for instance when on the runway), or listening out (manoeuvring area or stands). As a result, ATC can request assistance from ASD personnel at any time. Vehicles are equipped with mobile data (4G/wi-fi) which enables tablet devices to be used in the vehicle for a variety of applications. Some vehicles are also equipped to carry out wildlife control duties, with distress call amplifiers and gun cabinets installed. In addition, the ASD operate a fleet of vehicles to support the airfield operation. These include dry sweepers, combination sweepers and a large selection of snow clearance vehicles. Vehicles are fitted with UHF radios for the HAL domestic trunk radio system, and some are further fitted with VHF airband radios for driving on the manoeuvring area. Teams of drivers carry out daily cleaning duties around the airfield, focussing on roads, stands and walkways, in order to reduce FOD risk. The team will carry out scheduled chemical deep cleaning on stands, and respond to ad-hoc sweeping requirements on the manoeuvring area as required. In the event of an aircraft accident, the Airside Safety Department will provide specialist vehicles for the incident, including emergency equipment trailers, which contain inflatable tents for shelter during the event. ASD carry out runway friction measurement and rubber removal duties, using specialist equipment. The team also have a highly powered 'magnet' vehicle available for removing metallic FOD from the movement area, and a specialist soda cleaning machine for runway lighting.

(b) Aircraft Operations Unit
The Aircraft Operations Unit (AOU) has overall authority for stand allocation at Heathrow. However, due to the extensive use of Terminal 5 by British Airways, the day to day responsibility for stand allocation in this terminal is delegated to the airline, although HAL can override British Airways’ allocation if deemed necessary. The AOU operate under the direction of a Senior Operations Controller, who in turn reports to the duty Aircraft Operations Duty Manager in APOC.

(c) Airside Engineering (Civils)
The Airside Engineering Role is to ensure the facilities on the airfield are maintained in a safe and operational state. The role is discharged by a Civils Delivery Manager and an Asset Manager for surface and electrical assets respectively. Day to day maintenance of facilities is delivered through a team of Maintenance Managers.
(d) Airside Engineering Operations
The Airside Engineering team work on a 24hr shift working basis. They are led by the Airside Engineering Manager and their Maintenance Team Managers. The team carry out planned and reactive maintenance on all airfield electrical systems including Aeronautical Ground Lighting (AGL), Precision Approach Path Indicators (PAPI), Apron Lighting, Fixed Electrical Ground Power (FEGP) and standby generators.
As part of the maintenance plan, they also carry out light intensity checks of the runway lights and light level checks on the Apron. They are also responsible for responding to and repairing faults raised through the fault reporting system.
The team have a variety of vehicles available to carry out their duties including high lift platforms. Many of the team hold manoeuvring area driving licenses to enable them to access relevant areas of the airfield with minimum delay.

(e) Airside Operations Standards Team
Reporting to the Airside Operations Standards Manager, the Airside Operations Standards team are responsible for assuring the performance of the airside licensees against the HAL Airside Ground Handling Licence through observations, inspections and audits. The team reviews the Airside Infringement or Occurrence Notices issued, awarding penalty points and infringements as outlined in the Airside Driving Penalty Points scheme. They also maintain records and monitor trends on airside safety performance with respect to the Ground Handling Licence.

1.2.5 Aerodrome Safety Committees
Heathrow runs several regular safety focussed committees and working groups. These meetings are run formally, at appropriate intervals. The minutes and actions arising are circulated to members and records kept. Details of the committees held at Heathrow are detailed in the Aerodrome Safety Management System – please see Appendix B.

1.3 The name, status and responsibility of persons authorised by the Civil Aviation Authority (the CAA, as the competent authority) under article 232 of the Air Navigation Order 2009 to detain aircraft at the aerodrome for safety and other, related reasons, as set out in article 232.

1.3.1 HAL has the legal powers to detain, or assist in the detention of, any aircraft at Heathrow, for a variety of reasons including (but not exclusive to) for financial purposes (non-payment of charges), aviation safety, security, or in support of a court order.

1.3.2 The detention of an aircraft will usually be carried out by the HAL Airfield Duty Manager (AfDM), acting on behalf of the Operations Director, the Civil Aviation Authority (CAA) or under direction from a Court Official.

B.2 A description of the safety management system
2.1 Scope of the safety management system
2.2 Procedures related to the use of alcohol, psychoactive substances and medicines

2.2.1 Heathrow has a drugs and alcohol policy for all its direct employees. In addition, an OSI exists for third party employees related to ‘Alcohol and Classified Drugs’
2.3 A description of the method and procedures for recording aircraft movements, including movement and aircraft type, dates, and number of passengers.

2.3.1 Under its conditions of use, Heathrow requires airline operators to submit movement details for billing and operational planning purposes. Information on passenger numbers and aircraft movements is stored electronically on a database and is accessible to authorised Heathrow staff.

2.4 Description of the quality management system for aeronautical data and aeronautical information provision activities and related procedures, including those for meeting the relevant safety and security management objectives

2.4.1 See section F.1.2 for information on this subject.

B.3 Procedures for reporting to the competent authority including handling, notifying and reporting accidents, serious incidents and occurrences

3.1 Definition of accident, serious incident and occurrence and of the relevant responsibilities of all persons involved

3.1.1 Points D.3.1-D.3.7 are covered in the Heathrow Airside Safety Management System, section C.8. Please see Appendix B.

3.2 A description of the method and procedures for recording aircraft movements including movement type and aircraft type, dates and number of passengers

3.2.1 The HAL ‘Conditions of Use’ require all airline operators to electronically submit to HAL daily passenger numbers and aircraft movements. This data is stored within HAL database systems and is used for statistical and financial purposes (charging).

B.4 Aerodrome personnel qualifications and procedures, related to…

4.1 Training programme, including responsibilities, frequencies, syllabi and the identified training standards for all personnel involved in the operation, rescue and fire fighting maintenance and management of the aerodrome, and those persons operating unescorted on the movement area and other operational areas of the aerodrome

4.1.1 Points D.4.1-D.4.7 are covered in the Heathrow Airside Safety Management System, section C.6. Please see Appendix B. Details of the Fire Service training standards are covered in section G.10.
C. Particulars of the Aerodrome Site

C.1 Description of the aerodrome site

1.1 A plan showing the distance of the aerodrome from the nearest city, town or other populous area

1.1.1 A map showing the location of the aerodrome relative to the nearest city is available at appendix A. Readers should be aware that chart appendices are valid only at the date of issue. Up to date charts will always be available on the AIS website – www.ais.org.uk

1.2 Detailed maps and charts of the aerodrome showing the aerodrome’s location (longitude and latitude) and boundaries, major facilities, aerodrome reference point, layout of runways, taxiways and aprons, aerodrome visual and non-visual aids, and wind direction indicators (Scale 1:2500)

1.2.1 A 1:2500 scale chart, showing the position of the aerodrome reference point, aerodrome topography, markings, lighting and navigation aids is available upon request.

1.2.2 The Heathrow aerodrome chart, as published in the UK AIP (section AD 2-EGLL-2-1), is included as an attachment to this manual and is suitable for general printing. This chart provides an overview of the airfield boundaries, layout of the movement area, visual and non-visual aids and wind direction indicators.

1.2.3 In addition, the following maps and charts are included as attachments to this manual;

(a) Code F aerodrome ground movement chart (AD 2-EGLL-2-3)

(b) Aerodrome ground movement/parking charts, terminals 1-5; (AD 2-EGLL-2-4 to AD 2-EGLL-2-7)

(c) Heathrow’s ‘Airfield Map’, which is the map issued to the airport community, giving a simplified combined view of the airfield layout.

1.2.4 Heathrow is subject to constant construction and development. HAL employ a contractor to survey and update the information shown in the maps and charts. Developments on the aerodrome are incorporated when complete. The charts published in the AIP are updated on Heathrow’s behalf by NATS, based on information provided by Heathrow. The Airfield Map is updated by Heathrow’s own Asset Information Management Centre, and is as accurate as possible at the date shown on the drawing.

1.2.5 The number of amendments made to the maps and charts throughout the year is dictated by the amount of significant construction or change to the airfield.

1.2.6 The accountability for ensuring that the appropriate maps and charts are accurate rests with the Aerodrome Safety & Assurance Manager.

1.3 A plan showing the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome

1.3.1 With the exception of a section of the approach lighting on each runway (which are displayed on the UK AIP aerodrome chart), no significant aeronautical facilities are positioned outside the boundaries of the aerodrome.

1.4 Description of the physical characteristics of the aerodrome, elevations, visual and non-visual aids, as well as the information regarding the aerodrome reference temperature, strength of
pavements, rescue and fire fighting level of protection, ground aids, main obstacles and whether they are lighted

1.4.1 These topics are covered in section F.2 – Aerodrome dimensions and related information.

1.5 Description of the types of operations that the aerodrome is approved to conduct

1.5.1 Heathrow is approved to conduct public transport operations.

1.5.2 Heathrow is approved to conduct operations during the day and at night.
D. Particulars of the Aerodrome
Required to be Reported to the Aeronautical Information Service

D.1 The aeronautical information services available and the procedures for the promulgation of general information, including…

1.1 Aeronautical information services available
   1.1.1 In common with the rest of the UK, Aeronautical Information Services are not provided directly by Heathrow Airport Limited. AIS is contracted and provided centrally by NATS Ltd.
   1.1.2 UK AIS is located at – UK AIS, NATS Ltd, Room 3115, Sopwith Way, Southampton, SO31 7AY.
   1.1.3 Most UK AIS publications are available in both paper and electronic format. The UK AIP, AIP Supplements and AICs may be obtained from the UK AIS CD-ROM and, in addition, these documents are also available on the UK AIS website (www.ais.org.uk)

1.2 Procedures for the promulgation of general information

<table>
<thead>
<tr>
<th>Created by</th>
<th>Promulgated by</th>
</tr>
</thead>
<tbody>
<tr>
<td>The name of the aerodrome</td>
<td>n/a</td>
</tr>
<tr>
<td>The location of the aerodrome</td>
<td>Annual Aerodrome survey</td>
</tr>
<tr>
<td>The geographic co-ordinates of the aerodrome reference point determined in terms of the World Geodetic System – 1984 (WGS-84) reference datum</td>
<td>Annual aerodrome survey</td>
</tr>
<tr>
<td>The aerodrome elevation and geoid</td>
<td>Annual aerodrome survey</td>
</tr>
</tbody>
</table>
The elevation of each threshold and geoid undulation, the elevation of each runway end and any significant high or low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway

Annual aerodrome survey  UK AIP, via NATS AIS

The aerodrome reference temperature

UK Met Office  UK AIP, via NATS AIS

Details of the aerodrome beacon

n/a  n/a

The name of the aerodrome operator and contact details (including telephone numbers) of the aerodrome operator which may be contacted at all times

n/a  UK AIP, via NATS AIS

The annual aerodrome survey is commissioned by Heathrow and carried out by a specialist contractor (currently SLC Ltd). A sample of the results is checked for errors or omissions by the Aerodrome Safety & Assurance team, before being submitted to the AIS provider for publication in the UK AIP.

The accountability for the initiation, management and promulgation of the aerodrome survey rests with the Aerodrome Safety & Assurance Manager.

On-going changes to the aerodrome infrastructure or facilities are promulgated via the AIS provider and published in the UK AIP. These changes are requested by the Aerodrome Safety & Assurance team (for aerodrome changes) or by NATS (for navigational aids changes).

Short term changes to infrastructure or facilities are promulgated via NOTAM and/or ATIS. These are generally submitted by the Airfield Duty Manager (for aerodrome changes) or by NATS (for navigational aids changes).
D.2 Aerodrome dimensions and related information, including...

2.1 Runway – true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone

<table>
<thead>
<tr>
<th>Designation</th>
<th>09L</th>
<th>27R</th>
<th>09R</th>
<th>27L</th>
</tr>
</thead>
<tbody>
<tr>
<td>True Bearing</td>
<td>089, 40’ 07”</td>
<td>269, 42’ 32”</td>
<td>089, 40’ 53”</td>
<td>269, 43’ 08”</td>
</tr>
<tr>
<td>Length (based on Airy Ellipsoid)</td>
<td>3902m</td>
<td>3902m</td>
<td>3660m</td>
<td>3660m</td>
</tr>
<tr>
<td>Width</td>
<td></td>
<td>50m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulders (each side)</td>
<td>Between A1 and A11 = 20.5m; Between A11 and A13 = 12.5m</td>
<td>Between A1 and A11 = 20.5m; Between A11 and A13 = 12.5m</td>
<td>Between N1 and N7 = 20.5m; Between N7 and N11 = 12.5m</td>
<td>Between N1 and N7 = 20.5m; Between N7 and N11 = 12.5m</td>
</tr>
<tr>
<td>Displaced Threshold</td>
<td>309m</td>
<td>n/a</td>
<td>308m</td>
<td>n/a</td>
</tr>
<tr>
<td>Slope</td>
<td></td>
<td>Non-Significant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Type</td>
<td></td>
<td>Grooved Asphalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Runway</td>
<td>CAT IIIB Precision Approach</td>
<td>CAT IIIB Precision Approach</td>
<td>CAT IIIB Precision Approach</td>
<td>CAT IIIB Precision Approach</td>
</tr>
<tr>
<td>Existence of OFZ</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

2.2 Length, width and surface type of strip, runway end safety areas, stopways; length, width and surface type of taxiways; apron surface type and aircraft stands, clearway length and ground profile

2.2.1 All runways have a 280m wide strip, extending to 60m past the ends of each runway.

2.2.2 Runway End Safety Areas are provided for each runway, of the following sizes:

<table>
<thead>
<tr>
<th></th>
<th>Undershoot RESA Dimensions (m)</th>
<th>Overrun RESA (Landing) Dimensions (m)</th>
<th>Overrun RESA (Take-off) Dimensions (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09L</td>
<td>240 x 210</td>
<td>240 x 210</td>
<td>240 x 210</td>
</tr>
<tr>
<td>27R</td>
<td>240 x 210</td>
<td>240 x 182</td>
<td>240 x 182</td>
</tr>
<tr>
<td>09R</td>
<td>240 x 210</td>
<td>240 x 210</td>
<td>240 x 210</td>
</tr>
</tbody>
</table>
No **stopways** are provided at Heathrow.

A **clearway** of length 78m is provided for runway 27R only. The clearway is of concrete construction and has no significant changes in ground profile.

**Taxiways & Taxilanes** are constructed as follows…

<table>
<thead>
<tr>
<th>Designator</th>
<th>Construction</th>
<th>Code</th>
<th>Width (m)</th>
<th>Strip Width (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha (West)</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>40 – 47.5</td>
</tr>
<tr>
<td>Alpha (South)</td>
<td>Concrete/Asphalt</td>
<td>F</td>
<td>25</td>
<td>48.75 – 53</td>
</tr>
<tr>
<td>Alpha (East)</td>
<td>Concrete/Asphalt</td>
<td>F</td>
<td>25</td>
<td>47.5 – 57.5</td>
</tr>
<tr>
<td>Alpha (North)</td>
<td>Concrete/Asphalt</td>
<td>E/F</td>
<td>23/25</td>
<td>45.5 – 53</td>
</tr>
<tr>
<td>Bravo (West)</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>40 – 47.5</td>
</tr>
<tr>
<td>Bravo (South)</td>
<td>Concrete/Asphalt</td>
<td>F</td>
<td>25</td>
<td>48.75 – 57.5</td>
</tr>
<tr>
<td>Bravo (East)</td>
<td>Concrete/Asphalt</td>
<td>F</td>
<td>25</td>
<td>50 – 55</td>
</tr>
<tr>
<td>Bravo (North)</td>
<td>Concrete/Asphalt</td>
<td>F</td>
<td>23/25</td>
<td>47.5 – 50</td>
</tr>
<tr>
<td>Charlie</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>52 – 55</td>
</tr>
<tr>
<td>Delta</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>52.5 – 55</td>
</tr>
<tr>
<td>Echo</td>
<td>Concrete</td>
<td>E*</td>
<td>23</td>
<td>48.6 – 55</td>
</tr>
<tr>
<td>Foxtrot</td>
<td>Concrete</td>
<td>E*</td>
<td>23</td>
<td>42.5 – 50</td>
</tr>
<tr>
<td>Golf</td>
<td>Asphalt</td>
<td>E</td>
<td>23</td>
<td>40 – 47.5</td>
</tr>
<tr>
<td>Hotel</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>42.5 – 47.5</td>
</tr>
<tr>
<td>Kilo (North)</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>42.5 – 52</td>
</tr>
<tr>
<td>Kilo (South)</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>51.5 – 55</td>
</tr>
<tr>
<td>Lima</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>52 – 55</td>
</tr>
<tr>
<td>Mike</td>
<td>Concrete/Asphalt</td>
<td>E*</td>
<td>23</td>
<td>40 – 43</td>
</tr>
<tr>
<td>Romeo</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>42.5 – 47.5</td>
</tr>
<tr>
<td>Sierra</td>
<td>Concrete/Asphalt</td>
<td>E*/F</td>
<td>23</td>
<td>37 – 55</td>
</tr>
<tr>
<td>Tango</td>
<td>Concrete</td>
<td>E/F</td>
<td>23/25</td>
<td>40 – 49</td>
</tr>
<tr>
<td>Victor</td>
<td>Victor Material</td>
<td>Victor Letter</td>
<td>Victor Number</td>
<td>Victor Span</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Whiskey</td>
<td>Concrete/Asphalt</td>
<td>E*</td>
<td>23</td>
<td>49.5</td>
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<tr>
<td>Yankee</td>
<td>Concrete</td>
<td>C</td>
<td>18</td>
<td>24.5</td>
</tr>
<tr>
<td>Zulu</td>
<td>Concrete</td>
<td>D*</td>
<td>23</td>
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</table>

**Link Taxiways**

<table>
<thead>
<tr>
<th>Link Number</th>
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<th>Link Letter</th>
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<th>Link Span</th>
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<tbody>
<tr>
<td>Link 11</td>
<td>Asphalt</td>
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<tr>
<td>Link 12</td>
<td>Asphalt</td>
<td>E</td>
<td>23</td>
<td>47.5</td>
</tr>
<tr>
<td>Link 13</td>
<td>Asphalt</td>
<td>E</td>
<td>23</td>
<td>47.5</td>
</tr>
<tr>
<td>Link 21</td>
<td>Asphalt/Concrete</td>
<td>F</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Link 22</td>
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<td>F</td>
<td>23/25</td>
<td>55</td>
</tr>
<tr>
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<td>E*/F</td>
<td>25</td>
<td>47.5 – 55</td>
</tr>
<tr>
<td>Link 25</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>47.5</td>
</tr>
<tr>
<td>Link 26</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>49 / 55</td>
</tr>
<tr>
<td>Link 27</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Link 28</td>
<td>Concrete</td>
<td>E/F</td>
<td>23/25</td>
<td>43.5 – 55</td>
</tr>
<tr>
<td>Link 29</td>
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<td>F</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Link 30</td>
<td>Concrete</td>
<td>F</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Link 31</td>
<td>Concrete</td>
<td>F</td>
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<td>55</td>
</tr>
<tr>
<td>Link 32</td>
<td>Asphalt</td>
<td>F</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Link 33</td>
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<td>Link 34</td>
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<td>55</td>
</tr>
<tr>
<td>Link 35</td>
<td>Asphalt</td>
<td>E</td>
<td>23</td>
<td>47.5</td>
</tr>
<tr>
<td>Link 36</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>42 – 47.5</td>
</tr>
<tr>
<td>Link 41</td>
<td>Concrete</td>
<td>E</td>
<td>23</td>
<td>43 – 47</td>
</tr>
<tr>
<td>Link 42</td>
<td>Concrete</td>
<td>E*</td>
<td>23</td>
<td>50</td>
</tr>
</tbody>
</table>
2.2.7 Aprons are, in the vast majority of cases, constructed of concrete. Stand 357 (on Bravo – North) is the only remaining stand constructed using block paving.

2.3 Visual aids for approach procedures, approach lighting type and visual approach slope indicator system; marking and lighting of runways, taxiways and aprons; other visual guidance and control aids on taxiways and aprons, location and type of visual docking guidance system; availability of standby power for lighting.

2.3.1 Heathrow’s aerodrome lighting is suitable for precision approach categories II and III operations. Taxiway lighting systems and signs are suitably equipped for operations below 350m RVR.

2.3.2 No aerodrome beacon is installed.

2.3.3 Approach lighting for all runways is constructed as follows;
(a) Full Calvert coded centrelines and five-bar system.
(b) The lights are all uni-directional, high intensity, white, and beamed at 6’ (threshold) to 9’ (outer bar) to the horizontal.
(c) Supplementary high intensity approach lighting system over the inner 300m of the approach. This consists of 27 barrettes of 4 lights each, arranged in 9 rows of three, symmetrically each side of the extended runway centreline.
(d) The SAL’s are uni-directional, high intensity, white (centre barrette) or red (outer barrettes) and beamed at the same angles as the corresponding approach lighting.
(e) Runway 27L approach lighting is provided using LED fittings. All other runways use traditional halogen fittings.

2.3.4 All runways are equipped with a single bar PAPI on the left side, comprising four triple projector units. Each circuit is fitted with lamp failure detection.

2.3.5 Runway lighting is constructed as follows;
(a) Green threshold lights at each landing threshold. These 18 lights are uni-directional,
flush, high intensity, and are full width, supplemented by wing bars of four lights each side.

(b) **Centreline lights** at 15m spacing. The lights are bi-directional, flush, high intensity, and beamed at 5’ to the horizontal for the first 900m of each runway direction, and 3’ for the remainder. The lights are white up to 900m from the runway end, with the following 600m alternate red and white, and the final 300m all red in colour.

(c) **Edge lights** at 60m spacing. These lights are positioned at 25m either side of the centreline. These lights are bi-directional, flush, high intensity, and white.

(d) **Touchdown zone lights** over the first 900m of each runway direction. These consist of 24 barrettes of four lights, arranged in twelve rows, each barrette positioned symmetrically each side of the runway centreline. The lights are uni-directional, flush, high intensity, and white.

(e) **Runway stop end lights** at each runway end. These lights are uni-directional, flush, high intensity, and red.

2.3.6 **Taxiway lighting** is constructed as follows:

(a) The airfield is equipped with bi-directional green **centreline lighting**, installed on all sections of the taxiway. Lighting is selectively switchable on all routes. The lights are spaced at appropriate intervals for operations in RVR of less than 350m.

(b) **Stop bars** are installed at taxiway intersections, and are linked to the selective switching of the centreline lights. These are comprised of high intensity red lights either side of the centreline.

(c) At runway entrances, high intensity, bi-directional red **stop bars** are installed. Bars are located at CAT I and CAT II/III or at CAT I/II/III holding positions. Red stop bars are illuminated 24 hours a day, and are suppressed in conjunction with a verbal ATC clearance to allow aircraft or vehicle access to the runway.

(d) The **taxiway centreline lights** located within the ILS sensitive area are colour coded to show alternate green and yellow in both directions. These lights commence with a green light close to the runway centreline 30-60m before the intersections and end with a yellow light at the end of the ILS sensitive area.

(e) An interlock system is fitted to the taxiway centrelines on runway lead ons/offs. The system controls each side of the holding point stop bars independently, and is linked to the first 90m of the taxiway centreline lights. The system ensures that traffic on a taxiway destined for the runway is not able to identify (and therefore follow) a continuous lit centreline onto the runway, without the red stop bar first being suppressed.

(f) **Runway Guard Lights** ("wig-wags"), comprising low level amber flashing lights, are installed at all taxiway/runway intersections (including CAT II/III holding positions). Each light unit is fitted with lamp failure detection.

2.3.7 **Helicopter aiming point** lighting is provided as follows;

(a) 6 low intensity omni-directional inset white lights

2.3.8 Variable intensity lighting is available for approach, runway and taxiway lighting, and is controlled by ATC. Brilliances are available in accordance with the following table...
### 2.3.9

<table>
<thead>
<tr>
<th></th>
<th>Approach (inc. Threshold)</th>
<th>Supp'l Approach</th>
<th>TDZ</th>
<th>Runway Centreline</th>
<th>Runway Edge and Stop End</th>
<th>PAPI</th>
<th>Time</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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<tr>
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<td>100%</td>
<td>0</td>
<td>0</td>
<td>100%</td>
<td>100%</td>
<td>80%</td>
<td>Day</td>
</tr>
<tr>
<td>3</td>
<td>30%</td>
<td>30%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>80%</td>
<td>Night</td>
</tr>
<tr>
<td>4</td>
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<td>0</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>Night</td>
</tr>
</tbody>
</table>

**Taxiways**

100%, 30% and 1% brilliancy options are available.

### 2.3.10 Signals are provided as follows;

- The airfield has four illuminated wind sleeves located in grass areas near to the respective runway thresholds. There are no other signalling items.

### 2.3.11 Runway signage is provided as follows;

- Runway vacated information signs are located at each runway exit. They are on the reverse side of the respective runway-taxiway holding point sign.

### 2.3.12 Taxiway signage is provided as follows;

- Illuminated taxiway information signs are provided.
- Taxiway location signs are coloured yellow-on-black. Directional signage is black-on-yellow. Intermediate taxi-holding position signage is coloured white-on-red.
- The main taxiways are referred to by letters (ie. A, B, C….) Connecting taxiways are referred to as ‘links’ (ie. Link 11, Link 12, Link 13…)
- Intermediate taxi-holding positions are referred to by letter/number (ie. C1, D2, AY5…)

### 2.3.13 Runway-Taxiway holding areas and holding position signage is provided as follows;

- The departure runway holding area is surrounded by reporting points (ie. PLUTO, HORKA…) which are marked by white-on-red illuminated mandatory signs.
- Runway-Taxiway holding positions providing access to, or egress from a runway, are signified by location signs (eg. A1, N2E, SB3…) and by the appropriate mandatory white-on-red runway designator and/or CATI and CAT II/III signs located at the respective positions.

### 2.3.14 Apron lighting is provided as follows;

- Apron lighting pylons with multiple LED lamp fittings are provided on all apron areas.
2.3.15 **Apron signage** is provided as follows;
(a) Each stand has an illuminated sign showing the stand number. This can be part of the Visual Docking Guidance System, or as a stand-alone sign.

2.3.16 **Runway markings** are provided as follows;
(a) Runway designation, threshold, centreline, edge markings, touchdown zone and aiming point markings. All runway markings are white in colour.
(b) Yellow taxiway markings at appropriate points provide guidance off the runways onto the taxiway system.

2.3.17 **Taxiway markings** are provided as follows;
(a) Taxiway centreline markings are an unbroken yellow line. Intermediate Taxiway Holding positions are marked by a perpendicular broken yellow line.
(b) Taxiway edge markings are provided in some parts of the airfield.
(c) There are some guidance markings painted on the taxiways, such as stand number indicators and taxiway designations where deemed appropriate.
(d) All Runway/Taxiway holding positions have the appropriate markings for CAT I, CAT II/III, or CAT I/II/III operations.
(e) Most runway/taxiway holding positions have ‘Runway Ahead’ markings and/or enhanced centreline markings.
(f) All taxiway/taxilane vehicle crossings are demarcated using black and white surface markings.

2.3.18 **Apron markings** are provided as follows;
(a) A double white line is used to demarcate between the manoeuvring area and the apron.
(b) Stand centrelines are marked in continuous yellow, with secondary (MARS) centrelines painted in yellow/white alternating.
(c) Stands are generally marked with stopping positions to aid with aircraft positioning for towed and marshalled movements.

2.3.19 The **helicopter aiming point** is marked as follows;
(a) A white equilateral triangle measuring 18m on each side, is located on the taxiway system – in Link 43.

2.4 The location and radio frequency of VOR aerodrome checkpoints

2.4.1 No VOR aerodrome checkpoints are installed.

2.5 The location and designation of standard taxi routes
2.5.1 Taxi routes are published in the UK AIP ground movement chart (AD 2-EGLL-2-2)
2.5.2 A separate ‘Code F’ taxi route map is also produced and published in the UK AIP (AD 2-EGLL-2-3)

2.6 The geographical co-ordinates of each threshold, appropriate taxiway centreline points and aircraft stands
2.6.1 Co-ordinates of each threshold are published in the UK AIP (Aerodrome Chart; AD 2-EGLL-2-1)
2.6.2 Co-ordinates of each stand are published in the UK AIP (Aircraft Ground Movement/Parking; AD 2-EGLL-2-4,5,6,7)
2.6.3 Taxiway centreline co-ordinates are not published.
2.7 The geographical co-ordinates and the top elevation of significant obstacles in the approach and take-off areas, in the circling area and in the surroundings of the aerodrome (in the form of charts)

2.7.1 Significant obstacles on and around the aerodrome are published in the UK AIP. Notable charts showing this information are:
   (b) Aerodrome Chart; AD 2-EGLL-2-1
   (c) Standard Departure Charts – Instrument; AD 2-EGLL-6-x
   (d) Standard Arrival Charts, Instrument Approach Charts; AD 2-EGLL-7-x; AD 2-EGLL-8-x

2.7.2 Lists of obstacles, co-ordinates and elevations are also published in text format in the UK AIP, section EGLL AD 2.10.

2.8 Pavement surface type and bearing strength using the Aircraft Classification Number – Pavement Classification Number (ACN-PCN) method

2.8.1 Runways 09L/27R and 09R/27L have a PCN of **83/F/A/W/T**, sufficient for all aircraft types currently operating from Heathrow.

2.8.2 The remainder of the movement area is suitably constructed for the aircraft operating from Heathrow.

2.9 Pre-flight altimeter check locations established and their elevation

2.9.1 No altimeter check locations are established at Heathrow.

2.10 Declared distances

<table>
<thead>
<tr>
<th></th>
<th>TORA</th>
<th>TODA</th>
<th>ASDA</th>
<th>LDA</th>
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<tr>
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<td>3901m</td>
<td>3901m</td>
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<td>3658m</td>
<td>3658m</td>
<td>3658m</td>
<td>3658m</td>
</tr>
</tbody>
</table>

2.10.1 The most up-to-date declared distances, including those for intersection departures, may be found in the UK AIP, in section EGLL AD 2.13

2.11 Contact details (telephone/telex/fax numbers and e-mail addresses) of the aerodrome co-ordinator for the removal of disabled aircraft, expressed in terms of the largest aircraft type

2.11.1 Heathrow does not nominate an aerodrome co-ordinator for disabled aircraft removal.

2.11.2 The Heathrow representative at any incident involving a disabled aircraft will be the Airfield Duty Manager (AFDM), who may be contacted on 0208 745 7373, or airfield_duty_manager@heathrow.com
2.12 Rescue and fire-fighting level of protection, types and amounts of extinguishing agents normally available at the aerodrome

2.12.1 RFF Category at Heathrow is 10

2.12.2 The quantities of water, foam and complementary agents appropriate to AFRS Category 10 are available for immediate discharge and exceed the requirements of EASA Regulation; AMC4 ADR.OPS.B.010(a)(2).

2.12.3 At all times the AFRS will provide the number of vehicles and quantities of media described in AFRS Volume 1 Administration, Chapter 12 – section 12.1.

2.12.4 The main complementary media is Monnex and is regarded as a high performance dry powder. Refer to AFRS Volume 1 Administration, Chapter 12 – section 12.1.1, for further information.

2.13 Exemptions or derogations from the applicable requirements, cases of equivalent level of safety (ELOS), special conditions (SC, National SC & DAAD) and limitations

<table>
<thead>
<tr>
<th>Element</th>
<th>Exemption</th>
<th>Section</th>
<th>Detail of exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS ADR-DSN.A.005</td>
<td>(N) SC</td>
<td>AERODROME REF CODE</td>
<td>The UK determines the Aerodrome Reference Code Number (code element one) from the greater value of TODA or ASDA, and not the Aeroplane Reference Field Length.</td>
</tr>
<tr>
<td>CS ADR-DSN.B.075</td>
<td>SC</td>
<td>RUNWAYS</td>
<td>Short distances on the runways fail to meet the gradient change specification.</td>
</tr>
<tr>
<td>CS ADR-DSN.B.130</td>
<td>SC</td>
<td>RUNWAYS</td>
<td>Short sections of the transverse slope of the runway shoulders exceed 2.5%</td>
</tr>
<tr>
<td>CS ADR-DSN.B.180</td>
<td>SC</td>
<td>RUNWAYS</td>
<td>Longitudinal slope along short sections of the runway strip exceed the specification.</td>
</tr>
<tr>
<td>CS.ADR.DSN.B.250</td>
<td>SC</td>
<td>TAXIWAYS</td>
<td>Minimum clearance distance not provided on a taxiway curve at A6 when tracked cockpit-over-centreline.</td>
</tr>
</tbody>
</table>
| CS ADR-DSN.D.260 | SC | TAXIWAYS (Runway to Taxiway Separation Clearance) | Minimum runway to taxiway separation distances are not met at the following locations;  
- Sierra abeam hold S7  
- Sierra between S6 and AVROE |
| CS ADR-DSN.D.260 | SC | TAXIWAYS (Taxilane centreline to object clearance – Code E) | Minimum taxilane centreline to object clearance distances (Code E) are not met at the following location;  
- Zulu |
<table>
<thead>
<tr>
<th>Element</th>
<th>Exemption</th>
<th>Section</th>
<th>Detail of exemption</th>
</tr>
</thead>
</table>
| CS ADR-DSN.D.260             | SC        | TAXIWAYS (Taxiway centreline to object clearance – Code E) | Minimum taxiway centreline to object clearance distances (Code E) are not met at the following locations;  
- Foxtrot between F1 and Golf  
- To the South of Sierra between S7 and SY6 (Code D/E) |
| CS ADR-DSN.D.260             | SC        | TAXIWAYS (Taxiway centreline to object clearance – Code F) | Minimum taxiway centreline to object clearance distances (Code F) are not met at the following locations;  
- To the East of Alpha (E) at MORRA  
- To the East of Link 23, between Alpha & Link 21  
- To the West of Whiskey, abeam the Royal Suite Apron and stands 454-456.  
- To the North of Bravo (S) between Link 32 and Kilo  
- East and West of Echo between Link 35 and Link 36  
- To the South of Sierra between stands 601 and 609  
- To the South of Sierra between Tango and Victor  
- To the South of Tango between stands 405 and 412  
- To the East and West of Link 42  
- To the South of Link 44 |
<p>| CS ADR-DSN.D.280             | SC        | TAXIWAYS                       | A small number (7) of localised sections of taxiway do not meet the required transverse slope requirement. |
| CS ADR-DSN.D.315             | SC        | TAXIWAYS                       | Taxiway strip width is not met at various places around the airfield. |
| CS ADR-DSN.D.330             | SC        | TAXIWAYS                       | Slopes on taxiway strips – various non-significant non compliances around the airfield. |</p>
<table>
<thead>
<tr>
<th>Element</th>
<th>Exemption</th>
<th>Section</th>
<th>Detail of exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS ADR-DSN.D.335/340</td>
<td>(N) SC</td>
<td>TAXIWAYS</td>
<td>Displaced landing thresholds are provided and aircraft at full length holding points infringe the approach surface.</td>
</tr>
<tr>
<td>CS ADR-DSN.E.360</td>
<td>SC</td>
<td>APRONS</td>
<td>Numerous stands exceed the maximum permitted slope (transverse or longitudinal)</td>
</tr>
<tr>
<td>CS ADR-DSN.E.365</td>
<td>DAAD</td>
<td>APRONS</td>
<td>Clearance distances on some aircraft stands do not meet the specification.</td>
</tr>
<tr>
<td>CS ADR-DSN.L.535</td>
<td>SC</td>
<td>MARKINGS</td>
<td>There is no specification for the number of ‘piano keys’ a 50m runway should have – however Heathrow has the equivalent number for a Code F (45m) runway.</td>
</tr>
<tr>
<td>CS ADR-DSN.L.570</td>
<td>DAAD</td>
<td>MARKINGS</td>
<td>Heathrow has a small number of enhanced taxiway centreline markings which have 2m dashes rather than the required 3m.</td>
</tr>
<tr>
<td>CS ADR-DSN.L.597</td>
<td>SC</td>
<td>MARKINGS</td>
<td>Heathrow uses an equivalent marking for apron service roads which cross taxiways.</td>
</tr>
<tr>
<td>CS ADR-DSN.M.635</td>
<td>SC</td>
<td>LIGHTS</td>
<td>Two of the approach lighting systems (27R, 09L) have a pair of centreline lights missing in order to protect the integrity of the ILS signal.</td>
</tr>
<tr>
<td>CS ADR-DSN.M.710</td>
<td>(N) SC</td>
<td>LIGHTS</td>
<td>Turn-off lights show amber/green in both directions – the specification requires green approaching the runway.</td>
</tr>
<tr>
<td>CS ADR-DSN.M.715</td>
<td>SC</td>
<td>LIGHTS</td>
<td>Spacing between lights on one runway exit (A13) is larger than the specification.</td>
</tr>
<tr>
<td>CS ADR-DSN.M.730</td>
<td>DAAD</td>
<td>LIGHTS</td>
<td>Red stop bars protecting a runway at Heathrow are bi-directional (not uni-directional as per the specification)</td>
</tr>
<tr>
<td></td>
<td>SC</td>
<td>LIGHTS</td>
<td>High intensity lights are used on red stop bars (not low intensity as per the specification)</td>
</tr>
<tr>
<td>CS ADR-DSN.M.750</td>
<td>SC</td>
<td>LIGHTS</td>
<td>Some stands do not meet the requirement of a ‘uniformity ratio of not more than 4:1’</td>
</tr>
<tr>
<td>CS ADR-DSN.N.770</td>
<td>(N) SC</td>
<td>LIGHTS</td>
<td>Where installed at Heathrow, road holding points have flashing amber lights not red as per the specification.</td>
</tr>
<tr>
<td>Element</td>
<td>Exemption</td>
<td>Section</td>
<td>Detail of exemption</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>----------</td>
<td>---------------------</td>
</tr>
<tr>
<td>CS ADR-DSN.N.775</td>
<td>SC</td>
<td>LIGHTS</td>
<td>The light output of illuminated airfield signage cannot be measured in situ.</td>
</tr>
<tr>
<td>CS ADR-DSN.N.785</td>
<td>SC</td>
<td>LIGHTS</td>
<td>Signs at intersections are not located at a minimum of 60m from the centreline of the intersecting taxiway as per the specification. Heathrow does co-locate mandatory signs with other signs.</td>
</tr>
<tr>
<td>CS ADR-DSN.N.795</td>
<td>(N) SC</td>
<td>LIGHTS</td>
<td>Stand number indication boards are yellow-on-black rather than the specification of black-on-yellow.</td>
</tr>
<tr>
<td>CS ADR-DSN.Q.840, 846, 847</td>
<td>DAAD</td>
<td>OBSTACLES</td>
<td>There are numerous objects which penetrate the northern transitional surface of runway 09L/27R, and a small number which penetrate the TOCS for 27L. None of these objects are marked or lit.</td>
</tr>
<tr>
<td>CS ADR-DSN.R.870</td>
<td>DAAD</td>
<td>VISUAL AIDS</td>
<td>Heathrow uses cones/blocks that are 0.3m high for marking unserviceable areas.</td>
</tr>
<tr>
<td>CS ADR-DSN.T.915</td>
<td>DAAD</td>
<td>EQUIPMENT</td>
<td>Blast wall to the East of Echo between Link 35 &amp; Link 36 is within the taxiway strip.</td>
</tr>
</tbody>
</table>
E. Particulars of the operating procedures of the aerodrome, its equipment and safety measures

E.1 Aerodrome reporting, including...

1.1 Arrangements and procedures for reporting changes to the aerodrome information set out in the AIP and requesting the issue of a NOTAM, including reporting changes to the Competent Authority and recording the reporting of changes

1.1.1 Responsibility for ensuring that information within the AIP is up-to-date rests jointly with HAL, NATS and the Department for Transport.

1.1.2 The HAL Aerodrome Safety & Assurance Manager (ASAM) is responsible for maintaining the AIP with respect to aerodrome facilities, obstructions, some Local Traffic Regulations, and the airfield charts.

1.1.3 NATS are responsible for maintaining flight procedures and associated charts.

1.1.4 The Department for Transport is responsible for noise abatement procedures.

1.1.5 Changes to the AIP are notified to AIS via the submission of a ‘Change Request’ on the Aurora System. Records of changes submitted by HAL are kept by the ASAM.

1.1.6 Information related to the airfield operational state, or temporary changes of an immediate nature, are promulgated via NOTAM by the HAL Airfield Duty Manager (AfDM). The AfDM is responsible for determining the requirements for promulgation and actioning accordingly.

1.1.7 The AfDM will issue a NOTAM by submitting an electronic NOTAM proposal via the AFPEx portal online.

1.1.8 The AFPEx portal keeps records of NOTAMS submitted for publishing by Heathrow.

1.2 Procedures and frequencies for aeronautical data surveying

1.2.1 Responsibility for the initiation, management and promulgation of aeronautical data surveys rests with the HAL Aerodrome Safety & Assurance Manager (ASAM)

1.2.2 The ASAM commissions an approved survey company to carry out a ‘full’ or ‘check’ survey on a yearly basis. The current preferred supplier for aerodrome surveying is SLC Ltd.

1.2.3 Upon completion, the survey data is checked and analysed for completeness and significant changes. Particular attention is paid to changes on the aerodrome and in the approach and take-off funnels. Changes are recorded and incorporated in the appropriate documentation. The survey company is then instructed to forward the survey data to NATS Airport Services.

1.2.4 NATS will then check the content of the survey using appropriate computer software.
Once validated, a set of ‘Type A’ charts are produced for the approval of the ASAM.

1.2.5 On approval, the full survey is published, and the aerodrome charts and AIP amended if necessary.

1.2.6 Any significant new obstacles identified are investigated, and if necessary/possible, removed.

1.2.7 A copy of the latest survey is held by the ASAM.

E.2 Procedures for accessing the aerodrome movement area, including…

2.1 Coordination with the security agencies

2.1.1 Heathrow works with various security agencies to assure safety of passengers and aircraft. Heathrow has an internal security function, who carry out screening of passengers, staff and vehicles through various security areas around the airport. Heathrow also has its own dedicated branch of the Metropolitan Police Service (SO18 – Aviation Policing).

2.1.2 Heathrow provides statutory access to the aerodrome for security agencies and competent authority inspectors.

2.1.3 At an aircraft incident, the Airfield Duty Manager (AfDM) will liaise with the Met Police incident commander to co-ordinate activities, and where appropriate, provide scene preservation for evidential purposes.

2.2 Prevention of unauthorised entry into the movement area

2.2.1 The full perimeter of the airfield is protected by an anti-intruder fence.

2.2.2 Staff and vehicular access through the fence is provided at Control Posts staffed by HAL Security staff. Control posts are also provided to provide access from the Central Terminal Area (CTA) onto the movement area. Control post locations are shown on the HAL aerodrome map.

2.2.3 Pedestrian access through control posts or from terminal areas onto the aprons is controlled by means of an ID Card swipe system (known as MAID) which ensures that holders are permitted access only to areas of the airport for which they have a recognised need for access.

2.2.4 Vehicles using control posts to access the movement area are subject to search by HAL Security staff, and only vehicles with a valid license (Apron Pass) are permitted access.

2.2.5 HAL operates a licencing policy for all operators of vehicles airside, which, among other things, specifies the number of vehicles a company may operate airside. Acceptance of the licence also directs operating companies to abide by the appropriate Operational Safety Instructions (OSI) issued by HAL, which further define the safety requirements for companies operating airside.

2.2.6 All personnel and vehicles are screened in accordance with the requirements of the National Aviation Security Programme (NASP). The application of HAL’s security procedures can be found in the Airport Security Programme, published annually, with more detailed procedures contained in the HALSEC Operations Manual. Security requirements for airport users are published via a series of Airport Security Notices.

2.2.7 There are several emergency gates around the airfield, which provide access to Rendezvous Points and remote areas. The gates are kept locked when not in use, and keys tightly controlled. A common padlock is used across all gates. Keys are held by HAL Security, the Airside Safety Department, Airport Fire Service and Metropolitan Police.

2.2.8 Signage is placed at regular intervals around the perimeter, warning of the aircraft movement area, and that unauthorised entry is not permitted. The boundary of the Critical Part of the Security Restricted Zone (CPSRA) is also signed with mandatory security
There are two significant ‘Other’ security restricted areas on the airfield (those outside the Critical Part) – British Airways maintenance facilities, and the cargo facility south of runway 09R/27L. Access to and from these areas is controlled and the boundary between these areas and the Critical Part is managed by HAL Security and protected using a radar system.

E.3 Procedures and responsible personnel for the inspection, assessment and reporting of the condition of the aerodrome movement area and other operational areas and facilities, (including runway surface friction characteristics assessments and water-depth measurements), including…

3.1 Inspection intervals and times; reporting results and follow up actions

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1 (L1)</strong> A routine daily inspection of the movement area and airfield ground lighting by the staff of the Airside Safety Department (ASD). This inspection is generally carried out from a vehicle, and covers all of the movement area (Runways, Taxiways, Stands and Roads) and includes a horizon scan of the surrounding area looking for objects with the potential to infringe the OLS. Any equipment faults or defects found are reported to the Engineering Help Centre for passing to the respective engineering teams for rectification.</td>
</tr>
<tr>
<td><strong>Level 2 (L2)</strong> A more detailed inspection of a specific area is carried out by ASD under the ‘Taxiway and Stands Monitoring System’ (TMS &amp; SMS). The taxiways, associated lighting and stands are each divided into 32 areas, with one area of each being inspected per day. Runways are inspected at a frequency of half a runway each week. This inspection is either carried out from a vehicle, or on foot. Lighting inspections are carried out at night, with taxiway and stand surface inspections during daylight hours. Any equipment faults or defects found are reported to the Engineering Help Centre for passing to the respective engineering teams for rectification.</td>
</tr>
</tbody>
</table>
An audit/inspection carried out by members of the airside management team on a bi-weekly basis. The airfield is split into 6 inspection zones. One zone is inspected every 2 weeks, which results in each zone being inspected around 3.5 times per year.

This inspection checks L1 and L2 performance, and allows the management team to gain a perspective of the operational condition of the airfield.

A walking inspection of the runways is carried out twice a year by the airside management team and will include representatives from wider departments, including engineering.

### 3.1.2 Runway Surface Inspections

(a) Four routine surface inspections are carried out during the operational day. These are:

(i) Pre-Operations – carried out before the first arriving aircraft. During certain months of the year this is carried out during the hours of darkness; ASD vehicles are fitted with high power LED inspection lights to carry out the task.

(ii) AM – mid-morning; usually between 0900z and 1030z

(iii) PM – mid-afternoon; usually between 1400z and 1500z

(iv) Dusk – surface and lighting inspection

(b) The pre-operations and dusk inspections are carried out by a single ASD vehicle. The AM and PM inspections are carried out using two vehicles. All vehicles are in active radio contact with ATC at all times.

(c) Additional inspections are carried out as required. These may be at the request of ATC, for instance after an aborted take-off, certain categories of emergency, or during inclement weather conditions. Inspections may also be instigated by the Airside Safety Department, for instance following a ‘FOD Radar’ activation.

(d) Inspectors are trained to note and report anything which may affect the category or serviceability of the runway, including surface conditions, paint markings, lighting, FOD, obstructions or bird control. The inspector will take action appropriate to the issue, which may include raising engineering work orders, or in extreme cases where aircraft safety is at immediate risk, suspending operations on the affected runway via ATC. The inspector will also inform the ASD control room and the Airfield Duty Manager (AfDM). The AfDM will co-ordinate actions with other departments or ATC if escalation is required.

(e) A walking inspection of each runway is carried out twice a year by the airside management team, accompanied by teams from ASD, Airside Civil Engineering and Airside Systems.

### 3.1.3 Runway lighting inspections

(a) Surface lighting inspections (thresholds, stop ends, TDZ, centreline, edge lights etc.) are carried out by ASD each night as part of the dusk inspection.

(b) The staff of the Airside Safety Department carry out an inspection of one of the sets of approach lights each night on a rotation basis. The approach lights are checked for calibration by Airside Systems every 6 months.

(c) Inspectors are trained to note and report anything which may affect the category or serviceability of the runway. Lighting faults which affect the runway category are reported to ASD and the AfDM for escalation to ATC and engineers for rectification.

(d) PAPI units are inspected for serviceability by ASD as part of the ‘first light’ runway surface inspection. The units are inspected for correct setting angle once per week by Airside Systems, and if necessary are adjusted in situ. PAPI units may also be checked for alignment on the request of ASD or ATC – for instance following a pilot report of misalignment, or an incident where an aircraft under or over-shoot has occurred.
(e) Each month, Airside Systems check the runway light output using a MALMS portable photometric unit. The check covers TDZ, centreline and edge lights. Lights that are below specified levels are cleaned or changed as part of the maintenance programme. Detailed records are held by Airside Systems.

(f) Runway light cleaning takes place once per week, and will attend to a group of runway lights, such as the centreline, edge lights or threshold/stop end. Particular attention is paid to lights which have underperformed in the photometric check (MALMS) carried out by Airside Systems.

3.1.4 Runway turn-off lighting inspections are carried out as follows:
(a) Each night, ASD staff carry out a detailed L2 inspection of a number of runway turn-offs.
(b) All runway turn offs are inspected over a 14 day period.
(c) The inspection covers the serviceability and function of the lead-on, lead-off, stop bar (CAT I and CAT II/III where applicable), and ‘90m interlock’ functionality.
(d) The inspection is carried out in conjunction with ATC. A common set of ‘steps’ are followed by the controller and ASD staff carrying out the inspection, which allows each route and stop bar to be checked in turn.
(e) Any unserviceable fittings or failures in functionality are reported to the Engineering Help Centre or escalated via the AfDM if required.

3.1.5 Taxiway surface inspections are carried out as follows;
(a) Level 1 inspections are carried out by the staff of ASD in an appropriately equipped vehicle. The staff operate on a ‘listening out’ basis with ATC at all times. The taxiways are inspected on a Level 1 basis 3 times in a 24 hour period.
(b) Inspectors are trained to note and report anything which may affect the serviceability of the taxiway, including surface condition, paint markings, FOD, lighting and pit/drain covers. The inspection also covers runway guard lights, signs, work-in-progress and bird control.
(c) Inspectors will take appropriate action, which may include raising engineering work orders, or in extreme cases where aircraft safety is at immediate risk, closing the taxiway (via ATC). The inspector will also inform the ASD control room and the AfDM.
(d) Additional inspections are carried out at the request of ATC, after a taxiway closure, or at the cessation of works/maintenance.
(e) A more detailed, Level 2 inspection is carried out each day under the ‘Taxiway Monitoring System’. This involves a slow speed driving or walking inspection of a particular area of taxiway. The whole taxiway system is inspected to a Level 2 standard over a 32 day period. Inspectors will raise maintenance requests via the Engineering Help Centre or flag areas for monitoring. Results from these inspections are used to inform preventive or minor maintenance requirements and wider decisions on capital asset replacement programmes.

3.1.6 Taxiway lighting inspections are carried out as follows;
(a) A general L1 inspection of the taxiway lighting is carried out each evening by ASD as part of a routine patrol regime.
(b) A more detailed L2 inspection of one area per night is carried out under the ‘Taxiway Monitoring System’. The whole taxiway lighting system is inspected in detail over a 32 night period.
(c) The inspection is carried out in conjunction with ATC. A common set of ‘steps’ are followed by the ATC lighting panel operator (LPO) and ASD staff carrying out the inspection, which allows each green selectable route and red stop bar to be checked in turn.
(d) The inspector will take appropriate action to address defects when found, which may include raising work orders via the Engineering Help Centre, or in serious cases may require the closure of a section of taxiway.
(e) Results from the inspections are used to inform reactive or preventative maintenance requirements.

3.1.7 Aprons & stand equipment inspections are carried out as follows;
(a) Level 1 inspections of apron areas are carried out by ASD staff in a suitably equipped vehicle. Inspections are completed 4 times in each 24 hour period.
(b) A more detailed L2 inspection of one area per day is carried out under the ‘Stands Monitoring System’ (SMS). This involves a walking inspection of the specified area. The programme means that all of the aprons areas are inspected to a L2 standard over a 32 day period. This inspection includes surface condition, paint markings, pit/drain covers, works-in-progress, and birds/bird attractants.
(c) Emergency stand telephones are checked on a weekly basis, and any faults reported directly to HAL IT services.
(d) Stand lighting is inspected as part of the evening L1 inspection, and any faults reported via the Engineering Help Centre. Stand lighting is also inspected annually by HAL Engineering – this inspection includes a lighting assessment using calibrated light meters.
(e) In addition, all staff working on the apron area are expected to report any hazard which may impact upon airside safety. If necessary, ASD will send a member of staff to assess the situation and make the area safe in the first instance.

3.1.8 Runway friction measurement is carried out as follows;  
(a) HAL follows CAP 683 guidance “The Assessment of Runway Surface Friction for Maintenance Purposes”  
(b) HAL carries out twice yearly full assessment measurements of runway friction in order to monitor the condition of the runway surface.  
(c) Friction assessments may also be carried out in adverse weather conditions, at the request of ATC, or after a runway incident where surface friction may have been a factor.  
(d) HAL primarily uses the Airport Surface Friction Tester (ASFT) for measuring surface friction. The Finlay Irvine Griptester is available as a back-up. Both machines are maintained in Airfield Operations to ensure that a machine is available for immediate use.  
(e) Any materially significant areas of the runway surface which record below Minimum Friction Level values are reported to flight crews by the AfDM via NOTAM as ‘slippery when wet’.  
(f) Details of the operation of the ASFT and Griptester can be found in the ASD Training Manual.  
(g) A record of friction measurements is held in Airfield Operations offices. The results from friction measurements are used to target rubber removal efforts.

3.2 Arrangements and means of communicating with air traffic services during inspections  
3.2.1 All the vehicles of the Airside Safety Department carrying out inspections have VHF radios fitted, which enable immediate communication with ATC.  
3.2.2 Inspections taking place on taxiways and aprons are carried out on a ‘give way’ basis; as such inspection vehicles are expected to maintain situational awareness using the radio and to yield to aircraft. Runway inspections on live runways are carried out under positive control from ATC.  
3.2.3 ASD inspectors are empowered to suspend operations where safety is at risk, and are able to do this immediately using the VHF radio link to ATC.

3.3 Inspection checklists, log book and record-keeping  
3.3.1 Completion of routine surface and lighting inspections on the movement area are recorded in the ASD Daily Inspection Log.  
3.3.2 Surface faults found during inspections are electronically logged using a tablet-based software programme, which creates maintenance requests via the Engineering maintenance database (Maximo) – these requests are directed to the appropriate team for resolution. Inspectors are able to track progress of faults using the tablet and escalate if the issue requires it. AGL faults are either raised using the same tablet process, or logged using an email template and sent to the Engineering Help Desk for rectification.
E.4 Procedures for the inspection and routine and emergency maintenance of visual and non-visual aids, as appropriate, and the aerodrome electrical systems including...

4.1 Inspection checklists, logbook and record-keeping

4.1.1 The AGL and airfield electrical systems are maintained by HAL Airside Systems, with additional support by ATG (supplier of the AGL Control System), and a variety of other sub-contractors. ASD carry out inspections of the AGL systems, as detailed in section G.3

4.1.2 HAL Airside Systems maintain records of the activities carried out as part of the maintenance regime. Fault repairs and mandatory maintenance inspections completed are recorded using the ‘Maximo’ tool. Records stored in Maximo allow historical data on failure rates and maintenance regimes to be analyses and incorporated into revised maintenance programmes to prevent future failure.

4.2 Inspection intervals and times; reporting results and follow up actions

4.2.1 For details of inspection regimes for visual aids, see section G.3

4.3 Operating, maintenance and repair instructions, servicing information, troubleshooting and inspection procedures of aerodrome equipment

4.3.1 Airside Systems technicians receive sufficient training and achieve relevant qualifications such that they are able to carry out preventative maintenance and repair on airfield electrical installations.

4.3.2 In addition, method statements are provided via the ‘Maximo’ asset management system to aid technicians carrying out their allocated tasks.

4.4 Procedures for maintenance of the movement area, including paved areas; unpaved runways and taxiways; runways and runway strips and aerodrome drainage

4.4.1 For further information on maintenance of pavement areas, see section G.3
E.5 Procedures for aerodrome works including…

5.1 Co-ordinating, planning and carrying out construction and maintenance work

5.1.1 Any work that is carried out on the airfield is submitted through the Airside Works Approval section of Airside Operations. In consultation with appropriate companies and/or Heathrow Airport Limited departments, the work is planned and scheduled. This plan/schedule is then agreed and communicated to the relevant departments/Companies.

5.1.2 In appropriate cases (such as large or complex construction projects), supporting documentation will also be produced by the department to provide additional guidance to all parties involved (including ATC, contractors, airlines etc.). These documents are known as Airside Works Instructions and are written by the Development Assurance Team.

5.1.3 Approved works will be issued a works permit by Airside Works Approval, via an online computer system. The works permit sets out the particulars of the work to be conducted, and any safety conditions to be adhered to whilst the work is completed.

5.1.4 On the day/night of the works, the contractor must have the works permit authorised (checked) and activated by the Airside Safety Department prior to set up/start of work. This may be via a phone call or a meeting, as required by the Airfield Local Operating Procedure (ALOP).

5.1.5 The set up and inspection of works areas forms part of the inspection process carried out by ASD.

5.1.6 Upon completion of the work, the works permit is deactivated.

5.2 Arrangements and means of communicating with air traffic services during the progress of such work

5.2.1 Prior to commencement of works on the manoeuvring area, the AfDM will produce a map showing the areas of the airfield which will be closed for work during the course of the night. This map is then shared with ATC, key airline partners and various other internal HAL departments.

5.2.2 The closure of parts of the manoeuvring area for works is supervised by the Airfield Operations. ATC are advised, over the VHF air-band system, of the closure of each area, prior to suitably safeguarding the area. The reverse occurs at hand back.

5.2.3 During the night, the Airside Safety Department is in regular communication with ATC as works areas close and open. Any issues encountered during works which may affect the serviceability of a particular area will be discussed with ATC by the AfDM.
E.6 Procedures for apron management including…

6.1 Transfer of the aircraft between air traffic services and the apron management unit

6.1.1 Not applicable at Heathrow.

6.2 Allocation of aircraft parking positions

6.2.1 Stand allocation at Heathrow is carried out by the Aircraft Operations Unit (AOU) who work initially from a flight schedule provided by Airport Coordination Limited (ACL). The schedule is updated continually, either by electronic interface directly from ACL, the airlines and National Air Traffic Service (NATS), or by AOU operators. Updating relates to aircraft registrations, arrival and departure times.

6.2.2 Stands are allocated by AOU some hours in advance of the aircraft’s arrival. The allocations are transmitted by the Terminal Management System (TMS) to the Integrated Database for Airport Handling Operations (IDAHO) and from there to Air Traffic Control, the airlines, handling agents, fuel companies and control authorities. The IDAHO system also supplies ETA’s and landing times to terminal Flight Information Display Systems (FIDS), the Internet and HAL Finance for aircraft charging purposes.

6.2.3 The overriding authority for stand allocation at Heathrow rests with AOU. However, due to the extensive use of Terminals 5 by British Airways, they assume the day to day responsibility for stand allocation in this terminal. Allocations made by British Airways are passed to AOU via IDAHO into TMS. AOU then validate this information before sending it out for publication. HAL reserves the right to override British Airways allocation if deemed necessary.

6.2.4 A database of stand sizes and aircraft dimensions is held within IDAHO and TMS. All stand allocations are validated against this database to ensure stand to aircraft compatibility.

6.2.5 All information concerning the movement of arriving and departing aircraft are recorded in the IDAHO database. This database is also used for recording towing movements and stand occupancy times. The IDAHO database is used to calculate landing fees and parking charges.

6.3 Engine start and aircraft push back

6.3.1 Accountability for the control of ground noise at Heathrow rests with HAL. There are a number of local procedures in place to limit unnecessary engine ground running.

6.3.2 As a rule, engines are not started on stand. APU’s may be run on stand for a
minimal amount of time, and only immediately after arrival or just prior to departure.

6.3.3 Engine start on stand prior to push back may be approved by ATC, subject to HAL’s approval.

6.4 Marshalling and follow-me service

6.4.1 The vast majority of stands at Heathrow are fitted with advanced Stand Entry Guidance Systems (SEGS). However, in the event that the SEGS are not available or not installed, Heathrow provides a marshalling service.

6.4.2 Marshalling is carried out by the staff of the Airside Safety Department. Staff learn to marshal aircraft during initial training and receive annual competency checks.

6.4.3 Heathrow also provides a ‘follow-me’ leader service upon request of flight crews or ATC. This is also carried out by the staff of the ASD, using vehicles equipped for the duty.

E.7 Procedures for apron safety management including...

7.1 Protection from jet blast

7.1.1 Pilots operating at Heathrow are requested, via the UK AIP, section EGLL AD 2.20, to ensure they use minimum power necessary to avoid jet blast on adjacent stands.

7.1.2 ATC have various procedures, detailed within MATS Pt 2 for reducing jet blast risks during push back, including specifying the number of intervening stands between concurrent push backs, and specifying the direction of push from particular stands to avoid jet blast risk on adjacent stands.

7.1.3 Engine ground running is limited to low power or check start only on stand, and only with the approval of Heathrow. Stands with particular hazards related to jet blasts have specific operational conditions applied. During routine patrols, ASD will monitor engine running and address any hazards observed.

7.1.4 High power engine running outside of dedicated engine run facilities is managed closely by ASD and takes place in remote areas of the manoeuvring area in order to reduce the hazard to personnel, vehicles and other aircraft.

7.2 Enforcement of safety precautions during aircraft refuelling operations

7.3 Apron cleaning/sweeping

7.3.1 The sweeping and cleaning of the airfield is carried out as part of the duties of the
Airside Safety Department. These duties include cleaning, sweeping, FOD management and emptying of the various bins on stand.

**7.3.2** ASD has a variety of sweepers, combination sweepers, dustcarts and gulley-suckers/bowser. A combination of these vehicles is deployed daily to ensure that good coverage of the airfield is achieved, and that debris or spillages are able to be dealt with promptly.

**7.3.3** Contractors working on the airfield carrying out maintenance will usually be required to provide their own sweepers to ensure that working areas are clean prior to return to operational use. Inspections of work sites carried out by ASD ensure that this is the case.

**7.3.4** A stand cleaning programme ensures that every stand at Heathrow is cleaned using a detergent. These cleans take approximately 30 minutes to complete each stand and are carried out at opportune times during the operating day, when stands are vacant.

**7.3.5** HAL have installed a number of compactors in various apron areas, to which airline and handling agent staff can take bulk rubbish. The compactors are emptied, cleaned and maintained on a regular basis by a contractor.

**7.3.6** In addition, all operating companies and personnel on the apron are expected to take responsibility for FOD management and removing hazards to aircraft and other staff.

**7.4 Monitoring compliance of personnel on the apron with safety procedures**

- Airside_ASnsp_Standard_008 – Airfield Inspections
- Airside_ASDRVE_Standard_010 – Airside Vehicle Safety Requirements
- Airside_AGrOps_Standard_012 – Third Party Auditing
- Airside_ASDRVE_Standard_010 – Penalty Points
- Airside_ASDRVE_Standard_010 – Airside Driver Permit Scheme
- Airside_AGrOps_Standard_012 – Turnaround Checks
- ASGrOps_OSI_066 – CAA Publication Airside Safety Management CAP 642
- ASDRVE_OSI_017 – Pedestrian Walkways & Crossing Airside
- ASGrOps_OSI_021 – Aircraft Arrival Procedures on Stand
- ASGrOps_OSI_022 – Aircraft Turn Round Procedures
- ASGrOps_OSI_024 – Aircraft Maintenance on Stand
- ASDRVE_OSI_011 – Airbridges; Operators’ Permit, Operation & Use
- ASDRVE_OSI_018 – Aircraft Fixed Electrical Ground Power (FEGP) Operating Procedures
- ASGrOps_OSI_042 – Use of Personal Protective Equipment (PPE) Airside
- ASGrOps_OSI_044 – The Handling of Airside Infringements
- ASGrOps_OSI_045 – Handling of Electric Mobility Aids
- ASDRVE_OSI_016 – Interstand Clearways
- ASGrOps_OSI_043 – Prohibition of Smoking in Airside Areas
- ASDRVE_OSI_013 – Airbridge Operation – Pier 6
- ASDRVE_OSI_012 – Unit Load Device (ULD) Management
- ASGrOps_OSI_067 – Airside Incident Reporting
- ASGrOps_OSI_041 – Minimum Induction Training for Staff Operating on Airside Roads & Ramp Areas
- ASDRVE_OSI_009 – Escorting of Vehicles Airside
- ASGrOps_OSI_026 – Aircraft Tugs Push Back and Towing
- ASGrOps_OSI_072 – Airline Pushback Restrictions
- ASGrOps_OSI_029 Access to Bealine Base for Aircraft Under Tow

**7.4.1** ASD carry out regular routine patrols of the apron area. One of the areas of focus...
7.4.2 Should it be required, ASD will carry out positive interventions where possible. Infringement notices may also be issued for more serious safety infractions, or for driving offences. These notices (known as Airside Occurrence Notices – AONs) are passed on for follow up by the Airside Operations Standards Team.

7.4.3 In addition, both the Airside Safety Department and the Ramp Safety Teams carry out a prescribed number of audits of the aircraft turnaround process each day. These audits focus upon the key elements of the process, covering from the time before the aircraft arrives on stand to post the aircraft’s departure. Immediate safety hazards are addressed ‘in the moment’ – otherwise audit reports are completed.

7.4.4 Output from turnaround audits is passed to the Ramp Assurance Manager, who in turn creates performance dashboards for review and action planning with the ground handling community.

E.8 Procedures for movement area management including…

8.1 Procedures for the control of vehicles operating on or in the vicinity of, the movement area, including traffic rules, speed limits and method for issuing driving permits and enforcement means

8.2 Procedures for wildlife hazard management including assessing wildlife hazards and arrangements for implementation of the wildlife control programme and promulgation of the relevant information to the AIS; wildlife strike form
8.3 Policy

8.3.1 HAL operates to the guidelines laid down in CAP772 ‘Bird Strike Risk Management for Aerodromes’.

8.3.2 The Heathrow Bird Control Management Plan document is held by the Head of Airside Operations.

8.3.3 A policy of habitat management and active bird control is used to produce an airfield environment that is unattractive to birds. In addition, there are regular visits to local sites that attract birds, and consultation with site owners to encourage an awareness of the bird hazard to aircraft.

8.4 Assessment of wildlife hazards

8.4.1 A Bird Hazard Management Committee meets on a regular basis to review policy and active bird control measures.

8.4.2 A risk identification approach is taken to assessing wildlife hazards, as outlined in CAP 772. This approach takes the occurrence of a strike over the prior 5 years against its likely severity, to give an overall risk rating, against which wildlife hazard management plans are created.

8.5 Procedures

8.5.1 On airport habitat management includes the use of long grass on the airfield, control of vegetation and insects, management of food waste outlets and the wiring or netting of water areas.

8.5.2 Active bird control is carried out by the staff of the ASD who maintain a continuous bird patrol within the airfield boundary. Electronically produced bird distress calls, pyrotechnics fired from pistols and live rounds from shotguns are used to scare birds from the airfield. In addition, lethal control is exercised where other methods have failed to adequately address the risk. The bird patrol is carried out in appropriately equipped vehicles giving access to all areas of the airfield.

8.5.3 Information from the continuous bird patrols is recorded on a database, which produces statistical information for trend analysis.

8.5.4 A Section 5 Firearms Authority is held by the Head of Airside Operations. All members of the Airside Safety Department who are required to use a firearm hold a firearms certificate which must be revalidated every 3 years.

8.5.5 When the presence of a large number of birds is thought to constitute a hazard to aircraft, ASD will liaise with ATC who then advise aircrew. A message will also be broadcast on the ATIS and a NOTAM issued if appropriate.

8.5.6 In situations where a wildlife hazards presents a clear and immediate hazard to aircraft, staff of the Airside Safety Department are empowered to suspend operations on a runway or area of taxiway whilst the hazard is dealt with.

8.5.7 All bird carcasses found on the Manoeuvring Area are treated as bird strikes. Any reported bird strike within the airfield perimeter is investigated by ASD. Bird strikes within the perimeter are reported by ASD to the CAA on the appropriate form (SRG 2004). Any bird remains (or detailed photographs) are sent to Birdstrike Management Ltd for formal identification.

8.6 Training

8.6.1 ASD personnel receive instruction on bird control and firearms during their initial training. Specified staff attended a CAA recognised bird control course, and a course qualified person is on duty at all times. Periodic refresher training is undertaken.
8.7 Procedures for obstacle control and monitoring within and outside of the aerodrome boundaries and notification to the Competent Authority, of the nature and location of obstacles and any subsequent addition, or removal, of obstacles for action as necessary, including amendment of the AIS publication and responsibility for obstacle lighting on and off the airfield.

8.7.1 For obstacle control, monitoring, and amendment of the AIS, see section G.1.2

8.7.2 The Heathrow Airside Safety and Assurance team is responsible for safeguarding off-airport and liaison with local authorities. Local Planning Authorities (LPA) send all safeguarding consultations direct to the Safeguarding Department who assesses all planning applications in relation to the various safeguarding criteria. They will reply to the LPA stating either ‘No objection’, ‘No objection subject to Condition(s) (as specified)’ or ‘Objection’ for which reason(s) are given. Further details of the processes can be found in the Aerodrome Safeguarding Manual.

8.7.3 Airfield Transformation Management is responsible for obtaining prior approval from the CAA for all applicable ‘on-airport’ developments. A written brief, outlining the safeguarding requirements, is supplied to HAL Development Managers and Project Leaders with the aim of ensuring timely submissions, through Airside Development, to the CAA. An initial Safeguarding Assessment will be carried out by a member of the Airside Development Team. The assessment will ensure that the safety of the aerodrome is not compromised. Where appropriate, every opportunity will be made to eliminate non-standard items and enhance the safety of the airside operation. Following this assessment, all proposed changes are will be forwarded to the CAA for approval.

8.7.4 Safeguarding relating to crane operations is managed by the Airside Operations Works Approval team, who are responsible for approving the operation of cranes and tall construction equipment on and around the airport.
9.1 Dealing with emergencies at the aerodrome or in its surroundings

9.1.1 In line with the mandatory requirement, Heathrow Airport publishes and acts upon an Emergency Orders document which sets out the arrangements for dealing with aircraft emergencies at or within the vicinity of Heathrow Airport.

9.1.2 It also provides management, staff and contractual service providers with a comprehensive guide to the procedures, with the aim of delivering an effective and efficient emergency response.

9.1.3 The Emergency Orders are amended on a periodic basis subject to significant change in process, procedural impacts or when practices would invalidate the existing plans.

9.1.4 Responsibility for the publication and issue of the Emergency Orders rests with the Airside Contingency Planning Manager.

9.2 Tests for aerodrome facilities and equipment to be used in emergencies, including their frequency

9.2.1 All ASD and AFRS vehicles and equipment are inspected daily prior to use. Any defects noted are recorded and passed to the Heathrow vehicle maintenance supplier for rectification.

9.2.2 All specialist emergency equipment, such as the Emergency Medical Unit, are tested periodically and any issues addressed.

9.3 Exercises to test emergency plans, including their frequency

9.3.1 Heathrow has adopted the UK Alternative Means of Compliance (AltMoC) – ADR.OPS.B.005(c) when scheduling exercises to test emergency plans.

9.3.2 Heathrow carries out a series of modular tests in order to fully exercise emergency response plans at periodic intervals.

9.3.3 Actual emergency events or activations of the emergency orders may be used to evidence that some modules have been effectively tested. Reviews will be carried out to ensure that any deficiencies may be identified and corrected.

9.3.4 Heathrow will hold a full scale aerodrome emergency exercise at intervals not exceeding four years.
E.10 Rescue and Fire Fighting including…

10.1 RFFS Policy

**10.1.1** Heathrow Airport Limited (HAL) provides and maintains an Airport Fire & Rescue Service, capable of making an effective response and intervention to incidents that occur within the aerodrome operational area. The operational area is defined as the area containing any point on the airfield and 1000 metres beyond the threshold of each runway, as illustrated in the Airport Emergency Orders: AFRS Response Area & Pre-determined Attendance Area.

10.2 Fire Stations

**10.2.1** In order to meet the response times specified in ADR.OPS.B.010(a)(2), two fire stations are provided. These are positioned at strategic locations relative to the runways;
(a) Fire HQ, located centrally to the airfield, to the West of taxiway Echo.
(b) Fire East, located in the North-East corner of the airfield, adjacent to holding point M1.

10.3 Roles and accountabilities

**10.3.1** The Chief Fire Officer, reporting to the Director of Operations, is responsible for the overall operational efficiency of the AFRS. The safety accountabilities of this role are as follows;
(a) Manage staff and resources to ensure compliance with, and maintenance of, airside safety standards and recommended practices in accordance with the Aerodrome Certificate, EASA Regulation and Civil Aviation Publication (CAP) guidance documents 748 and 642.
(b) Ensure mandatory training is carried out in accordance with HAL standards and guidance document CAP 699 ‘Standards for the Competence of AFRS personnel employed at United Kingdom licensed aerodromes’.
(c) Prepare, submit and manage Airport Fire & Rescue Service business plans, ensuring sufficient resources are available.
(d) Ensure that safety is given the highest priority at all times in meeting the operational standards for personnel and equipment.
(e) Launch immediate inquiries following any breach of the Managing Responsibly System (MRS)
(f) Continuously review procedures for handling aircraft incidents and ensure that current known “best practice” is incorporated.
(g) Ensure controls are in place to minimise environmental risk associated with RFFS activities.
(h) Refer to AFRS Volume 1 Administration, Chapter 2 – section 2.2.1, for further information.

**10.3.2** The Deputy Chief Fire Officer reports to the Chief Fire Officer and is responsible for the operational efficiency and day to day running of the Airport Fire & Rescue Service. Refer to AFRS Volume 1 Administration, Chapter 2 – section 2.2.2, for further information.

**10.3.3** The Assistant Chief Fire Officer is responsible for training, development and recruitment within the Airport Fire and Rescue Service. At an incident the Assistant Chief Fire Officer (ACFO) will be required to attend either the incident site and manage internal/external bodies which may include the AAIB, ATC, Airline representatives, duty or senior management team and any other agencies. Refer to AFRS Volume 1 Administration, Chapter 2 – section 2.2.3, for further information.

**10.3.4** The Station Manager is accountable for the day to day operation of the watch and compliance with processes and systems adopted by LHR, taking charge/control of a major airfield incident, developing and planning of local fire service policy, procedures and working practices and implementing group policy and procedures in order to maintain day to day compliance in the fire service.
10.3.5 The Watch Manager – Operations Reports directly to the Deputy Chief Fire Officer, this role will assist the Senior Management in the day to day running of the AFRS including assisting to develop and maintain policy and processes that ensures the AFRS meet the business needs of Heathrow Airport. Lead and oversee on Fire Service projects as required, represent AFRS in stakeholder meetings as required. Reference holder in areas as defined, in line with AFRS Management structure.

10.3.6 The Watch Manager reports to the Station Manager and is responsible for assisting in the operational efficiency and day to day running of the Duty Watch. Refer to AFRS Volume 1 Administration, Chapter 2 – section 2.2.5, for further information.

10.3.7 The Crew Commander report to the Watch Manager and are responsible for assisting in the operational efficiency and assisting in the day to day running of the Duty Watch. Refer to AFRS Volume 1 Administration, Chapter 2 – section 2.2.7, for further information.

10.3.8 Firefighters report to the Watch Manager and carry out the day to day activities in order to maintain a fully compliant AFRS in order to save life, protect property in line with company standards and licencing requirements. Working daily to maintain competence within guidance document CAP 699. Refer to AFRS Volume 1 Administration, Chapter 2 – section 2.2.8, for further information.

10.4 Selection of Personnel

10.4.1 HAL is an equal opportunities employer. Medical Standards adopted by HAL are in accordance with the Heathrow Airport Ltd AFRS recruit medical and physical policy.

10.4.2 Potential recruits must progress through the Heathrow Airport Fire & Rescue recruitment process.

10.4.3 HAL Policy is that all AFRS staff will be medically assessed on a regular basis. Medical assessments are carried out by the Occupational Health Department Physician at Heathrow Airport. The assessments are carried out at 3 yearly intervals, regardless of age.

10.5 Training

10.5.1 Heathrow AFRS provide training in accordance with HAL standards and guidance document CAP 699.

10.5.2 Fire Fighters expected to drive appliances or other operational vehicles hold the appropriate driving licence. Revalidation of the license will be carried out to standards and conditions set by the Driving Standards Agency (DSA).

10.5.3 Refer to AFRS Volume 1 Administration, Chapter 4 – section 4.1, for further information.

10.6 Staffing

10.6.1 Heathrow provides sufficient RFFS cover for 2 simultaneous Category 10 responses.

10.6.2 In order to achieve this, the resource allocation is assessed through a ‘Task and Resource Analysis’ (TRA), and is signed off by the Aerodrome Accountable Manager.

10.6.3 Minimum AFRS resource coverage to achieve this is as follows;

(a) 1 x Station Manager
(b) 1 x Watch Manager
(c) 1 x Crew Commander
(d) 14 x Firefighter (desirable to include 2 Crew Commanders)

10.6.4 Station resource allocation is as follows;

(a) 1 x Station Manager, responsible for both fire stations
(b) Fire HQ; 1 x Watch Manager; 7 x Firefighter (desirable to include 1 x Crew Commander)
(c) Fire East; 1 x Crew Commander; 7 x Firefighter (desirable to include 1 x Crew Commander)
(d) This provides an initial Category 10 response from either station, which can be
supplemented by a crew of 4 on the ‘Domestic’ pump, which includes a Crew Commander – should it be required. Therefore 13 personnel are available for the first incident, ensuring 8 can initiate an attendance to a second simultaneous incident, should it occur.

10.6.5 Refer to AFRS Volume 1 Administration, Chapter 16 – section 16.1.19, for further information.

10.7 Appliances, Extinguishing Media & Medical Equipment

10.7.1 The extinguishing media, rescue equipment and personnel provided in line with the agreed TRA for the appropriate category. The appliances utilised will be Major Foam Tender Pumps (MFTP), Command Vehicle and Domestic Pump. The Aerial Ladder Platform and Hose Layer will, if required, be deployed at the discretion of the Station Manager utilizing available personnel.

10.7.2 The quantities of water, foam and complementary agents appropriate to AFRS Category 10 are available for immediate discharge and exceed the requirements of EASA Regulation; AMC4 ADR.OPS.B.010(a)(2).

10.7.3 At all times the AFRS will provide the number of vehicles and quantities of media described in AFRS Volume 1 Administration, Chapter 12 – section 12.1.

10.7.4 The main complementary media is Monnex, which is regarded as a high performance dry powder. Refer to AFRS Volume 1 Administration, Chapter 12 – section 12.1.1, for further information.

10.7.5 All appliances and equipment are tested in accordance with the manufacturers’ instructions. Appliance defects are reported to the HAL vehicle maintenance provider and categorised according to priority and seriousness of the defect. The Watch Manager is responsible for follow up action including contacting the HAL vehicle maintenance department if the defect requires immediate action.

10.7.6 Equipment and vehicle tests & inspections records are maintained and held on the AFRS EMS, a computer data recording system.

10.7.7 Appliance servicing and defect records are held by the HAL vehicle maintenance provider.

10.7.8 Heathrow’s AFRS carries a variety of medical equipment. Inventories are detailed in the AFRS document ‘Needs Analysis – Provision of Emergency Medical Equipment’ and are reviewed annually.

10.7.9 The Emergency Medical Vehicle and the Emergency Medical Trailer are stationed at the Airside Operations Facility (AOF) and are deployed to any incident via a request to Airfield Operations.

10.7.10 Airfield Operations is responsible for ensuring regular maintenance and replenishment of the equipment is carried out in accordance with the appropriate standards.

10.7.11 Refer to AFRS Volume 1 Administration, Chapter 14, for further information on medical equipment.

10.8 Alerting Procedures and Response Objectives

10.8.1 Monitoring of the movement areas and initiation of emergency response is a function carried out by Air Traffic Control.

10.8.2 The AFRS will always aim to achieve the Response Objective in accordance with EASA Regulation; AMC5 ADR.OPS.B.010(a)(2).

10.8.3 The training programme for AFRS personnel and familiarisation of the airfield encompasses AFRS standby positions, runway holds and designated runway crossing points. Response exercises are undertaken to keep AFRS personnel familiar with best
routes to any point on the aerodrome in an ever-changing environment. Refer to AFRS Volume 3 Operational Procedures, Chapter 16 – section 16.1, for further Information.

10.9 Communications

10.9.1 UHF fixed and portable radios and fixed VHF radios are provided to allow two-way communication with internal teams, flight crews, and ATC. Refer to AFRS Volume 1 Administration, Chapter 10 – section 10.1, for further information.

10.9.2 In addition, station managers carry ‘Airwaves’ radios, enabling swift communication with the Met Police duty officers, and the HAL AfDM, during an incident.

10.10 Unforeseen Circumstances which may Affect Promulgated Level of AFS Fire Category

ASEO_OSI_068 – Operations at Heathrow Airport with Depleted Rescue and Fire Fighting Service

10.10.1 In the event of a change in fire category from that published in the UK AIP, the AfDM is responsible for promulgating the change to ATC and to flight crews via NOTAM.

10.10.2 In the event of either Fire Station being unavailable or loss of services essential to ‘normal’ operation of the Airport Fire & Rescue Service, Contingency Plans are in place. The Contingency Plans are held in the Station Managers office at Fire HQ

10.10.3 Refer to AFRS Volume 1 Administration, Chapter 16 – section 16.2, for further information.

E.11 Removal plan for disabled aircraft, including…

ASEO_OSI_069 – Aircraft Recovery Plan

11.1 Relevant arrangements, equipment, and procedures for its implementation

11.1.1 The policy and management for the removal of disabled aircraft is outlined in Operational Safety Instruction ‘Aircraft Recovery Plan’ and satisfies the requirement for a plan for the removal of disabled aircraft. This OSI cover the expeditious removal of an aircraft from an operational runway or taxiway area, including the provision of appropriate man-power and equipment to execute the task.

11.1.2 Responsibility for the management of aircraft recovery resides with the Airline Operator, or aircraft owner, in liaison with the Airfield Duty Manager (AfDM). Only staff authorised by the aircraft owner are permitted to remove the aircraft.

11.1.3 HAL does not hold equipment specifically for the purpose of removal of disabled aircraft. However, with the agreement of the Airline Operator, HAL may be able to provide some non-specialist equipment to support in the removal of disabled aircraft.

E.12 Procedures for ensuring the safe handling and storage of fuel and dangerous goods in the aerodrome, including…

ASGrops_OSI_019 – Fuelling of Aircraft

12.1 Equipment, storage areas, delivery, dispensing, handling and safety measures

12.1.1 Heathrow Airport Limited (HAL) itself does not supply or store aviation fuel, or
provide fuelling facilities at Heathrow. It does, however, have lease agreements with the major fuel companies and suppliers. The lease agreements specify the conditions under which aviation fuel may be supplied at Heathrow. In particular, they cover construction of storage tanks, pipelines and hydrants, road tanker operation insurance, emergency procedures and fire precautions. The agreements also stipulate that the fuel companies must observe all general or local acts of parliament which may be applicable and specifically the Petroleum (Consolidation) Act 1928 (with associated documents) and the Pipelines Act 1962 plus the guidelines laid down in CAP 748 (previously CAP 434).

12.1.2 The only grade of fuel available at Heathrow is Jet A-1.

12.1.3 Aviation fuel is delivered to Heathrow by the oil companies using dedicated underground pipelines and a limited road tanker offload facility. Fuel is stored in two tank farms areas - one at Perry Oaks (in the centre of the airfield, between Delta and Echo taxiways), and the second in the Cargo Area.

12.1.4 Both fuel facilities are owned by a joint venture company of oil companies, known as Heathrow Airport Fuel Company (HAFCO). It comprises BP International Ltd, Valero Energy Ltd (formerly called Chevron Ltd), ESSO Petroleum Company Ltd, Kuwait Petroleum International Aviation Company (UK) Ltd (trading as Q8), Shell UK Ltd, Total UK Ltd and Vitol Aviation BVBP, ExxonMobil, Shell, ChevronTexaco, Total and Q8 (24hr Tel; 020-8754 8762).

12.1.5 The fuel hydrant system is operated by a joint venture known as Heathrow Hydrant Operating Company Limited Ltd (HHOpCo), comprising British Airways PLC (BA), BP International Ltd, Valero Energy Ltd (formerly Chevron Ltd), ESSO Petroleum Company Ltd, Kuwait Petroleum International Aviation Company (UK) Ltd (trading as Q8), Shell UK Ltd, Total UK Ltd and Vitol Aviation BV. (24hr Tel; 020-8754 8762).

12.1.6 Fuel transfer from the hydrant outlets to the aircraft is carried out by a number of fuel companies and consortiums. A very limited amount of fuel is transferred using bowsers in the General Aviation area. All companies operate under the Aviation Fuel Quality and Operating Procedures known as Joint Industry Guidelines (JIG). The HAL fuel manager also has access to, and involvement with, the JIG audit process.

12.1.7 The into-plane fuelling service providers are Swissport Fuelling Services (tel: 020-8564 4903) who supply on behalf of Vitol, the Aircraft Service International Group (ASIG) Joint Venture operation with Shell and ExxonMobil (Esso) (tel: 020-8897-2836), ASIG’s dedicated BA operation (tel: 020-8759-5354) which supplies on behalf of all BA’s suppliers and Aviation Fuel Services Ltd (AFS, tel: 020-8759-1363) which supplies on behalf of BP, Q8, and Total.

12.2 Quality and correct specification of aircraft fuel; audit and inspection intervals, checklists, sampling and record keeping.

12.2.1 Heathrow Airport Limited (HAL) itself does not supply or store aviation fuel, or provide fuelling facilities at Heathrow. It does, however, have lease agreements with the major fuel companies and suppliers. The lease agreements specify the conditions under which aviation fuel may be supplied at Heathrow. In particular they cover construction of storage tanks, pipelines and hydrants, road tanker operation insurance, emergency procedures and fire precautions. The agreements also stipulate that the fuel companies must observe all general or local acts of parliament which may be applicable and specifically the Petroleum (Consolidation) Act 1928 (with associated documents) and the Pipelines Act 1962 plus the guidelines laid down in CAP 748 (previously CAP 434).
HAL has access to the fuel industry audits, where recommendations and sign-off can be checked. The Ground Operations Licensing Team carry out annual checks on HHOpCo. Additionally, AFS, ASIG and Swissport are audited as part of the GOL audit schedule.

Other operational procedures

Low visibility operations: description of operational procedures including coordination with air traffic services unit and apron management unit, standard taxiing routes, control of activities and measurement and reporting of runway visual range.

The two main runways at Heathrow are equipped with Marconi Standard Instrumented Runway Visual Range units at the up wind, mid-point and downwind ends of each runway. These come into operation when the Runway Visual Range on the associated runway drops below 1,500 metres, and, at the lower end of the visibility range are capable of reading the IRVR in 25 metre steps. The units are frangible and are located 350ft (105 m) from the runway centreline. They are self-monitoring but are recalibrated by the manufacturers every nine months.

IRVR digital readouts are provided in Air Traffic Control, the London Air Traffic Control Centre, the Southern AIS Centre, the Meteorological Centre, British Airways ‘Heathrow Airport Centre’ control room and are promulgated throughout the airport by HAL ACDM.

Heathrow's procedures for operating in Low Visibility are detailed in the appropriate OSI – ‘Low Visibility Operations’

Procedures for winter operations

Annually, Heathrow publishes its ‘Snow Plan’ which sets out how it will carry out snow removal and de/anti-icing activities, and how the organisation is structured to carry out the plan.

The Snow Plan also sets out the responsibilities of third party airside users during a snow or winter weather event, in terms of ‘self-help’ and reporting the conditions of aprons for further action by the Airside Safety Department.

Snow removal plan and procedures for its implementation, including a description of the available means and relevant arrangements

The Snow Plan also sets out the responsibilities of third party airside users during a snow or winter weather event, in terms of ‘self-help’ and reporting the conditions of aprons for further action by the Airside Safety Department.

Procedures for operations in adverse weather conditions

Airside_ASWeather_Standard_014 – Adverse Weather – Anti and De-icing
Airside_ASWeather_Standard_014 – Adverse Weather – Strong Winds
ASWeather_OSI_054 – Adverse Weather
13.4.1 The activities carried out by Heathrow during, or in preparation for, adverse weather conditions, are listed in the Airfield Operations Training Manual.

13.4.2 The dedicated Met Office forecaster based in the Airport Control Centre (APOC) may issue a weather warning for Strong Winds, Gales, Thunderstorms, Ice etc.

13.4.3 Weather warnings are promulgated to the airport community using the CDM web portal. Major handling companies are also contacted by telephone.

13.4.4 ASD will increase patrols of the movement area during adverse weather. Additional inspections of runways will be carried out if necessary or at the request of ATC.

13.5 Procedures for night operations

13.5.1 Heathrow is equipped for operations in the day or night period.

13.5.2 Control of the AGL and the decision to use it rests with ATC and is governed by the procedures in MATS Pt 2.

13.5.3 At night, as detailed in section E.3, inspections are carried out by the ASD which focus upon lighting quality and serviceability. Any faults found are passed for rectification to Engineering.

13.6 Procedures for the protection of radar and other navigational aids, control of activities, and ground maintenance in the vicinity of these installations

13.6.1 Instrument Landing System (ILS) installations have their critical areas protected using pegs and signage. Critical areas are also marked on the Airfield Map to aid drivers.

13.6.2 The 10cm radar installation at Heathrow is located outside the critical part of the security restricted zone, to the South East of the airfield. It is physically protected from intrusion. Works on the radar are managed by NATS.

13.6.3 Development applications or crane/tall equipment permit applications in the local area which are going through the safeguarding process are assessed for impact upon the 10cm radar, as well as Ground Movement Radar and other navigational aids. Assessments are carried out by NATS specialist teams and objections raised if required.

13.6.4 Permits to work on the airfield in the vicinity of navigational aids are only issued following consultation with NATS.

13.7 Procedures for the operation of aircraft with higher code letter at the aerodrome, including taxiing routes

13.7.1 Heathrow is able to accept Code F aircraft across the majority of the airfield. These routes are detailed in the UK AIP, section AD 2-EGLL-2-3.

13.7.2 In the event of unusual or large aircraft requiring the use of the airfield (eg. AN-225), the AfDM will make an assessment of the most suitable taxi route.

13.8 Procedures and measures for the prevention of fire at the aerodrome

13.8.1 All HAL staff receive training on the prevention of fire.

13.8.2 Airside Safety Department staff, as part of their routine inspection regime, will look for fire risks, such as sources of ignition or fuel.
13.8.3 Smoking is prohibited in the airside environment at Heathrow, except in small, carefully controlled areas.

13.9 Procedure for calculating reduced declared distances where there are temporary objects infringing the strip or obstacle limitation surfaces

13.9.1 The responsibility for calculating and promulgating reduced declared distances rests with the AfDM.

13.9.2 Procedures for calculating revised declared distances are available in Airfield Operations SOP-16-006 “Re-declaring Runway Distances”

13.10 Procedures for the safe integration of other aviation activities such as gliding, parachuting and banner towing.

13.10.1 No 'other aviation activities' take place using Heathrow as a base.

13.10.2 The airspace surrounding Heathrow is classified as Class D, is highly controlled (permission to enter the area for VFR flights is only granted by prior approval) and extremely busy - it is therefore unlikely that gliding, parachuting and banner towing activities will take place around Heathrow.

13.10.3 ATC will manage VFR and SVFR flights through the airspace around Heathrow in accordance with CAP493 (MATS Pt 1) and MATS Pt 2 (EGLL) procedures.

13.11 Procedure for termination of operation

13.11.1 In circumstances whereby Heathrow Airport Limited intends to terminate the operation of the aerodrome, the following will be carried out;

(a) The competent authority will be notified as soon as possible
(b) Pertinent information will be provided to the Aeronautical Information Service provider
(c) Heathrow will surrender its Certificate to the competent authority on the date of termination of operations.
(d) Heathrow will ensure that appropriate measures have been taken to prevent the unintended use of the aerodrome by aircraft.

13.12 Environmental procedures

ASEnv_OSI_055 – Airside Environment – Pre Conditioned Air; Rules and Procedures
ASEnv_OSI_056 – Airside Environment – Pollution Prevention
ASEnv_OSI_057 – Airside Environment – De-icing Fluid Management Reporting Procedures
ASEnv_OSI_058 – Airside Environment – Waste Management and Disposal
ASEnv_OSI_059 – Airside Environment – Spillage and Incident Reporting Procedures
ASEnv_OSI_062 – Airside Environment – Disposal of Pollutants, Oils and Lubricants (POL) and other Hazardous Wastes

13.12.1 Heathrow Airport Limited (HAL) is committed to minimising the impact of its growing business on the environment and local communities through the continuous improvement of environmental performance and by acting as responsible stewards of the environment at all times.

13.12.2 Heathrow is subject to a number of environmental controls in common with other major industries. The avoidance of water, air and land contamination, which can result from inadequate storage of materials, routine operations or emergency situations, is an essential operating requirement.

13.12.3 Heathrow is also subject to aircraft Noise Abatement legislation, both on the ground and in the air.

13.12.4 The emphasis rests firmly on the avoidance and minimisation of risk, and all practical
steps should be taken to prevent events by means of training, awareness of legislation, good maintenance of equipment and good working practices.

13.13 Procedure for the Notification of Communicable Diseases & Death on Board Aircraft

ASGrOps_OSI_039 – Procedure for Notification of Communicable Diseases and Death on Board Aircraft
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## Document History

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<td>v3.1</td>
<td>Draft update</td>
<td>11th February 2019</td>
</tr>
<tr>
<td>v3.2</td>
<td>Further updates</td>
<td>02nd May 2019</td>
</tr>
<tr>
<td>V3.3</td>
<td>Issue</td>
<td>03rd May 2019</td>
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Airside Operational Plan

Aerodrome Safety Management System Manual

REF: Airside_ASSMS_Plan_001_ASMSM_v6.0

DATE: 03rd May 2019
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A Purpose of this Document

This document outlines the structure and nature of safety management actions conducted by Heathrow Airport Limited (HAL) towards maintaining and improving safety in relation to aviation operations.

The ICAO requirement for member states to adopt a regulatory system for the Certification of Aerodromes used for international operations, is set out in the Standards and Recommended Practices (SARPs) contained in Annex 14 Volume I to the Convention on International Civil Aviation (The Chicago Convention of 1944).

The European Commission Regulation 139-2014\(^1\) sets the requirement for aerodromes operating commercial aircraft and with a paved runway above 800m to have a European Aviation Safety Agency (EASA) aerodrome certificate, and to comply with the rules set in these regulations. In particular, Article ADR.OR.D.005 in Annex III, Section D, sets the requirement for EASA certified aerodromes to operate a safety management system with regards to aerodrome safety and the scope of the EASA Certificate.

EASA sets in 2014-12-R-ED Decision of 27th February 2014\(^2\) how aerodromes are to demonstrate and maintain compliance with the European Commission regulations. This is set out in EASA’s “Annex to 2014-12-R-ED Acceptable Means of Compliance (AMC) & Guidance Material (GM) to Authority, Organisation and Operations Requirements for Aerodromes”\(^3\). The detailed requirements for a safety management system for EASA Aerodromes are then set-out in Annex III, Section D, ADR.OR.D.005 AMC 1 to AMC2, for acceptable means of compliance, and ADR.OR.D.005 GM 1 to GM 2 for guidance material.

This document describes how Heathrow Airport Limited meets the above requirements with regards to the aerodrome safety management system. This document builds up and supports the wider requirements of UK, EASA and ICAO regulations as set out in Heathrow’s Aerodrome Manual\(^4\).

B Structure of the Safety Management System

The structure of Heathrow’s Aerodrome Safety Management System is based on Heathrow’s Health and Safety Improvement Standard – The Heathrow Health and Safety Management System\(^5\). This standard requires the safety management system to follow 10 elements to describe how safety activities are planned, executed and reviewed.

These ten elements are included below.

1. Regulations and Guidance
2. Hazard and Risk Assessment
3. Procedures, instructions and controls
4. Policies, Organisation and Accountabilities
5. Communication and Involvement
6. Training and Competence
7. Emergencies and Business Continuity
8. Incident Reporting and Investigation
9. Performance and Governance
10. Improvement and Change Management
The safety management system has been set-up to provide a structure that is simple and easy to follow for all HAL employees and contractors contributing to aerodrome safety activities at Heathrow, while maintaining compliance with EASA regulatory requirements. The structure further assures alignment with an international recognised system known as OHSAS 18001.

Table 1 below highlights how the Aerodrome Safety Management System structure complies with EASA requirements, and aligns with Aerodrome Manual, ICAO requirements and OHSAS 18001 expectations. As the Aerodrome Manual refers to this SMS Manual in its entirety, certain sections are not directly included within the Aerodrome Manual itself.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Regulations and Guidance</td>
<td>ADR. OR. D. 005)</td>
<td>A.3.2</td>
<td>1.1 (a)</td>
<td>4.3.2</td>
</tr>
<tr>
<td>2- Hazard and Risk Assessment</td>
<td>ADR. OR. D. 005</td>
<td></td>
<td>2.1</td>
<td>4.3.1</td>
</tr>
<tr>
<td>3- Procedures, Instruction and Controls</td>
<td>ADR. OR. D. 005</td>
<td>1.1(c), 1.3, 1.5</td>
<td>4.4.4</td>
<td></td>
</tr>
<tr>
<td>4- Policies, Organisation and Accountabilities</td>
<td>ADR. OR. D. 010, ADR. OR. D. 015</td>
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<td>4.1, 4.2, 4.4.1</td>
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<td>5- Communications and Involvement</td>
<td>ADR. OR. D. 005, ADR. OR. D. 027</td>
<td>1.1(f), 1.2(d), 4.2</td>
<td>4.4.3</td>
<td></td>
</tr>
<tr>
<td>6- Training and Competence</td>
<td>ADR. OR. D. 017</td>
<td>B.4</td>
<td>4.1</td>
<td>4.4.2</td>
</tr>
<tr>
<td>7- Emergencies and Business Continuity</td>
<td>ADR. OP S.B. 005</td>
<td>E.9</td>
<td>1.4</td>
<td>4.4.7</td>
</tr>
<tr>
<td>8- Incident Reporting and Investigation</td>
<td>ADR. OR. D. 030</td>
<td>B.3</td>
<td>3.1</td>
<td>4.5.3.1, 4.5.3.2</td>
</tr>
<tr>
<td>9- Performance and Governance</td>
<td>ADR. OR. D. 005</td>
<td>1.3, 3.1</td>
<td>4.5.1</td>
<td></td>
</tr>
<tr>
<td>10- Improvement and Change Management</td>
<td>ADR. OR. D. 005</td>
<td>1.1(g), 3.2, 3.3</td>
<td>4.6</td>
<td></td>
</tr>
</tbody>
</table>

Furthermore, Heathrow Airport has adopted Quality Management System principles with regards to the delivery of Aerodrome Safety Management, as outlined in ISO 9001:2015. A description of how quality management system requirements are met through this plan are included in Appendix 1.
C Safety Management System Elements

C.1 Regulations and Guidance

The regulations and guidance related to aerodrome safety requirements are outlined in the Aerodrome Manual, Section A.3.2, which is expanded below:

The ICAO requirement for member states to adopt a regulatory system for the Certification (i.e. Licensing) of Aerodromes used for international operations is set out in the Standards and Recommended Practices (SARPs) contained in Annex 14 Volume I to the Convention on International Civil Aviation (The Chicago Convention of 1944). Submission of an Aerodrome Manual by the applicant, as part of the approval/acceptance process for the granting of an Aerodrome Certificate, is included as a Recommendation.

The United Kingdom Civil Aviation Act of 1982 (the Act) makes provision for an Air Navigation Order (the Order) or ANO, which puts the provisions of the Chicago Convention and its Annexes into effect. The ANO is published in Civil Aviation Publication 393 ‘Air Navigation: The Order and the Regulations’ (CAP 393). Within the Air Navigation Order (ANO), article 207 sets out the requirement for flights operated for the purposes of commercial transport (as detailed in article 208) to use only aerodromes licensed for the take-off and landing of such aircraft.

EC216/2008 is a European legislative regulation which builds on the provisions of the Chicago Convention, and establishes for European Member States the regulations for ‘high and uniform protection of the European citizen’ in aviation safety. It mandates the formation of a European Aviation Safety Agency (EASA), and sets out the powers of EASA for regulating aviation safety in Europe. Article 8 of EC216/2008 requires operators involved in commercial transport to “demonstrate their capability and means of discharging the responsibilities associated with their privileges…” and therefore “…these capabilities and means shall be recognised through the issuance of a certificate”

Regulation EC139/2014 sets out the implementing rules and administrative procedures related to aerodromes as required by EC216/2008. ADR.OR.B.005 requires an applicable certificate to be issued by the Competent Authority (the UK Civil Aviation Authority) in order to operate an aerodrome for commercial transport. EASA sets out in 2014-12-R-ED Decision of 27th February 2014 how aerodromes are to demonstrate and maintain compliance with the European Commission regulations. This is set out in EASA’s “Annex to 2014-12-R-ED Acceptable Means of Compliance (AMC) & Guidance Material (GM) to Authority, Organisation and Operations Requirements for Aerodromes” in terms of management, operations and maintenance. This includes two amendments published as Annex’s to 2016-09-R-ED and 2017-17-R-ED. In terms of Certifications Basis (asset compliance requirements), these requirements are detailed in 2017-021-R-ED CS-ADR-DSN Issue 4+7.

In the UK, the CAA issues guidance material with regards to Management, Operations and Maintenance through its Civil Aviation Publication (CAP) 1168, Guidance Material for Organisations, Operations and Design Requirements for Aerodromes8. This CAP then provides further links to other existing CAPs relating to specific aeronautical activities, such as Wildlife Hazard Management at Aerodromes (CAP 772) or Requirement for an Airside Driving Permit (ADP) Scheme (CAP 790).

Furthermore, the reporting of occurrences in aviation is outlined in Regulation EU 376/20149. Heathrow has adopted this regulation as an Alternative Means of Compliance to EASA EC 139/2014 with regards to incident reporting and investigation.

The structure of the regulatory framework applicable to Heathrow in relation to aerodrome safety, alongside regulatory guidance material, is included in Appendix 2.
C.2 Hazard and Risk Assessment

Heathrow sets its approach to hazard and risk management in its Risk Management Policy. As a result of this policy, Heathrow maintains at all times an up-to-date Business Risk Register which identifies and quantifies risk that can potentially affect the Heathrow operation, and in particular aerodrome safety. Aircraft operations risks are managed by Airside Operations, through the Airside Operations Risk Register. Airfield asset risks are captured within the Engineering Risk Register.

Further to its corporate Risk Register, Heathrow manages Aerodrome Safety risks according to its procedure Airside_ASSMS_ASOP_001_Hazard and Risk Management. This procedure outlines how aerodrome safety hazards are managed with regards to:

- Hazard identification
- Risk assessment, and,
- Risk Management

The procedure outlines a specific risk scheme tailored to identify, assess and manage aerodrome safety risks which is based on the guidance provided through Civil Aviation Publication 760, Guidance on the Conduct of Hazard Identification, Risk Assessment and the Production of Safety Cases.

C.3 Procedures, Instructions and Controls

C.3.1 Documentation structure and management

Heathrow airport structures its aerodrome safety documentation on four levels, from Policy documentation to local procedures and notices. These levels are described below:

Policy:
The Aerodrome Manual and Aerodrome Safety Policy set the policy and framework against which Heathrow plans, executes, checks and reviews its aerodrome safety objectives.

Standards:
Documents in the standards section set the direction that Heathrow adopts in terms of specific safety management and technical or compliance areas. This section includes the following documents:

- Airside Standards: range of documents setting the standards that Heathrow sets itself against regulatory requirements and guidance material
- Airfield Planning Asset Standard: Sets the asset (Certification Basis) standards against which Heathrow aerodrome assets are inspected, maintained and designed

General Airside Procedures and Plans:
Documents in this section describe how the Policy and Standards are implemented across the aerodrome operation. This section includes the following documents:

- Airside Plans: these documents describe, where individual procedures are not sufficient, how policy and standards against a specific aerodrome safety objective (which is referred to as a theme) are met, and how operational procedures complement each other towards achieving such objectives. Examples of such airside plans are this Aerodrome Safety Management System Manual, the Heathrow Emergency Orders, or the Heathrow Snow Plan Airside.
- **Airside Standard Operating Procedures (ASOP):** These documents outline the activities required, across the Heathrow Airside organisation, to achieve a specific task. The procedures are aligned with safety objectives (themes) and are aligned to the relevant Airside Standards, and if applicable, Airside Plans. Temporary changes to procedures are issued as a Temporary Advice Notice.

- **Operational Safety Instructions (OSI):** These documents outline the requirements on all aerodrome operators towards meeting a safety objective (theme). The OSIs may include detailed steps and approach as required, and are aligned to the relevant Airside Standards and Airside Plans if applicable. Temporary changes to OSIs are issued as an Operational Advice Notice.

**Local Operational Procedures:**
Documents at this level include the detailed procedures that each Airside department follows and that are required to achieve the plan and general procedures outlined in the section above. Documents in this section are referred to as Airside Local Operating Procedures (ALOP) and temporary changes are captured through Temporary Advice Notices.

The high-level structure described above, as well as the requirements associated with the creation, approval, issue, retention and destruction of documents is outlined in the Document and Records Management Procedure.

### C.3.2 Record Management

In line with EASA regulatory requirements, Heathrow maintains operational and management records of aerodrome safety related activities for a period of at least 5 years, starting 1st April 2016. Such records include, but are not limited to:

- Operational Logs and Notes
- Safety Performance information
- Safety Incidents and Investigations
- Aerodrome Safety Governance meeting notes and minutes
- Personnel training records
- Aerodrome Data and Surveys
- Change Management records
- Development assurance and control of works records
- Previous versions of aerodrome documents and procedures

The approach followed towards the creation, management, storage and destruction of records is described in the Document and Records Management Procedure.

Heathrow utilises SharePoint as the primary repository for Documents and Records Management. In addition, there are specific systems used for elements of Safety Processes within the Aerodrome and these are detailed in Table 2.

Heathrow requires the systems to be cloud based, with back-ups within 24 hours of any new entry in a location different from that containing the working data, in an environment that it remains in good condition. All patches and software upgrades are to be tested and controlled via the Heathrow IT Framework, with all data being backed up and remaining accessible for the full retention period.

Where records are subject to data protection legislation, the data will be reviewed and stored in line with the Heathrow Data Protection policy.
### Table 2 – List of Document and Records Repositories

<table>
<thead>
<tr>
<th>System Name</th>
<th>Use of System</th>
</tr>
</thead>
<tbody>
<tr>
<td>SharePoint</td>
<td>Primary repository for Aerodrome Safety Management Records.</td>
</tr>
<tr>
<td>Shared Drive</td>
<td>Old repository for records, data being migrated to SharePoint.</td>
</tr>
<tr>
<td>OMRA</td>
<td>Old Repository for recording details of Safety Incidents.</td>
</tr>
<tr>
<td>AIR</td>
<td>Repository for recording details of Safety Incidents.</td>
</tr>
<tr>
<td>Auto CAD</td>
<td>Old system used for safeguarding and holds details of Obstacles on and around the Aerodrome</td>
</tr>
<tr>
<td>GDMS Online</td>
<td>Used for safeguarding and holds details of Obstacles on and around the Aerodrome</td>
</tr>
<tr>
<td>Cornerstone</td>
<td>Old system used for Learning records Airside and currently the primary repository of Learning Records for the rest of HAL.</td>
</tr>
<tr>
<td>Maximo</td>
<td>Primary repository for Asset Management and fault reporting, including inspection of Manoeuvring area.</td>
</tr>
<tr>
<td>PEGA</td>
<td>Primary repository for management Airside Works Permits</td>
</tr>
<tr>
<td>IRIS</td>
<td>Primary repository for details of Incident Response by Airport Operations.</td>
</tr>
<tr>
<td>ID Gateway</td>
<td>Primary repository for details of Airside Passes and Airside Vehicle permits.</td>
</tr>
<tr>
<td>ADB</td>
<td>Primary repository for Aircraft Movement data.</td>
</tr>
<tr>
<td>CMO</td>
<td>Primary repository for Crane Permits</td>
</tr>
</tbody>
</table>
C.4 Policies, Organisation and Accountabilities

C.4.1 Policies

The Aerodrome Manual sets the policies and refers to a set of standards that Heathrow Airport Ltd follows with regards to Aerodrome Safety. Furthermore, the Aerodrome Safety policy statement states:

"Keeping Everyone Safe" is one of Heathrow's core values. Our aim is to ensure that everyone goes home or gets to their destination safe and well every day. Our commitments to the Health, Safety and Wellbeing of our colleagues are published in our 'Team Heathrow' Policy Statement – this policy covers our commitment to Aviation Safety.

To prevent aviation accidents and incidents Heathrow will maintain an active Aerodrome Safety Management System. Our overall safety objective is the proactive management of identifiable hazards and their associated risks with the intent to eliminate their potential for affecting aviation safety. To that end, we will continuously examine our operation for these hazards and find ways to minimize them. Heathrow supports the open sharing of information on all safety issues and encourages all employees and third-party colleagues to report significant errors, safety hazards or concerns. We will encourage incident reporting, train staff on safety management, document our findings and mitigation actions and strive for continuous improvement.

Ultimate responsibility for aviation safety rests with the Accountable Manager (Chief Operating Officer). Responsibility for making our operations safer for everyone lies with each one of us – from senior managers to front-line employees. Each manager is responsible for implementing the safety management system in his or her area of responsibility, and will be held accountable to ensure that all reasonable steps are taken.

Therefore, our commitment is to:

a) Operate and continually develop an effective Aerodrome Safety Management System to provide a systematic foundation for safety in all our airfield activities.

b) Ensure that aerodrome safety is suitably prioritised when considered relative to commercial, operational, and environmental conflicts.

c) Comply with EASA and CAA regulatory requirements.

d) Clearly define for all our staff their responsibilities for the delivery of airfield safety performance.

e) Ensure that all our staff are provided with adequate and appropriate training, are competent in safety matters, and are only allocated tasks commensurate with their skills.

f) Ensure that sufficient resources are available to implement our safety policies and activities.

g) Demonstrate and provide leadership across third parties operating on airfield to minimise the risks associated with aerodrome operations.

h) Operate a safety risk management process to ensure that Operations safety risks are reduced to be As Low as Reasonably Practicable (ALARP).

i) Audit, record, and review our safety performance against realistic objectives and/or targets, take appropriate action when required.

j) Ensure that appropriate safety information is provided to all airfield users and employees, and that people are aware of risks and relevant safety control measures.

k) Promote a 'Just' safety culture which creates an environment that allows all Airside colleagues to report all incidents and safety concerns without the threat of censure.

Chris Garton
Chief Operating Officer
Accountable Manager
Heathrow Airport Limited.
C.4.2 Organisation

The Aerodrome Manual describes the organisation structures within Heathrow that deliver the aerodrome’s safety accountabilities and safety management activities, as well as the key individuals accountable for aerodrome safety. This is included in Section B.1 of the manual.

C.4.3 Accountabilities

The Aerodrome Manual includes in Section B.2 the general accountabilities of key roles and named individuals accountable for Aerodrome Safety at Heathrow. Further to the information included in the aerodrome manual, Table 3 highlights the key safety accountabilities of named Aerodrome Safety personnel.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name and Title</th>
<th>Key Safety Accountabilities</th>
<th>IR / AMC / UK Legislation</th>
</tr>
</thead>
</table>
| Accountable Manager   | Chris Garton, Chief Operating Officer        | • Ensures that all necessary resources are available to operate the aerodrome in accordance with the applicable requirements and the aerodrome manual;  
                                 |                                      | • Ensures that if there is a reduction in the level of resources or abnormal circumstances which may affect safety, the required reduction in the level of operations at the aerodrome is implemented;  
                                 |                                      | • Establishes, implement, and promotes the safety policy; and  
                                 |                                      | • Ensures compliance with relevant applicable requirements, certification basis, and the organisation’s safety management system, as well as its quality management system with regard to aeronautical data and aeronautical information provision activities. | ADR.OR.D.015  
                                 |                                      |                                                                                                                               | AMC1 ADR.OR.D.015 (a)                  |
| Accountable Manager - Delegate | Kathryn Leahy, Director of Operations         | Has delegated accountability from the Accountable Manager with regards to:  
                                 |                                      | • Airside Operations – including airside management, airfield operations, and airport fire service and rescue  
                                 |                                      | • Aerodrome Safety Management  
                                 |                                      | • Provision of aeronautical data and aeronautical information  
                                 |                                      | • Compliance Monitoring  
                                 |                                      |                                                                                                                               | ADR.OR.D.015  
                                 |                                      |                                                                                                                               | AMC1 ADR.OR.D.015 (a)                  |
| Accountable Manager – Delegate Maintenance Manager | Gavin Payne, Engineering Operations Director | Has delegated accountability from the Accountable Manager with regards to:  
- Airfield Engineering – aerodrome maintenance  
Delegates further to:  
- Head of Engineering: Paul Weal | ADR.OR.D.015 AMC1 ADR.OR.D.015 (a) |
| Accountable Manager - Delegate | Amanda Owen, Safety Improvement Director | Has delegated accountability from the Accountable Manager with regards to:  
- See AM | Health and Safety at Work etc. Act 1974 |
| Safety Manager | Michael McKee Aerodrome Safety & Assurance Manager | Facilitates hazard identification, risk analysis, and management;  
Monitors the implementation and functioning of the safety management system, including the necessary safety actions;  
Manages the safety reporting system of the aerodrome;  
Provides periodic reports on safety performance;  
Ensures maintenance of safety management documentation;  
Ensures that there is safety management training available, and that it meets acceptable standards;  
Provides advice on safety matters; and  
Initiates and participate in internal occurrence/accident investigations. | ADR.OR.D.015 AMC1 ADR.OR.D.015 (c) |
| Compliance Monitoring Manager | Ian Witter, Head of Airside Safety & Assurance | Establishes and maintains a schedule of compliance monitoring encompassing all aerodrome safety activities,  
Manages and conducts a schedule of compliance monitoring audits on a regular and timely basis  
Sets and maintains adequate compliance monitoring documentation and records | ADR.OR.D.005 AMC1 AD.OR.D005(b)(1) |
Manager of Operational Services | Trevor Waldock, Head of Airside Operations | Manages delivery of Operational Services including:
- Inspection of Movement Area
- Safeguarding the airfield from Wildlife Hazards
- Police the Operation of Vehicles Airside
- Manage the Airfield Winter Operations response
- Safeguard the Airfield in the Low Visibility Operations
- Manage Aerodrome Works safety.

Over and above the accountabilities highlighted in Table 2, Appendix 3 sets the alignment of EASA 139/2014 Implementing Rules (IR) and Acceptable Means of Compliance (AMC) requirements against Heathrow’s Aerodrome Safety roles and organisation. This is set in Tables A.2.1 to A.2.6 as follows:

- Table A.2.1 - Safety Accountabilities – Additional Aerodrome Operator Accountabilities (Annex III, ADR.OR Subpart C)
- Table A.2.2 - Safety Accountabilities – Management (Annex III, ADR.OR Subpart D)
- Table A.2.3 – Safety Accountabilities – Aerodrome Manual (Annex III, ADR.OR Subpart E)
- Table A.2.4 - Safety Accountabilities – Aerodrome Data (Annex III, ADR.OPS Subpart A)
- Table A.2.5 - Safety Accountabilities – Aerodrome Operational Services, Equipment and Installations (Annex III, ADR.OPS Subpart B)
- Table A.2.6 - Safety Accountabilities – Aerodrome Maintenance (Annex III, ADR.OPS Subpart C)
C.4.4 Contracted Activities

A number of Aerodrome Safety activities are sub-contracted to other organisations. When contracting activities, Heathrow Airport Ltd ensures that:

- A written agreement exists between Heathrow Airport Ltd and contracted organisation, defining the activities and requirements
- Contracted activities are included in the compliance monitoring programmes
- The contracted organisation has sufficient and competent personnel to undertake the required activities. A prior audit may be required when engaging new organisations.

Table 4 below lists the activities sub-contracted by Heathrow Airport Ltd that support aerodrome safety.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Contactor</th>
<th>Responsible Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Traffic Services</td>
<td>NATS</td>
<td>Head of Airport Operations</td>
</tr>
<tr>
<td>Wildlife Management</td>
<td>Birdstrike Management Ltd</td>
<td>Head of Airside Operations</td>
</tr>
<tr>
<td>Support and Auditing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerodrome Surveys</td>
<td>SLC Associates</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
<tr>
<td>Aerodrome Maintenance – Pavements, paint markings, drainage</td>
<td>Dyer &amp; Butler</td>
<td>Head of Engineering</td>
</tr>
<tr>
<td>Aerodrome Pavement Structural Surveys</td>
<td>Jacobs</td>
<td>Head of Engineering</td>
</tr>
<tr>
<td>Aerodrome Maintenance – Grass Areas</td>
<td>JS Agriculture</td>
<td>Head of Engineering</td>
</tr>
<tr>
<td>Aerodrome Maintenance - AGL support</td>
<td>ATG</td>
<td>Head of Engineering</td>
</tr>
<tr>
<td>Winter Operations Support</td>
<td>Dyer &amp; Butler</td>
<td>Winter Operations Manager</td>
</tr>
<tr>
<td>Flight Checks</td>
<td>Flight Calibration Services Ltd</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
<tr>
<td>Airport Fire Service Contingency Provision</td>
<td>SEBs</td>
<td>Chief Fire Officer</td>
</tr>
<tr>
<td>Instrument Flight Procedures Design and Maintenance</td>
<td>Trax International</td>
<td>Airspace Lead</td>
</tr>
</tbody>
</table>

C.5 Communications and Involvement

C.5.1 Aerodrome Safety Communications

Aerodrome Safety events and performance are communicated on a regular basis through a structured series of reports and dashboards. These are listed below:
Weekly reports:
An Aerodrome Safety Weekly Report is issued every week collating all reported Occurrences and Observations from the previous week. The report includes any report relating to aerodrome safety, air traffic operations safety, bird strikes or aircraft incidents.

Monthly Reports and Dashboards:
Aerodrome safety performance monthly reports are produced and issued to aerodrome safety managers, and reviewed at aerodrome safety governance meetings. These reports are supported by monthly dashboards highlighting safety performance over time and against safety targets – such dashboards include Runway Safety, Manoeuvring Area Safety, Air Safety, Wildlife Management or Airfield Inspection Performance. Performance dashboards are reviewed at aerodrome safety performance meetings and are displayed in operational areas.

In addition to the above regular reports, significant events, key learnings or safety campaigns are included in Aerodrome Safety Bulletins and issued to all aerodrome safety personnel through the Airside “Safety Catch” publication.

C.5.2 Involvement in Aerodrome Safety
Heathrow Airport Ltd actively encourages engagement in aerodrome safety activities and initiatives on a formal and informal basis. Such activities include:
- Ramp FOD walks ‘Community Sweep’: weekly apron walks with ramp team and ramp users focusing on identification and removal of Foreign Object Debris and aerodrome safety hazards
- 6-monthly Runway walks: full length walk of both runways at night to identify surface and lighting hazards or irregularities
- Annual Airport Safety Week: aligned to UK’s Airport Operators Association, the safety week is an opportunity to engage and enhance collaboration and involvement of airport personnel in aerodrome safety. An additional Safety Week is hosted during the Winter season.
- RTST: Heathrow maintains an open-door policy for the RTST with regards to airline or ground handler attendance
- Pilot van runs, sponsored by RTST: Annual drive of the manoeuvring area with aerodrome operator, air traffic services, airline crews and ground handlers to identify any conflicting information or hazards that may contribute to pilot or driver’s confusion on the manoeuvring area

Further to the above, Heathrow encourages individuals’ engagement in Aerodrome Safety through its incident reporting and investigation procedures, as highlighted in Section C.8. This is achieved through the application of Just Culture principles with regards to investigations and a commitment to feedback the outcome of any reviews to the originator of the report, where applicable.

C.6 Training and Competence
Heathrow Airport has established a framework for training and competence that fully meets the requirements of EASA EC 139/2014 and associated Acceptable Means of Compliance. The framework is managed and assured by the Airside Operations Learning Manager, and is achieved through the following sections.

C.6.1 Operations and Management Training – HAL Personnel
Operations and Management training of HAL Airside Operations personnel is achieved through the following structure:
Airside Operations Learning and Development Airside Standard
The Airside Operations Learning Standard document sets the Heathrow policy with regards to Aerodrome Safety training and competence. In particular, it requires Airside Operations to set-up and manage a competency framework and training programme for all of its operational and management colleagues that meets or exceeds EASA requirements. Requirements are set, inter alia, for training and assessment to be completed by qualified personnel, for Safety Management System Training to be provided to all colleagues and for employee training and competence records to be kept centrally and updated regularly.

Airside Operations Learning Plan:
The Airside Operations Training Plan describes how Airside Operations achieves its objectives in terms of Training and Competence. In particular, it manages the administration and update of the Airside Operations Competency Framework, the Airside Operations Training Database and the Training Material in use for the purpose of establishing and maintaining adequate levels of competence.

Airside Operations Competency Framework and Competency Matrix
The Airside Operations Competency Framework, supported by the Airside Operations Competency Matrix, is a comprehensive document outlining the competency requirements of each role within Airside Operations against a defined set of Competencies. The framework establishes competencies at Awareness, Practitioner and Management level, and sets decay periods as well as competency assessment requirements for each area of competency within the framework. In particular, the framework includes mandatory Safety Management System training for all personnel aimed at ensuring that all personnel understand the objectives, requirements and accountabilities within the SMS.

Airside Learning Library
The Airside Learning Library (ALL) is a comprehensive set of information which, for each competency within the Airside Operations Competency Framework, outlines both the context as well as the content relevant to the competency. The ALL provides a source of reference for all Airside colleagues as well as forming the basis for all training material used towards setting and maintaining adequate technical competence.

C.6.2 Airport Fire Service
Heathrow AFRS provide training in accordance with HAL standards and guidance document CAP 699. This combines AFRS requirements as well as Airside Driver Training (as per section below). The framework and requirements for AFRS training is detailed in AFRS Volume 1 Administration, Chapters 4 and 16, as follows:

- V1 Ch4 – Section 4.1: AFS Training
- V1 Ch4 – Section 4.2: AFS Local Training
- V1 Ch4 – Section 4.4: Training Needs Analysis
- V1 Ch4 – Section 4.5: Fire Service Standard No6 Training & Assessment
- V1 Ch4 – Section 4.6: Firefighter, Crew Commander, Supervisor Training & Assessment Framework
- V1 Ch16 – Section 16.1: Category 10 TRA

Airport Fire Service personnel are included in Safety Management System training as per Section C.6.1
C.6.3 HAL Maintenance - Airside Engineering Training

Airside Engineering is outside the scope of the Airside Operations Competency Framework, and the Airside Engineering Department at Heathrow gains its training and competence provision through the Engineering Training Academy. The Academy caters for the needs of the Heathrow-wide Engineering Directorate and specifically for the Airside Engineering Department and Airside Systems Operations team. Training includes Airside Driving, and AGL independent training qualifications. Airside Engineering personnel are included in Safety Management System training as per Section C.6.1. Further details can be obtained from the Head of Engineering.

C.6.4 Airside Driver Training

Heathrow airport sets standards and requirements for an Airside Driving Permit based on CAP 790 requirements, through its Airside Standard – Airside Driver Training (ADP) Schemes. The ADP scheme at Heathrow is based on an A Permit, for Aprons and Roads, M Permit for manoeuvring area use excluding runway access, and an R permit for runway access. In addition, Heathrow Airport has instigated specialist Airside Driving Permits for Escorting of Vehicles Airside, E Permit, and the use of Mototok, P Permit.

The scheme sets the requirements for training, assessment and issuing of permits, as well as incorporating regular audits and checks of third parties carrying out driver training and assessment. Further details can be obtained from the Airside Operations Learning Manager, and reference to ASDRVE_OSI_006 Airside Driver Training and the Airside Driver Permit.

C.6.5 3rd Party Training

The responsibility for adequate training of 3rd party airfield personnel is set on each organisation as follows:

- OSI ASGrOps_OSI_041: Sets the requirement for minimum airside safety induction training
- Ground Operation Licence: Section 7 (Personnel requirements) sets the requirement for each organisation to have sufficient trained, competent and qualified personnel to undertake the activities covered under their licence.
- Airside Driver Training: All airside drivers are trained and assessed against the requirements of the scheme.

In addition to the above, contracted organisations to HAL are also set training and competence requirements under their individual contracts.

C.7 Emergencies and Business Continuity

C.7.1 Emergency Planning

Heathrow airport meets the Emergency Planning requirements of EASA 139/2014 through Emergency Orders, emergency orders modular testing regime and emergency exercise. The management of the Emergency Orders and associated testing is completed through the Airside Contingency Planning Manager within the Safety & Assurance team. Details of how Heathrow completes its emergency planning are set in the Aerodrome Manual, Section E.9.

C.7.2 Business Continuity and Contingency Planning

Outside of the remit of the Emergency Orders, Heathrow sets Business Continuity Plans (which apply to the Heathrow wide operation), and local Contingency Plans (which apply to a specific department within Heathrow). Airside Operations contributes to the Heathrow wide Business Continuity Plans, and sets its own Contingency Plans which are assured by the Airside Contingency Planning Manager. The plans are aligned with the Airside Operations risk register and ensure that plans are in place to address scenarios within the following categories:

- Loss of Operational Personnel
- Loss of Operational Infrastructure and Operational Systems
- Failure to Maintain Compliance
- Other impacts to Airside Operations (including associated safety risks)

Details of Airside input to Business Continuity Plans and Contingency Plans can be obtained from the Airside Contingency Planning Manager.
C.8 Incident Reporting and Investigation

Heathrow airport has adopted the requirements of Regulation EU 376/2014 as an Alternative Means of Compliance to EASA EC 139/2014 with regards to aeronautical incident reporting and investigation. This regulation sets the actions to be undertaken by an airport operator in terms of the Mandatory Occurrence Reporting scheme, setting out what is expected to be reported, what should be shared with the UK CAA, and what mechanisms should be in place with regards to incident investigation and corrective action.

C.8.1 General

Incident reporting and investigation at Heathrow, with regards to aerodrome safety, is achieved through the Aerodrome Safety Investigation team, part of the Safety Services Office.

The Aerodrome Safety Investigation and Improvement team works towards embedding principles of a strong safety culture, while applying the Just Culture expectations of EU Reg 376/2014. The regulation notes: "(37) A 'just culture' should encourage individuals to report safety related information. It should not, however, absolve individuals of their normal responsibilities. In this context, employees and contracted personnel should not be subject to any prejudice on the basis of information provided pursuant to this regulation, except in cases of wilful misconduct or where there has been manifest, severe and serious disregard with respect to an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or to property, or seriously compromising the level of aviation safety."

C.8.2 Incident Reporting

Aerodrome incidents are classified as ‘occurrences’ and ‘observations’, which may contribute to ‘accidents’ and ‘serious incidents’. These are defined as follows:

Occurrence: any safety-related event which endangers or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person and includes in particular an accident or serious incident

Observation: any safety event or circumstance which, in the opinion of the reporter, could have resulted in an occurrence

Accident: An Occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight and such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

1) a person is fatally or seriously injured as a result of:
   • being in the aircraft
   • direct contact with any part of the aircraft, including parts which have become detached from the aircraft
   • direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew

2) the aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes) or minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike, (including holes in the radome)

3) the aircraft is missing or is completely inaccessible
Serious Incident: an incident involving circumstances indicating that there was a high probability of an accident and is associated with the operation of an aircraft, which in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked.

Incidents are reported as follows:

- **Occurrences**: Are to be reported to the CAA through the Mandatory Occurrence Reporting scheme portal, within 72 hours of the incident taken place, and notified to the Aerodrome Safety Investigation and Improvement Team.
- **Accidents and Serious Incidents**: Are to be reported as Occurrences as above, and in addition, are to be reported to the Air Accident Investigation Bureau through the Airfield Duty Manager.
- **Observations**: Are voluntary reports, to be reported directly to the Aerodrome Safety Investigation Team, or through the HAL Airside Incident Reporting Tool.

Requirements for incident reporting at Heathrow Airport are included in ASSMS_ASOP_005 (in relation to Airside Operations staff), and ASSMS_OSI_065 (in relation to airfield users). ASSMS_ASOP_005 includes, in particular, the list of reportable Occurrences and Serious Incidents.

C.8.3 Incident Reporting

All incidents Airside are reported through the HAL Airside Incident Reporting Tool (AIR).

AIR provides an environment where the confidentiality of the reporter is protected in line with ADR.0R.D.030 (c), the investigation process can be managed to ensure timely completion of investigations and publication of lesson learning material.

The AIR tool also includes an integrated automated reporting functionality to the ECCAIRS Mandatory Occurrence Reporting portal, for which initial notifications and updates can be submitted.

In addition to the AIR tool, there is a confidential reporting form on Heathrow.com/airside, to which all third parties at Heathrow have access, from which they report any safety observations or concerns.

C.8.4 Incident Investigation

The Aerodrome Safety Investigation Team reviews every Occurrence and Observation noted by the operational teams. The following steps are followed in the investigation process:

1. Observation or Occurrence is raised by reporter. (Occurrences are also reported to CAA)
2. Details are shared with Safety Investigation and Improvement team.
3. Details of all relevant MOR’s are inputted into NATS STAR system (this allows weekly reports and monthly performance dashboards to be produced and shared with the operational teams and senior management).
4. The investigation is conducted, findings and recommendations are established.
5. Feedback is provided to the reporter, and lessons learnt are published to the wider team if necessary.
6. Findings and recommendations are shared with Aerodrome Safety management (nominated persons, delegates, and management teams involved in the specific investigations).
7. Actions to achieve Safety outcomes are identified and agreed.
8. Improvements and corrective actions are tracked in the AIR Tool and reviewed at the Safety Performance Meeting and ASSG.

In line with EU 376/2014, an initial analysis of all incidents investigated can be made available to the UK CAA within 30 days of the incident taken place. Heathrow aims to complete all investigations within 3 months of the incident taken place.
C.9 Performance and Governance

Heathrow manages its aerodrome safety performance and decision-making through a structure of forums, boards and steering groups that cover the scope of aerodrome safety activities and accountabilities described in the Aerodrome Manual.

These meetings within the Aerodrome SMS Governance Structure are run formally, at appropriate intervals, and have agreed terms of reference. The minutes and actions arising are circulated to members and records kept on the Aerodrome SMS Governance site.

The structure of aerodrome safety governance is shown in Appendix 3. While the forums are largely run through the Airside Operations Department, they are further supported by the Engineering and Asset Management Directorate (accountable for aerodrome maintenance). The aerodrome safety governance structure operates in parallel with Heathrow’s ANSP, NATS, to allow alignment of safety decisions as well as escalation within Heathrow Airport Limited executive governance, NATS’s executive governance, or HAL / NATS partnership governance.

The sections below describe the key aerodrome safety forums and their associated scope, accountabilities and performance indicators.

In addition to the Heathrow Aerodrome Safety Governance, dedicated governance forums are in place with regards to managing the liaison and interface with the UK’s Civil Aviation Authority, as described in Section C.9.5.

C.9.1 First Tier Governance and Executive Escalation:

The Accountable Manager’s Meeting, Heathrow’s Safety Review Board which is chaired by the Aerodrome Accountable Manager, represents the highest governance forum in the Aerodrome SMS Governance Structure. The Accountable Manager meeting considers matters of strategic safety in support of the accountable manager’s safety accountabilities, ensures that appropriate resources are allocated to achieve the established safety performance, reviews safety performance against the safety policy and objectives, timeliness of safety actions and the effectiveness of the organisation’s safety management processes. It includes in its membership the Director of Operations, Engineering Operations Director, and the Safety Improvement Director, to ensure that all delegated accountabilities of the Accountable Manager are represented. It further includes the Aerodrome Safety & Assurance Manager (responsible for the Safety Office), and the Head of Airside Safety & Assurance (responsible for the Compliance Office), to ensure that both functions have direct access to the Accountable Manager in line with EASA 139/2014 requirements. At Heathrow, Aerodrome Safety is also reviewed at the HAL Business Assurance Exec, Sustainability and Operational Risk Sub Committee and at Board Level.

From time to time, key safety decisions affecting performance outside aerodrome safety, or safety incidents reviewed at the Accountable Manager’s Meeting require escalation. This is achieved through the Executive Escalation Forums which are available within Heathrow Airport Limited, NATS, or the HAL / NATS Partnership governance structures.

C.9.2 Second Tier Governance

The Airside Safety Steering Group (ASSG), chaired by the Head of Airside Safety & Assurance, is the forum where aerodrome safety performance is effectively managed. It is attended by the Operations Leadership Team and supported by the Airfield Facilities Manager and Aerodrome Safety & Assurance Manager. The forum is responsible for:

- Reviewing and acting upon all areas aerodrome safety performance
- Setting Safety Improvement Strategy
- Approving Risk outside of normal parameters
• Escalation of safety recommendations not implemented within agreed timescales
• Reviewing and ensuring implementation of safety initiatives as required
• Acting as point of escalation from third tier governance forums as required.

C.9.3 Third Tier Governance

(a) Emergency Operations Group (EOG)
Chaired by the Airside Contingency Planning Manager, the Emergency Operations Group brings together representatives from the emergency services, both airport-based and local authority, along with other subject matter experts, to discuss all matters relating to the emergency response operation at the aerodrome. Issues covered include reviewing the Airport Emergency Orders, sharing knowledge and best practise, reviewing of major incidents, planning of emergency exercises, and management of change within the scope of the forum.

Performance indicators: completion against modular exercise schedule, lessons learnt from incident response and exercises.

(b) Ramp and Baggage Safety Steering Group (RBSSG)
Chaired by the Head of Airside Operations, the RBSSG includes the discussion of ramp and baggage safety data, and to review safety concerns in order to drive improvements, and well as the management of change within the scope of the forum. The meeting also reviews shared learning with ground handlers and airlines, and to support the development and implementation of a positive safety culture at Heathrow.

Performance indicators: ramp safety performance, aircraft incidents and aircraft ground damage, ground handling safety performance.

(c) Runway and Taxiway Safety Team (RTST)
Chaired by the Head of Airside Operations, the Runway and Taxiway Safety Team is responsible for;
• Reviewing and challenging safety performance across the Taxiways and Runways
• Identifying key risks to safe operations on the manoeuvring area
• Focusing on the prevention of runway incursions/excursions, prevention of taxiway conflicts & collisions, enhancing situational awareness for all users and FOD detection/control
• Reviewing the strategic objectives on an annual basis and re-prioritise as appropriate
• Reviewing the European Action Plan for the Prevention of Runway Incursions (EAPPRI) recommendations
• Working collaboratively and improving the safety culture
• Providing guidance on external developments in policy that affects safety on the manoeuvring areas (e.g. new CAA or HSE regulation) to provide a collaborative response and implementation if required
• Facilitating joint Pilot/ATC/Airport van runs on airfield

Performance Indicators: Runway and Manoeuvring Area safety performance and incident review, including runway incursions and excursions.

(d) Wildlife Hazard Management Steering Group (WHM)
Chaired by the Head of Airside Operations, the Wildlife Hazard Management Steering Group is responsible for;
• Implementing the wildlife hazard management strategy
• Developing, implementing and monitoring action plans necessary to achieve the objectives of the strategy, in line with regulatory and business requirements.
• Commissioning and subsequently reviewing independent advice or audit on wildlife management at and in the vicinity of Heathrow Airport.
• Providing the technical forum for discussion of bird hazard management issues – to share best practise and learning.
• Presenting and reviewing wildlife observation and strike data, and identifying areas for improvement.
• Reviewing the wildlife hazard risk matrix regularly and introducing controls where required
• Managing change within the scope of the forum

Performance Indicators: Bird hazard management performance, bird activity, bird strikes, species culls, bird deterrent presence on airfield, sightings, outputs from yearly audit and off-airport surveys

(e) Airside Approvals Board (AAB)
Chaired by the Senior Airfield Transformation Manager, the Airside Approvals Board is responsible for;
• Providing authority to Heathrow Development teams for construction work on the airfield, focussing upon the agreed scope of works, phasing, timescales, access principles, and any changes to the operation of the airfield as a result.
• Ensuring airfield compliance with EASA Change Management requirements with regards to aerodrome infrastructure
• Endorsing approval decisions given by airside’s Development Assurance Delivery team for minor projects or small amendments to larger projects, through recording these decisions formally as meeting minutes.
• Approving or denying requests for delivering non-compliant projects. Projects brought for approval should be compliant with Heathrow and EASA standards. Non-compliances requiring variations or concessions must be highlighted by the project team, and an explanation provided as to why a compliant design is not achievable.
• Acting as the escalation point for any issues which cannot be resolved directly between Heathrow Development teams and the airside Development Assurance Delivery team.
• Bringing together representatives from across the Airside and Safety Improvement functions in order to ensure cross-departmental agreement on developments. The scope of the AAB also includes approvals for ground handling operator changes, new airline entrants, introduction of new aircraft types, and airline relocations.

(f) Safety Performance Meeting
Chaired by the Head of Airside Operations, the Safety Performance Meeting is responsible for;
• Review of Safety Performance on the Airfield including review of key Leading and Lagging Safety Performance Indicators.
• Identifying Key Safety Trends and acting upon them.
• Review and action of Safety Investigation outcomes and findings.
• Escalation point for the FOD Radar Governance, BHM Governance and Fire Safety Governance groups.

Performance indicators: Safety Performance Indicators, Safety Investigation outcomes

(g) Flight Operations, Performance and Safety Committee (FLOPSC)
Chaired by the Head of Airport Operations, FLOPSC is responsible for;
• Oversight and review of Flight Operations.
• Review of Flight Performance and Airborne Safety Performance

Performance indicators: Safety Performance Indicators, Punctuality, Flight Operations changes

(i) AGL Change Control Group
Chaired by the Senior Airfield Transformation Manager, the AGL Change Control Group is responsible for;
• Review and authorise all AGL Change Management requests within the scope of the Airside Management of Change Procedure, in conjunction with the Risk and Change Steering Group

Performance indicators: AGL Change Management requests

(j) FOD Radar Governance
Chaired by the Head of Airside Operations, the FOD Radar Governance Group is responsible for;
• Monitor and review the performance of the FOD Radar system
• Review and manage all FOD Radar system change requests  
**Performance indicators:** FOD Radar Performance, FOD Radar system change requests

(k) Fire Safety Governance  
Chaired by the Chief Fire Officer, the Fire Safety Governance Group is responsible for:  
• Monitor compliance with strategies set by the HAL Fire Board  
• Drive local implementation of strategy and associated activity  
• Identify and manage local risks  
• Sign off local evacuation / contingency plans  
**Performance indicators:** HAL Fire Board Strategy compliance, Evacuation and Contingency Plans

(l) Local Safety Forums  
Chaired by each head of department, the local safety forums provide a platform for management and staff to review safety performance and to agree safety focus within each department. While the local safety forums predominantly focus on Occupational Health and Safety, Aerodrome Safety matters and associated safety performance is discussed at the forums and escalated to the ASSG as appropriate.

C.9.4 Governance Interfaces within Heathrow  
Aerodrome Safety requirements are also shared across a number of Heathrow forums outlined below:
- **Tunnel Board:** 6-weekly forum chaired by the Engineering & Asset Management Director and setting policy for the safe operation of Heathrow's tunnels, both landside and airside. This forum is attended by the Aerodrome Safety & Assurance Manager.

C.9.5 CAA Liaison Governance  
Aerodrome Safety is reviewed with the UK’s Civil Aviation Authority through governance liaison forums as described in Appendix 4. The forums are as follows:

**CAA / HAL / NATS Quarterly Meeting:**  
Chaired by the Director of Operations, this forum brings together senior representatives from CAA SRG (Aerodromes and Air Traffic Operations), HAL Airside Operations and NATS Heathrow to review safety performance, highlight potential risks and discuss future changes in either regulation or operations.

**HAL / CAA SRG Meeting**  
Chaired by the Senior Airfield Transformation Manager, this forum reviews aerodrome regulatory aspects of Heathrow’s operation in terms of infrastructure changes, approvals, notifications, safety incidents and investigations, and potential risks.

**HAL RFFS / CAA Meeting**  
Chaired by the Chief Fire Officer, this forum reviews RFFS regulatory aspects of Heathrow’s Fire Service, in terms of emergency incidents, changes, training and competence and potential risks.
In addition to the above, HAL actively participates in a number of consultation forums chaired by the CAA:

- **CAA GHOST** – A meeting of industry experts from ground handling, airlines, airports and regulatory bodies which meets quarterly to discuss current issues related to ground handling safety with a view to sharing good practice and influencing regulatory guidance materials.
  - CAA GHOST Sub-Group; Ground Damage
  - CAA GHOST Sub-Group; We are Safety
  - CAA GHOST Sub-Group; Human Factors
- **CAA UK Birdstrike Committee** – An annual meeting, chaired by CAA, includes attendees from the aviation and avian industries. Discussing the management of wildlife hazards, national data trends, regulatory issues, innovations, etc.
- **CAA Aeronautical Information Management (AIM) Meeting** – A quarterly meeting hosted by CAA (AIS - Kingsway) including NATS, Airlines, Airports, UK Flight Safety Committee and Airport Operators Association (AOA). Discussing issues related to the management of aeronautical information, safeguarding, obstacles, Aeronautical Information Publication (AIP) and NOTAMs amongst other items.
- **CAA Met Office User Forum** – An annual meeting hosted by CAA Met Authority, includes attendees from airlines, airports, regulator, NATS and UK Met Office. Discussing the provision of the regulated met services, performance, costs and R&D, amongst other items.
- **CAA Runway Safety Steering Group** – a 6 monthly meeting of CAA, airports, airlines, and ANSPs to review national trends and statistics, learn lessons from incidents, monitor regulatory developments.

### C.10 Improvement and Change Management

#### C.10.1 Continuous Improvement

The contents of the Aerodrome Manual and this manual are formally reviewed and re-issued every 12 months. The review takes into account any lessons learnt or recommendations on aerodrome safety management in the previous 6 months and accounts for changes to safety management during that period. Changes requiring publication in the intervening period are issued as a temporary amendment to the manuals, and are added to the next issue of the manuals.

#### C.10.2 Change Management

EASA 139/2014 sets clear requirements for Change Management within aerodrome safety management. Such requirements include the identification of changes, the assessment of hazards and risks associated with the changes, the introduction of mitigation measures to manage such changes, and the notification of the changes to the CAA. In certain circumstances, changes require prior approval from the CAA before the changes can be implemented. Further guidance on the management of changes in the UK are provided through CAP791, Procedures for Changes to Aerodrome Infrastructure.

Heathrow sets its aerodrome safety change management approach in Airside_ASSMS_ASOP_002_Change Management_v2.0. The accountability for change management rests with the Aerodrome Safety & Assurance Manager.

#### C.10.3 Compliance Monitoring

EASA Compliance Monitoring requirements are undertaken by the Safety & Assurance team within the Operations Directorate. The Head of Airside Safety & Assurance is responsible for Compliance Monitoring at Heathrow, reporting to the Director of Operations. The Safety & Assurance team are not involved in the day to day operation of the airfield.

HAL Operations are responsible for creating a Corrective Action Plan to deal with any Findings and Requirements made, which is governed through the Airside Safety Steering Group.

Further details in relation to Compliance Monitoring can be found in the EASA Compliance Monitoring Procedure.
D Applicable ASOPs and OSIs

Table 5 below highlights the ASOPs and OSIs that support the Aerodrome Safety Management System Manual.

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<tr>
<th>Section</th>
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<td>ASGrOps_OSI_041Minimum Induction Training for Staff Operating Airside</td>
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E References

3 Annex to 2014-12-R-ED Acceptable Means of Compliance (AMC) & Guidance Material (GM) to Authority, Organisation and Operations Requirements for Aerodromes
4 Aerodrome Manual ref Airside_ASSMS_AM_001
5 Health and Safety Improvement Standard – The Heathrow Health and Safety Management System
7 2015-001-R CS-ADR-DSN Issue 4
8 CAP 1168 Guidance Material for Organisations, Operations and Design Requirements for Aerodromes, V1.1

10 Heathrow Risk Management Policy 2012 12 02a

11 Airside_ASMS_ASOP_001_Hazard and Risk Management


13 Airside_QMS_ASOP_001_Document Management

14 Airside Operations Learning Standard, Airside_ASTrain_Standard_002_Learning Development

15 Airside Operations Training Plan, Airside_ASTrain_Plan_002_Learning and Development

16 Airside Operations Competency Framework, Airside_ASTrain_Plan_Airside Learning Plan_Form 1_Competency Framework

17 Airside Standard – Airside Driver Training (ADP) Schemes


19 Airside_ASSMS_ASOP_005 Mandatory Occurrence Reporting Requirements

20 ASSMS_OSI_065, Mandatory Occurrence Reporting (MOR) - (EU) 376/2014, 25th April 2016


22 Airside_ASSMS_ASOP_002_Change Management

23 EASA Compliance Monitoring Procedure, ASSMS_ASOP_014 Compliance Monitoring Procedure

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<td>ISSUE - following Operations restructure and addition of new Accountable Manager</td>
<td>11&lt;sup&gt;th&lt;/sup&gt; May 2018</td>
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<td>v4.2</td>
<td>Second draft following Org Change</td>
<td>03&lt;sup&gt;rd&lt;/sup&gt; August 2018</td>
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<td>v4.3</td>
<td>Final updates to Org Structure</td>
<td>10&lt;sup&gt;th&lt;/sup&gt; August 2018</td>
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<td>Update to ASD title</td>
<td>12&lt;sup&gt;th&lt;/sup&gt; September 2018</td>
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<td>17&lt;sup&gt;th&lt;/sup&gt; September 2018</td>
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<td>v5.1</td>
<td>Draft – changes following change in roles and addition of AIR</td>
<td>01&lt;sup&gt;st&lt;/sup&gt; March 2019</td>
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<tr>
<td>v5.2</td>
<td>Next draft</td>
<td>14&lt;sup&gt;th&lt;/sup&gt; March 2019</td>
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<tr>
<td>v5.3</td>
<td>Final Draft following further structural changes</td>
<td>02&lt;sup&gt;nd&lt;/sup&gt; May 2019</td>
</tr>
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<td>v6.0</td>
<td>ISSUE – changes to Org structure, accountabilities and addition of AIR</td>
<td>03&lt;sup&gt;rd&lt;/sup&gt; May 2019</td>
</tr>
</tbody>
</table>
### Appendix 1 - Quality Management Systems Requirements

Table H.1 below outlines how the requirements of BS EN ISO 9001:2015 are met by Heathrow’s Aerodrome Safety Management System.

<table>
<thead>
<tr>
<th>QMS Section</th>
<th>ASMS Section / Subsections</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context of the Organisation</td>
<td>C-1 – Regulations &amp; Guidance</td>
<td>Sets the regulatory requirements and guidelines within which Aerodrome Safety must be delivered</td>
</tr>
<tr>
<td>Leadership</td>
<td>C.4 – Policies, Organisation &amp; Accountabilities</td>
<td>Supported by the Aerodrome Manual, sets the commitment to safety, and the safety policy, organisation and safety accountabilities that assure the delivery of Aerodrome Safety at Heathrow</td>
</tr>
<tr>
<td></td>
<td>C.9 Performance &amp; Governance / Governance</td>
<td>Sets the authorities (Governance) that manage the planning, delivery, checking and improvement of Aerodrome Safety at Heathrow.</td>
</tr>
<tr>
<td>Planning</td>
<td>C.2 Hazard &amp; Risk Assessment</td>
<td>Sets how Aerodrome Safety risks are identified, assessed and managed</td>
</tr>
<tr>
<td></td>
<td>C.10.1 Continuous Improvement</td>
<td>Sets how improvements to the Aerodrome Safety Management System are planned and executed</td>
</tr>
<tr>
<td>Support</td>
<td>C.6 Training and Competence</td>
<td>Sets how Aerodrome Safety competence requirements are identified, planned and met by Heathrow Airport</td>
</tr>
<tr>
<td></td>
<td>C.5 Communication and Involvement</td>
<td>Sets how Heathrow Airport, Contracted Organisations and Airfield Partners are kept informed and up to date in terms of Aerodrome Safety, and how individual’s and company’s feedback relating to Aerodrome Safety is gained.</td>
</tr>
<tr>
<td></td>
<td>C.3 Procedures, Instructions and Controls</td>
<td>Sets how Aerodrome Safety documents, procedures and records are managed</td>
</tr>
<tr>
<td>Operation</td>
<td>C.3 Procedures, Instructions and Controls</td>
<td>Sets how Aerodrome Safety documents, procedures and records are managed</td>
</tr>
<tr>
<td></td>
<td>C.7 Emergency Orders and Business Continuity</td>
<td>Sets how response to Emergency Incidents and Contingency Plans are set and managed</td>
</tr>
<tr>
<td></td>
<td>C.4.4 Contracted Activities</td>
<td>Sets how activities managed through contractor organisations are set and managed</td>
</tr>
<tr>
<td></td>
<td>C.10.2 Change Management</td>
<td>Sets how changes impacting Aerodrome Safety are identified, assessed, reviewed, approved and implemented</td>
</tr>
<tr>
<td>Performance Evaluation</td>
<td>C.8 Incident Reporting and Investigation</td>
<td>Sets how Aerodrome Safety incidents and near misses are reported, reviewed and investigated towards recommending Safety Improvement actions and initiatives</td>
</tr>
<tr>
<td></td>
<td>C.10.3 Compliance Monitoring</td>
<td>Through the Compliance Office, sets the accountability for internal audit of all Aerodrome Safety areas</td>
</tr>
<tr>
<td>Improvement</td>
<td>C.8 Incident Reporting and Investigation</td>
<td>Sets how Aerodrome Safety incidents and near misses are reported, reviewed and investigated towards recommending Safety Improvement actions and initiatives</td>
</tr>
</tbody>
</table>
I Appendix 2 – Aerodrome Safety Regulatory Framework

[Diagram showing Aerodrome Regulatory Framework, including elements such as Convention of International Civil Aviation, UK Law, EASA / Certification, EC 216/2008, EDD 2017-021-R, and various standards and guidelines.]
## Appendix 3 – IR and AMC Safety Accountabilities mapping against Aerodrome Safety Roles and Organisations

### Table A.2.1 - Safety Accountabilities – Additional Aerodrome Operator Accountabilities (Annex III, ADR.OR Subpart C)

<table>
<thead>
<tr>
<th>Safety Accountability</th>
<th>IR / AMCs</th>
<th>Roles Accountable / Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerodrome Operator Responsibilities</td>
<td>IR ADR.OR.C.005</td>
<td>Key Safety Personnel as per Table 3, and further delegated through the Operations Leadership Team</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OR.C.005 (c)</td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>IR ADR.OR.C.015</td>
<td>Key Safety Personnel as per Table 3, and further delegated through the Operations Leadership Team</td>
</tr>
<tr>
<td>Findings and Corrective Actions</td>
<td>IR ADR.OR.C.020</td>
<td>Accountable Manager (Chief Operating Officer)</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OR.C.020 (b)</td>
<td>Director of Operations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
<tr>
<td>Immediate Reaction to a Safety Problem</td>
<td>IR ADR.OR.C.025</td>
<td>Accountable Manager (Chief Operating Officer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director of Operations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
<tr>
<td>Occurrence Reporting</td>
<td>IR ADR.OR.C.030</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OR.C.030</td>
<td></td>
</tr>
<tr>
<td>Prevention of Fire</td>
<td>IR ADR.OR.C.040</td>
<td>Safety Improvement Director</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OR.C.040</td>
<td>Head of Fire Safety Improvement</td>
</tr>
<tr>
<td>Use of Alcohol, psychoactive substances</td>
<td>IR ADR.OR.C.045</td>
<td>Safety Improvement Director</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OR.C.045</td>
<td></td>
</tr>
<tr>
<td>Safety Accountability</td>
<td>IR / AMCs</td>
<td>Roles Accountable / Responsible</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Safety Management: Safety Management System</td>
<td>IR ADR.OR.B.040 AMC1 ADR.OR.D.005 (b) (1)</td>
<td>Head of Airside Safety &amp; Assurance</td>
</tr>
<tr>
<td>Safety Policy</td>
<td>AMC1 ADR.OR.D.005 (b) (2)</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
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<tr>
<td>Hazard Identification</td>
<td>AMC1 ADR.OR.D.005 (b) (3)</td>
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<tr>
<td>Risk Assessment</td>
<td>AMC1 ADR.OR.D.005 (b) (4)</td>
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<tr>
<td>Safety Performance Monitoring and Measurement</td>
<td>AMC1 ADR.OR.D.005 (b) (5)</td>
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<tr>
<td>Change Management</td>
<td>AMC1 ADR.OR.B.040 (a);(b)</td>
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<td>Management System Continuous Improvement</td>
<td>AMC1 ADR.OR.D.005 (b) (6)</td>
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<tr>
<td>Safety Communication</td>
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<td>Management System Documentation</td>
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<td>Management System Manual</td>
<td>AMC1 ADR.OR.D.005 (c)</td>
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<tr>
<td>Distribution of rules and procedures</td>
<td>AMC2 ADR.OR.D.005 (c)</td>
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</tr>
<tr>
<td>Safety Management: Safety Management System Training</td>
<td>IR ADR.OR.D.005 AMC1 ADR.OR.D.005 (b)(8)</td>
<td>Head of Airside Safety &amp; Assurance</td>
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<td>Safety Management: Coordination of the Aerodrome Emergency Plan</td>
<td>IR ADR.OR.D.005 AMC1 ADR.OR.D.005 (b)(10)</td>
<td>Head of Airport Operations</td>
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<tr>
<td>Safety Management: Compliance Monitoring</td>
<td>IR ADR.OR.D.005 AMC1 ADR.OR.D.005 (b)(11)</td>
<td>Head of Airside Safety &amp; Assurance</td>
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<tr>
<td>Management of Aeronautical Data and Information</td>
<td>IR ADR.OR.D.007 AMC1 ADR.OR.D.007 (a) (b) (AMC not currently in use)</td>
<td>Head of Airside Safety &amp; Assurance</td>
</tr>
<tr>
<td>Contracted Activities</td>
<td>IR ADR.OR.D.010</td>
<td>Head of Airside Safety &amp; Assurance</td>
</tr>
</tbody>
</table>
| Personnel Requirements | IR ADR.OR.D.015  
AMC1 ADR.OR.D.015 (d) | Head of Airside Safety & Assurance  
Airside Regulation and Oversight Manager  
Airside Operations Learning Manager |
|------------------------|---------------------|-----------------------------------------------|
| Training and Proficiency Programmes:  
General  
Checking of Trainees  
Rules and Procedures  
Instructors / Assessors  
Personnel Records | IR ADR.OR.D.017  
AMC1 ADR.OR.D.017 (a) (b)  
AMC2 ADR.OR.D.017 (a) (b)  
AMC3 ADR.OR.D.017 (a) (b)  
AMC1 ADR.OR.D.017 (d)  
AMC1 ADR.OR.D.017 (e)  
(AMCs not currently in use) | Head of Airside Safety & Assurance  
Airside Regulation and Oversight Manager  
Airside Operations Learning Manager |
| Facilities Requirements | IR ADR.OR.D.020  
AMC1 ADR.OR.D.020 (c) | Director of Operations  
Engineering & Asset Management Director  
Head of Engineering |
| Coordination with Other Organisations | ADR.OR.D.025 | Head of Airside Safety & Assurance |
| Safety Programmes  
Aerodrome Safety Committees  
Hot Spots | ADR.OR.D.027  
AMC1 ADR.OR.D.027  
AMC2 ADR.OR.D.027 | Head of Airside Safety & Assurance  
Aerodrome Safety & Assurance Manager  
Head of Airside Operations |
| Safety Reporting System | ADR.OR.D.030  
AMC1 ADR.OR.D.030 (AMC not in use, EC 376/2014 used instead) | Head of Airside Safety & Assurance  
Aerodrome Safety & Assurance Manager |
| Record Keeping:  
Documentation to be Retained | ADR.OR.D.035  
AMC1 ADR.OR.D.035 | Head of Airside Safety & Assurance  
Aerodrome Safety & Assurance Manager |
| Record Keeping:  
Recording of Aircraft Movements | ADR.OR.D.035  
AMC2 ADR.OR.D.035 | Head of Airport Operations |
### Table A.2.3 - Safety Accountabilities – Aerodrome Manual (Annex III, ADR.OR Subpart E)

<table>
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<th>Roles Accountable / Responsible</th>
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<td>Aerodrome Manual</td>
<td>IR ADR.OR.E.005</td>
<td>Head of Airside Safety &amp; Assurance</td>
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<td>AMC1 ADR.OR.E.005</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
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<tr>
<td></td>
<td>AMC2 ADR.OR.E.005 (i) (2)</td>
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<tr>
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<td>AMC3 ADR.OR.E.005</td>
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<td>Documentation Requirements</td>
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<td>Head of Airside Safety &amp; Assurance</td>
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<td>Aerodrome Safety &amp; Assurance Manager</td>
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### Table A.2.4 - Safety Accountabilities – Aerodrome Data (Annex III, ADR.OPS Subpart A)

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<td>Aerodrome Data - General</td>
<td>IR ADR.OPS.A.005</td>
<td>Head of Airside Safety &amp; Assurance</td>
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<td>AMC1 ADR.OPS.A.005</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
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<td></td>
<td>Safeguarding and Compliance Manager</td>
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<td>Aerodrome Data - Condition of the movement area and related facilities</td>
<td>IR ADR.OPS.A.005</td>
<td>Head of Airside Operations</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OPS.A.005 Point (8)</td>
<td>Airfield Duty Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airside Safety Department personnel</td>
</tr>
<tr>
<td>Data Quality Requirements</td>
<td>IR ADR.OPS.A.010</td>
<td>Head of Airside Safety &amp; Assurance</td>
</tr>
<tr>
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<td>AMC1 ADR.OPS.A.010</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
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<tr>
<td></td>
<td>AMC2 ADR.OPS.A.010 (AMC not currently in use)</td>
<td>Safeguarding and Compliance Manager</td>
</tr>
<tr>
<td>Coordination between Aerodrome Operators and Providers of Aeronautical Services</td>
<td>IR ADR.OPS.A.015</td>
<td>Head of Airside Safety &amp; Assurance</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OPS.A.015</td>
<td>Aerodrome Safety &amp; Assurance Manager</td>
</tr>
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<td></td>
<td></td>
<td>Safeguarding and Compliance Manager</td>
</tr>
<tr>
<td>Safety Accountability</td>
<td>IR / AMCs</td>
<td>Roles Accountable / Responsible</td>
</tr>
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<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Aerodrome Emergency Planning</td>
<td>IR ADR.OPS.B.005&lt;br&gt;AMC1 ADR.OPS.B.005 (b)&lt;br&gt;AMC2 ADR.OPS.B.005 (b)&lt;br&gt;AMC1 ADR.OPS.B.005 (c)</td>
<td>Head of Airport Operations&lt;br&gt;Airside Contingency Planning Manager</td>
</tr>
<tr>
<td>Rescue and Firefighting Services</td>
<td>IR ADR.OPS.B.010&lt;br&gt;AMC1 ADR.OPS.B.010 (a) (2)&lt;br&gt;AMC2 ADR.OPS.B.010 (a) (2)&lt;br&gt;AMC3 ADR.OPS.B.010 (a) (2)&lt;br&gt;AMC4 ADR.OPS.B.010 (a) (2)&lt;br&gt;AMC5 ADR.OPS.B.010 (a) (2)&lt;br&gt;AMC6 ADR.OPS.B.010 (a) (2)&lt;br&gt;AMC1 ADR.OPS.B.010 (a) (4)&lt;br&gt;AMC1 ADR.OPS.B.010 (b) ; (c)&lt;br&gt;AMC2 ADR.OPS.B.010 (b) ; (c)&lt;br&gt;AMC3 ADR.OPS.B.010 (b) ; (c)</td>
<td>Chief Fire Officer&lt;br&gt;Deputy Chief Fire Officer&lt;br&gt;Assistant Chief Fire Officer&lt;br&gt;Airport Fire Service personnel</td>
</tr>
<tr>
<td>Monitoring and Inspection of Movement Area and Related Facilities: Pavements / Ground Checks AGL / Visual aids (airport) Obstacles</td>
<td>IR ADR.OPS.B.015&lt;br&gt;AMC1 ADR.OPS.B.015&lt;br&gt;AMC2 ADR.OPS.B.015</td>
<td>Head of Airside Operations&lt;br&gt;Airfield Duty Manager&lt;br&gt;Airside Safety Department personnel</td>
</tr>
<tr>
<td>Monitoring and Inspection of Movement Area and Related Facilities: AGL / Visual aids (off airport)</td>
<td>IR ADR.OPS.B.015&lt;br&gt;AMC1 ADR.OPS.B.015&lt;br&gt;AMC2 ADR.OPS.B.015</td>
<td>Head of Engineering&lt;br&gt;Airside Engineering Manager&lt;br&gt;Airside Systems Personnel</td>
</tr>
<tr>
<td>Monitoring and Inspection of Movement Area and Related Facilities: Visual aids (flight checks)</td>
<td>IR ADR.OPS.B.015&lt;br&gt;AMC1 ADR.OPS.B.015&lt;br&gt;AMC2 ADR.OPS.B.015</td>
<td>Head of Airside Safety &amp; Assurance&lt;br&gt;Aerodrome Safety &amp; Assurance Manager&lt;br&gt;Safeguarding and Compliance Manager</td>
</tr>
<tr>
<td>Wildlife Strike Hazard Reduction</td>
<td>IR ADR.OPS.B.020&lt;br&gt;AMC1 ADR.OPS.B.020</td>
<td>Head of Airside Operations&lt;br&gt;Airfield Duty Manager&lt;br&gt;Airside Safety Department personnel</td>
</tr>
<tr>
<td>Operation of Vehicles</td>
<td>IR ADR.OPS.B.025&lt;br&gt;AMC1 ADR.OPS.B.025</td>
<td>Head of Airside Safety &amp; Assurance&lt;br&gt;Airside Regulation and Oversight Manager</td>
</tr>
<tr>
<td>Classification: Public</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Surface Movement Guidance Control System</strong></td>
<td>AMC2 ADR.OPS.B.025</td>
<td>Airside Operations Learning Manager</td>
</tr>
<tr>
<td></td>
<td>IR ADR.OPS.B.030</td>
<td>NATS – Air Traffic Service Provider</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OPS.B.030</td>
<td></td>
</tr>
<tr>
<td><strong>Operations in Winter Conditions</strong></td>
<td>IR ADR.OPS.B.035</td>
<td>Head of Airside Operations</td>
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<tr>
<td></td>
<td></td>
<td>Winter Operations Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airfield Duty Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airside Safety Department personnel</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OPS.B.035</td>
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</tr>
<tr>
<td><strong>Night Operations</strong></td>
<td>IR ADR.OPS.B.040</td>
<td>Head of Airside Operations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airfield Duty Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airside Safety Department personnel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NATS – Air Traffic Service Provider</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OPS.B.040</td>
<td></td>
</tr>
<tr>
<td><strong>Low Visibility Operations</strong></td>
<td>IR ADR.OPS.B.045</td>
<td>Head of Airside Operations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airfield Duty Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airside Safety Department personnel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NATS – Air Traffic Service Provider</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OPS.B.045</td>
<td></td>
</tr>
<tr>
<td><strong>Operations in Adverse Weather Conditions</strong></td>
<td>IR ADR.OPS.B.050</td>
<td>Head of Airside Operations</td>
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<tr>
<td></td>
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<td>Airfield Duty Manager</td>
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<tr>
<td></td>
<td></td>
<td>Airside Safety Department personnel</td>
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<tr>
<td></td>
<td></td>
<td>Head of Safety and Standards</td>
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<td></td>
<td>Airside Operations Standards Manager</td>
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<td>AMC1 ADR.OPS.B.050</td>
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<tr>
<td><strong>Fuel Quality</strong></td>
<td>IR ADR.OR.OPS.B.055</td>
<td>Head of Ground Handling Strategy and Licensing</td>
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<tr>
<td></td>
<td></td>
<td>Ground Handling &amp; Fuel Manager</td>
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</tr>
<tr>
<td><strong>Visual Aids and Aerodrome Electrical Systems</strong></td>
<td>IR ADR.OR.OPS.B.065</td>
<td>Head of Engineering</td>
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<tr>
<td></td>
<td></td>
<td>Airside Engineering Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airside Systems Personnel</td>
</tr>
<tr>
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<td>AMC1 ADR.OR.OPS.B.065</td>
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</tr>
<tr>
<td><strong>Aerodrome Works Safety – Development Assurance</strong></td>
<td>IR ADR.OR.OPS.B.070</td>
<td>Head of Planning, Performance and Transformation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior Airfield Transformation Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Airfield Transformation Manager</td>
</tr>
<tr>
<td></td>
<td>AMC1 ADR.OR.OPS.B.070</td>
<td></td>
</tr>
<tr>
<td><strong>Aerodrome Works Safety – Works Approval, Planning and Coordination</strong></td>
<td>IR ADR.OR.OPS.B.070</td>
<td>Head of Airside Operations</td>
</tr>
<tr>
<td></td>
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<td>Airside Works Unit personnel</td>
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<td>AMC1 ADR.OR.OPS.B.070</td>
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<td>AMC2 ADR.OR.OPS.B.070</td>
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<td>AMC3 ADR.OR.OPS.B.070</td>
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### Aerodrome Works Safety – Works Management

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<tr>
<th>IR / AMCs</th>
<th>Roles Accountable / Responsible</th>
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<tr>
<td>IR ADR.OR.OPS.B.070 AMC1 ADR.OR.OPS.B.070</td>
<td>Head of Airside Operations  &lt;br&gt; Airfield Duty Manager  &lt;br&gt; Airside Safety Department personnel</td>
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<td>AMC2 ADR.OR.OPS.B.070 AMC3 ADR.OR.OPS.B.070</td>
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### Safeguarding of Aerodromes

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<tr>
<td>IR ADR.OR.OPS.B.075 AMC1 ADR.OR.OPS.B.075</td>
<td>Head of Airside Safety &amp; Assurance  &lt;br&gt; Aerodrome Safety &amp; Assurance Manager  &lt;br&gt; Safeguarding and Compliance Manager</td>
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### Marking and Lighting of Vehicles and other Mobile Objects

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<tr>
<td>IR ADR.OR.OPS.B.080 AMC1 ADR.OR.OPS.B.090</td>
<td>Head of Airside Safety &amp; Assurance  &lt;br&gt; Airside Operations Standards Manager</td>
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<tr>
<th>Safety Accountability</th>
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<tr>
<td>Aerodrome Maintenance - General</td>
<td>IR ADR.OPS.C.005 AMC1 ADR.OPS.C.005</td>
<td>Head of Engineering  &lt;br&gt; Airside Systems Personnel  &lt;br&gt; Civils Manager</td>
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<td>Pavements, other ground services, drainage:</td>
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<td>Runway Friction:</td>
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<tr>
<td>Runway Friction</td>
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<tr>
<td>Taxiway / Apron Pollutants</td>
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<tr>
<td>Pavements, other ground services, drainage:</td>
<td>IR ADR.OPS.C.010 AMC1 ADR.OPS.C.010</td>
<td>Head of Airside Operations  &lt;br&gt; Airfield Duty Manager  &lt;br&gt; Airside Safety Department personnel</td>
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<td>Runway Friction:</td>
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<td>Drainage</td>
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<tr>
<td>Visual Aids and Electrical Systems</td>
<td>IR ADR.OPS.C.015 AMC1 ADR.OPS.C.015</td>
<td>Head of Engineering  &lt;br&gt; Airside Engineering Manager  &lt;br&gt; Airside Systems Personnel</td>
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