



## Safety Management System

1<sup>st</sup> May 2024

ASSMS\_OSI\_065

Version 3.0

# Operational Safety Instruction

## Mandatory Occurrence Reporting

It is the responsibility of all employers to ensure that relevant OSIs are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in any doubt should consult their Supervisor or Manager.

### 1. Introduction

- 1.1 This Operational Safety Instruction (OSI) informs the airport community of procedures for the mandatory reporting of any accident, serious incident and occurrence at Heathrow Airport. Reporting is mandated by UK Reg (EU) No 376/2014 (UK Mandatory Occurrence Reporting Regulation), which requires the reporting of safety-related events involving UK airspace users.
- 1.2 This OSI forms part of Heathrow Airport Limited's (HAL) compliance with the following:
  - UK Reg (EU) No. 376/2014 (UK Mandatory Occurrence Reporting Regulation).
  - UK Reg (EU) No. 2015/1018 (the UK MOR Occurrences Regulation).
  - UK Reg (EU) No. 139/2014 (the UK Aerodromes Regulation).
  - CAA 139/2014 Aerodromes AMC GM ADR.OR.D.005 (b)(3) Management system.
- 1.3 This OSI must be read in conjunction with the guidance material for UK Reg (EU) No 376/2014 (UK Mandatory Occurrence Reporting Regulation) found using the following link: <https://www.caa.co.uk/uk-regulations/aviation-safety/basic-regulation-the-implementing-rules-and-uk-cao-amc-gm-cs/occurrence-reporting/>.
- 1.4 Red bars have been added to the left-hand side of this document to draw the reader's attention to where changes or clarifications have been incorporated.
- 1.5 ASGrOps\_OSI\_065 Mandatory Occurrence Reporting v2.0 is hereby cancelled.



## 2. Definitions

Abbreviation	Description
CAA	Civil Aviation Authority
ECCAIRS	European Co-ordination Centre for Aviation Incident Reporting Systems
FOD	Foreign Object Debris
GSE	Ground Service Equipment
HAL	Heathrow Airport Limited
MOR	Mandatory Occurrence Report

## 3. Regulations

### 3.1 What needs to be reported:

The annexes of implementing regulation UK Reg (EU) 2015/1018 (UK Mandatory Occurrence Reporting Regulation) lists classifying occurrences in civil aviation to be mandatorily reported. This includes but **is not limited to**:

- 3.1.1 Occurrences related to the operations of the aircraft.
- 3.1.2 Occurrences related to technical conditions, maintenance and repair of the aircraft.
- 3.1.3 Occurrences related to air navigation services and facilities.
- 3.1.4 Occurrences related to aerodromes and ground services.
- 3.1.5 Occurrences related to aircraft other than complex motor-powered aircraft, including sailplanes and lighter-than-air vehicles.

More detail into what needs to be reported can be found in [Appendix A](#) of this OSI.

### 3.2 Who can report MORs:

UK Reg (EU) No. 376/2014 (UK Mandatory Occurrence Reporting Regulation) provides a list of designated persons that must report occurrences per MOR schemes. This includes but **is not limited to**:

- Pilots,
- Engineers,
- Design/manufacturing/maintenance/airworthiness personnel,
- Air Traffic Service / Air Navigation Services personnel,
- Aerodrome personnel,
- Ground handling personnel,
- Catering personnel,
- Cargo personnel,
- Cleaning personnel,
- Refuelling personnel,



*Note: This list is non-exhaustive, and the reporting obligations are based on the occurrence to be reported—a detailed list can be found in the relevant regulation (See Section 3.3).*

**3.3** More information on the regulations and the UK CAA guidance material for said regulations can be found using the following link: <https://www.caa.co.uk/uk-regulations/aviation-safety/basic-regulation-the-implementing-rules-and-uk-cao-amc-gm-cs/occurrence-reporting/>

**3.4 How to report occurrences:**

Individuals and organisations should submit Mandatory Occurrence Reports (MORs) via their own internal reporting system. Any Heathrow related MORs must be reported to Airside Operations.

If this is not possible, individuals and organisations can submit Mandatory Occurrence Reports (MORs) using the ECCAIRS2 [Aviation Reporting Portal](#) provided by the European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS). The portal is available to all those working in the aviation industry and the general public.

#### 4. Reporting Incidents to Heathrow

**4.1** Operating companies are reminded that, in addition to their responsibilities under existing OSI's and the regulations in Section 1.3, they must also report the following incidents directly to Airfield Operations:

- Collisions between an aircraft and other obstacles (including vehicles).
- Wildlife strike, or evidence of wildlife strike.
- Exceptional or unusual Foreign Object Debris on the movement area which has, or could have, endangered an aircraft.
- Push-back or taxi interference by vehicle, equipment or person.
- Reports of jet blast.
- Fuel spillages.

**4.2** Operating companies must share all information for reportable incidents that occur on the ground at Heathrow during the initial (take-off) or final (approach & landing) phases of flight from or to Heathrow.

**4.3** Copies of safety reports or Mandatory Occurrence Reports (ECCAIRS2 [Aviation Reporting Portal](#)) filed by operating companies must be sent to the Aerodrome Standards and Assurance team at [airside\\_safety@heathrow.com](mailto:airside_safety@heathrow.com)



- 4.4 HAL also encourages voluntary safety reports and observations via the 'Close Call Reporting' feature of the Airport Community App or by contacting Aerodrome Standards and Assurance Team at: [airside\\_safety@heathrow.com](mailto:airside_safety@heathrow.com).

## 5. Enquiries

Any enquiries on this OSI should be directed to the Aerodrome Standards and Assurance Team at: [airside\\_safety@heathrow.com](mailto:airside_safety@heathrow.com).

## 6. References

UK Reg (EU) No. 376/2014 (UK Mandatory Occurrence Reporting Regulation)

UK Reg (EU) No. 2015/1018 (the UK MOR Occurrences Regulation)

UK Reg (EU) No. 139/2014 (the UK Aerodromes Regulation)

CAA 139/2014 Aerodromes AMC GM ADR.OR.D.005 (b)(3) Management system.

UK Guidance Material for Regulation (EU) No. 376/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018

Further information and the referenced regulations can be found using the following link:

<https://www.caa.co.uk/uk-regulations/aviation-safety/basic-regulation-the-implementing-rules-and-uk-cao-amc-gm-cs/occurrence-reporting/>



## Document Data

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## Document History

Revision	Description of Change	Date
v1.0	Original to new template	11 <sup>th</sup> August 2017
v2.0	Update team names and requirements to send copies of MOR to S&A Team	09 <sup>th</sup> December 2019
v3.0	Full document review with updates to regulations and formatting changes. More detail has been included on what needs to be reported and who can report MORs. Updated process on voluntary safety reports and observations. Added UK Reg (EU) No. 2015/1018 under Appendix A.	1 <sup>st</sup> May 2024



## Appendix A: UK Reg (EU) No. 2015/1018

### ANNEX I

#### OCCURRENCES RELATED TO THE OPERATION OF THE AIRCRAFT

*Remark:* This Annex is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

#### 1. AIR OPERATIONS

##### 1.1. Flight preparation

- (1) Use of incorrect data or erroneous entries into equipment used for navigation or performance calculations which has or could have endangered the aircraft, its occupants or any other person.
- (2) Carriage or attempted carriage of dangerous goods in contravention of applicable legislations including incorrect labelling, packaging and handling of dangerous goods.

##### 1.2. Aircraft preparation

- (1) Incorrect fuel type or contaminated fuel.
- (2) Missing, incorrect or inadequate De-icing/Anti-icing treatment.

##### 1.3. Take-off and landing

- (1) Taxiway or runway excursion.
- (2) Actual or potential taxiway or runway incursion.
- (3) Final Approach and Take-off Area (FATO) incursion.
- (4) Any rejected take-off.
- (5) Inability to achieve required or expected performance during take-off, go-around or landing.
- (6) Actual or attempted take-off, approach or landing with incorrect configuration setting.
- (7) Tail, blade/wingtip or nacelle strike during take-off or landing.
- (8) Approach continued against air operator stabilised approach criteria.



- (9) Continuation of an instrument approach below published minimums with inadequate visual references.
- (10) Precautionary or forced landing.
- (11) Short and long landing.
- (12) Hard landing.

#### 1.4. **Any phase of flight**

- (1) Loss of control.
- (2) Aircraft upset, exceeding normal pitch attitude, bank angle or airspeed inappropriate for the conditions.
- (3) Level bust.
- (4) Activation of any flight envelope protection, including stall warning, stick shaker, stick pusher and automatic protections.
- (5) Unintentional deviation from intended or assigned track of the lowest of twice the required navigation performance or 10 nautical miles.
- (6) Exceedance of aircraft flight manual limitation.
- (7) Operation with incorrect altimeter setting.
- (8) Jet blast or rotor and prop wash occurrences which have or could have endangered the aircraft, its occupants or any other person.
- (9) Misinterpretation of automation mode or of any flight deck information provided to the flight crew which has or could have endangered the aircraft, its occupants or any other person.

#### 1.5. **Other types of occurrences**

- (1) Unintentional release of cargo or other externally carried equipment.
- (2) Loss of situational awareness (including environmental, mode and system awareness, spatial disorientation, and time horizon).
- (3) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.



## 2. TECHNICAL OCCURRENCES

### 2.1. Structure and systems

- (1) Loss of any part of the aircraft structure in flight.
- (2) Loss of a system.
- (3) Loss of redundancy of a system.
- (4) Leakage of any fluid which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or which has or could have endangered the aircraft, its occupants or any other person.
- (5) Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution.
- (6) Malfunction or defect of any indication system when this results in misleading indications to the crew.
- (7) Abnormal functioning of flight controls such as asymmetric or stuck/jammed flight controls (for example: lift (flaps/slats), drag (spoilers), attitude control (ailerons, elevators, rudder) devices).

### 2.2. Propulsion (including engines, propellers and rotor systems) and auxiliary power units (APUs)

- (1) Failure or significant malfunction of any part or controlling of a propeller, rotor or powerplant.
- (2) Damage to or failure of main/tail rotor or transmission and/or equivalent systems.
- (3) Flameout, in-flight shutdown of any engine or APU when required (for example: ETOPS (Extended range Twin engine aircraft Operations), MEL (Minimum Equipment List)).
- (4) Engine operating limitation exceedance, including overspeed or inability to control the speed of any highspeed rotating component (for example: APU, air starter, air cycle machine, air turbine motor, propeller or rotor).
- (5) Failure or malfunction of any part of an engine, powerplant, APU or transmission resulting in any one or more of the following:
  - (a) thrust-reversing system failing to operate as commanded;
  - (b) inability to control power, thrust or rpm (revolutions per minute);





(c) non-containment of components/debris.

3. INTERACTION WITH AIR NAVIGATION SERVICES (ANS) AND AIR TRAFFIC MANAGEMENT (ATM)
  - (1) Unsafe ATC (Air Traffic Control) clearance.
  - (2) Prolonged loss of communication with ATS (Air Traffic Service) or ATM Unit.
  - (3) Conflicting instructions from different ATS Units potentially leading to a loss of separation.
  - (4) Misinterpretation of radio-communication which has or could have endangered the aircraft, its occupants or any other person.
  - (5) Intentional deviation from ATC instruction which has or could have endangered the aircraft, its occupants or any other person.
  
4. EMERGENCIES AND OTHER CRITICAL SITUATIONS
  - (1) Any event leading to the declaration of an emergency ('Mayday' or 'PAN call').
  - (2) Any burning, melting, smoke, fumes, arcing, overheating, fire or explosion.
  - (3) Contaminated air in the cockpit or in the passenger compartment which has or could have endangered the aircraft, its occupants or any other person.
  - (4) Failure to apply the correct non-normal or emergency procedure by the flight or cabin crew to deal with an emergency.
  - (5) Use of any emergency equipment or non-normal procedure affecting in-flight or landing performance.
  - (6) Failure of any emergency or rescue system or equipment which has or could have endangered the aircraft, its occupants or any other person.
  - (7) Uncontrollable cabin pressure.
  - (8) Critically low fuel quantity or fuel quantity at destination below required final reserve fuel.
  - (9) Any use of crew oxygen system by the crew.
  - (10) Incapacitation of any member of the flight or cabin crew that results in the reduction below the minimum certified crew complement.





- (11) Crew fatigue impacting or potentially impacting their ability to perform safely their flight duties.

## 5. EXTERNAL ENVIRONMENT AND METEOROLOGY

- (1) A collision or a near collision on the ground or in the air, with another aircraft, terrain or obstacle<sup>(1)</sup>.
- (2) ACAS RA (Airborne Collision Avoidance System, Resolution Advisory).
- (3) Activation of genuine ground collision system such as GPWS (Ground Proximity Warning System)/TAWS (Terrain Awareness and Warning System) 'warning'.
- (4) Wildlife strike including bird strike.
- (5) Foreign object damage/debris (FOD).
- (6) Unexpected encounter of poor runway surface conditions.
- (7) Wake-turbulence encounters.
- (8) Interference with the aircraft by firearms, fireworks, flying kites, laser illumination, high powered lights, lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (9) A lightning strike which resulted in damage to the aircraft or loss or malfunction of any aircraft system.
- (10) A hail encounter which resulted in damage to the aircraft or loss or malfunction of any aircraft system.
- (11) Severe turbulence encounter or any encounter resulting in injury to occupants or deemed to require a 'turbulence check' of the aircraft.
- (12) A significant wind shear or thunderstorm encounter which has or could have endangered the aircraft, its occupants or any other person.
- (13) Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any aircraft system.
- (14) Volcanic ash encounter.

## 6. SECURITY

- (1) Bomb threat or hijack.



- (2) Difficulty in controlling intoxicated, violent or unruly passengers.
- (3) Discovery of a stowaway.

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(1) Obstacle includes vehicle.



## ANNEX II

## OCCURRENCES RELATED TO TECHNICAL CONDITIONS, MAINTENANCE AND REPAIR OF THE AIRCRAFT

### 1. MANUFACTURING

Products, parts or appliances released from the production organisation with deviations from applicable design data that could lead to a potential unsafe condition as identified with the holder of the type-certificate or design approval.

### [F12](#). DESIGN

Any failure, malfunction, defect or other occurrence related to a product, part, or appliance which has resulted in or may result in an unsafe condition.

*Remark:* This list is applicable to occurrences occurring on a product, part, or appliance covered by the type-certificate, restricted type-certificate, supplemental type-certificate, [\[F1UKTSO\]](#) authorisation, major repair design approval or any other relevant approval deemed to have been issued under Commission Regulation (EU) No 748/2012(1).

#### Textual Amendments

**F1** Words in Annex 2 para. 2 substituted (31.12.2020) by [The Aviation Safety \(Amendment etc.\) \(EU Exit\) Regulations 2019 \(S.I. 2019/645\)](#), regs. 1, **425** (with [Sch. 3](#)) (as amended by [S.I. 2019/1098](#), regs. 1(3), 12); [2020 c. 1, Sch. 5 para. 1\(1\)](#)

### 3. MAINTENANCE AND CONTINUING AIRWORTHINESS MANAGEMENT

- (1) Serious structural damage (for example: cracks, permanent deformation, delamination, debonding, burning, excessive wear, or corrosion) found during maintenance of the aircraft or component.
- (2) Serious leakage or contamination of fluids (for example: hydraulic, fuel, oil, gas or other fluids).
- (3) Failure or malfunction of any part of an engine or powerplant and/or transmission resulting in any one or more of the following:
  - (a) non-containment of components/debris;
  - (b) failure of the engine mount structure.
- (4) Damage, failure or defect of propeller, which could lead to in-flight separation of the propeller or any major portion of the propeller and/or malfunctions of the propeller control.





- (5) Damage, failure or defect of main rotor gearbox/attachment, which could lead to in-flight separation of the rotor assembly and/or malfunctions of the rotor control.
- (6) Significant malfunction of a safety-critical system or equipment including emergency system or equipment during maintenance testing or failure to activate these systems after maintenance.
- (7) Incorrect assembly or installation of components of the aircraft found during an inspection or test procedure not intended for that specific purpose.
- (8) Wrong assessment of a serious defect, or serious non-compliance with MEL and Technical logbook procedures.
- (9) Serious damage to Electrical Wiring Interconnection System (EWIS).
- (10) Any defect in a life-controlled critical part causing retirement before completion of its full life.
- (11) The use of products, components or materials, from unknown, suspect origin, or unserviceable critical components.
- (12) Misleading, incorrect or insufficient applicable maintenance data or procedures that could lead to significant maintenance errors, including language issue.
- (13) Incorrect control or application of aircraft maintenance limitations or scheduled maintenance.
- (14) Releasing an aircraft to service from maintenance in case of any non-compliance which endangers the flight safety.
- (15) Serious damage caused to an aircraft during maintenance activities due to incorrect maintenance or use of inappropriate or unserviceable ground support equipment that requires additional maintenance actions.
- (16) Identified burning, melting, smoke, arcing, overheating or fire occurrences.
- (17) Any occurrence where the human performance, including fatigue of personnel, has directly contributed to or could have contributed to an accident or a serious incident.
- (18) Significant malfunction, reliability issue, or recurrent recording quality issue affecting a flight recorder system (such as a flight data recorder system, a data link recording system or a cockpit voice recorder system) or lack of information needed to ensure the serviceability of a flight recorder system.



- (1) Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations ([OJ L 224, 21.8.2012, p. 1](#)).



## ANNEX III

**OCCURRENCES RELATED TO AIR NAVIGATION SERVICES AND FACILITIES**

*Remark:* This Annex is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

## 1. AIRCRAFT-RELATED OCCURRENCES

- (1) A collision or a near collision on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle(1), including near-controlled flight into terrain (near CFIT).
- (2) Separation minima infringement(2).
- (3) Inadequate separation(3).
- (4) ACAS RAs.
- (5) Wildlife strike including bird strike.
- (6) Taxiway or runway excursion.
- (7) Actual or potential taxiway or runway incursion.
- (8) Final Approach and Take-off Area (FATO) incursion.
- (9) Aircraft deviation from ATC clearance.
- (10) Aircraft deviation from applicable air traffic management (ATM) regulation:
  - (a) aircraft deviation from applicable published ATM procedures;
  - (b) airspace infringement including unauthorised penetration of airspace;
  - (c) deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulations.
- (11) Call sign confusion related occurrences.

## 2. DEGRADATION OR TOTAL LOSS OF SERVICES OR FUNCTIONS

- (1) Inability to provide ATM services or to execute ATM functions:
  - (a) inability to provide air traffic services or to execute air traffic services functions;



- (b) inability to provide airspace management services or to execute airspace management functions;
  - (c) inability to provide air traffic flow management and capacity services or to execute air traffic flow management and capacity functions.
- (2) Missing or significantly incorrect, corrupted, inadequate or misleading information from any support service<sup>(4)</sup>, including relating to poor runway surface conditions.
  - (3) Failure of communication service.
  - (4) Failure of surveillance service.
  - (5) Failure of data processing and distribution function or service.
  - (6) Failure of navigation service.
  - (7) Failure of ATM system security which had or could have a direct negative impact on the safe provision of service.
  - (8) Significant ATS sector/position overload leading to a potential deterioration in service provision.
  - (9) Incorrect receipt or interpretation of significant communications, including lack of understanding of the language used, when this had or could have a direct negative impact on the safe provision of service.
  - (10) Prolonged loss of communication with an aircraft or with other ATS unit.

### 3. OTHER OCCURRENCES

- (1) Declaration of an emergency ('Mayday' or 'PAN' call).
- (2) Significant external interference with Air Navigation Services (for example radio broadcast stations transmitting in the FM band, interfering with ILS (instrument landing system), VOR (VHF Omni Directional Radio Range) and communication).
- (3) Interference with an aircraft, an ATS unit or a radio communication transmission including by firearms, fireworks, flying kites, laser illumination, high-powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (4) Fuel dumping.
- (5) Bomb threat or hijack.
- (6) Fatigue impacting or potentially impacting the ability to perform safely the air navigation or air traffic duties.







(7) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

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- (1) Obstacle includes vehicle.
  - (2) This refers to a situation in which prescribed separation minima were not maintained between aircraft or between aircraft and airspace to which separation minima is prescribed.
  - (3) In the absence of prescribed separation minima, a situation in which aircraft were perceived to pass too close to each other for pilots to ensure safe separation.
  - (4) For example: air traffic service (ATS), automatic terminal information service (ATIS), meteorological services, navigation databases, maps, charts, aeronautical information service (AIS), manuals.



## ANNEX IV

**OCCURRENCES RELATED TO AERODROMES AND GROUND SERVICES**

## 1. SAFETY MANAGEMENT OF AN AERODROME

*Remark:* This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

1.1. **Aircraft- and obstacle-related occurrences**

- (1) A collision or near collision, on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle(1).
- (2) Wildlife strike including bird strike.
- (3) Taxiway or runway excursion.
- (4) Actual or potential taxiway or runway incursion.
- (5) Final Approach and Take-off Area (FATO) incursion or excursion.
- (6) Aircraft or vehicle failure to follow clearance, instruction or restriction while operating on the movement area of an aerodrome (for example: wrong runway, taxiway or restricted part of an aerodrome).
- (7) Foreign object on the aerodrome movement area which has or could have endangered the aircraft, its occupants or any other person.
- (8) Presence of obstacles on the aerodrome or in the vicinity of the aerodrome which are not published in the AIP (Aeronautical Information Publication) or by NOTAM (Notice to Airmen) and/or that are not marked or lighted properly.
- (9) Push-back, power-back or taxi interference by vehicle, equipment or person.
- (10) Passengers or unauthorised person left unsupervised on apron.
- (11) Jet blast, rotor down wash or propeller blast effect.
- (12) Declaration of an emergency ('Mayday' or 'PAN' call).



## 1.2. Degradation or total loss of services or functions

- (1) Loss or failure of communication between:
  - (a) aerodrome, vehicle or other ground personnel and air traffic services unit or apron management service unit;
  - (b) apron management service unit and aircraft, vehicle or air traffic services unit.
- (2) Significant failure, malfunction or defect of aerodrome equipment or system which has or could have endangered the aircraft or its occupants.
- (3) Significant deficiencies in aerodrome lighting, marking or signs.
- (4) Failure of the aerodrome emergency alerting system.
- (5) Rescue and firefighting services not available according to applicable requirements.

## 1.3. Other occurrences

- (1) Fire, smoke, explosions in aerodrome facilities, vicinities and equipment which has or could have endangered the aircraft, its occupants or any other person.
- (2) Aerodrome security related occurrences (for example: unlawful entry, sabotage, bomb threat).
- (3) Absence of reporting of a significant change in aerodrome operating conditions which has or could have endangered the aircraft, its occupants or any other person.
- (4) Missing, incorrect or inadequate de-icing/anti-icing treatment.
- (5) Significant spillage during fuelling operations.
- (6) Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen, nitrogen, oil and potable water).
- (7) Failure to handle poor runway surface conditions.
- (8) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

## 2. GROUND HANDLING OF AN AIRCRAFT

*Remark:* This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of



activities to which they are linked in the list.

### 2.1. **Aircraft- and aerodrome-related occurrences**

- (1) A collision or near collision, on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle<sup>(2)</sup>.
- (2) Runway or taxiway incursion.
- (3) Runway or taxiway excursion.
- (4) Significant contamination of aircraft structure, systems and equipment arising from the carriage of baggage, mail or cargo.
- (5) Push-back, power-back or taxi interference by vehicle, equipment or person.
- (6) Foreign object on the aerodrome movement area which has or could have endangered the aircraft, its occupants or any other person.
- (7) Passengers or unauthorised person left unsupervised on apron.
- (8) Fire, smoke, explosions in aerodrome facilities, vicinities and equipment which has or could have endangered the aircraft, its occupants or any other person.
- (9) Aerodrome security-related occurrences (for example: unlawful entry, sabotage, bomb threat).

### 2.2. **Degradation or total loss of services or functions**

- (1) Loss or failure of communication with aircraft, vehicle, air traffic services unit or apron management service unit.
- (2) Significant failure, malfunction or defect of aerodrome equipment or system which has or could have endangered the aircraft or its occupants.
- (3) Significant deficiencies in aerodrome lighting, marking or signs.

### 2.3. **Ground handling specific occurrences**

- (1) Incorrect handling or loading of passengers, baggage, mail or cargo, likely to have a significant effect on aircraft mass and/or balance (including significant errors in loadsheet calculations).
- (2) Boarding equipment removed leading to endangerment of aircraft occupants.





- (3) Incorrect stowage or securing of baggage, mail or cargo likely in any way to endanger the aircraft, its equipment or occupants or to impede emergency evacuation.
  - (4) Transport, attempted transport or handling of dangerous goods which resulted or could have resulted in the safety of the operation being endangered or led to an unsafe condition (for example: dangerous goods incident or accident as defined in the ICAO Technical Instructions<sup>(3)</sup>).
  - (5) Non-compliance on baggage or passenger reconciliation.
  - (6) Non-compliance with required aircraft ground handling and servicing procedures, especially in de-icing, refuelling or loading procedures, including incorrect positioning or removal of equipment.
  - (7) Significant spillage during fuelling operations.
  - (8) Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance or structural strength.
  - (9) Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen, nitrogen, oil and potable water).
  - (10) Failure, malfunction or defect of ground equipment used for ground handling, resulting into damage or potential damage to the aircraft (for example: tow bar or GPU (Ground Power Unit)).
  - (11) Missing, incorrect or inadequate de-icing/anti-icing treatment.
  - (12) Damage to aircraft by ground handling equipment or vehicles including previously unreported damage.
  - (13) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.
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- (1) Obstacle includes vehicle.
  - (2) Obstacle includes vehicle.
  - (3) Technical Instructions For The Safe Transport of Dangerous Goods by Air (ICAO — Doc 9284).



## ANNEX V

**OCCURRENCES RELATED TO AIRCRAFT OTHER THAN COMPLEX MOTOR-POWERED AIRCRAFT, INCLUDING SAILPLANES AND LIGHTER-THAN-AIR VEHICLES**

For the purposes of this Annex:

- (a) 'Aircraft other than complex motor-powered aircraft' means any aircraft other than that defined in Article 3(j) of Regulation (EC) No 216/2008;
- (b) 'Sailplane' has the meaning assigned in Article 2(117) of Commission Implementing Regulation (EU) No 923/2012(1);
- (c) 'Lighter-than-air vehicles' has the meaning assigned in point ML10 of the section 'Definitions of terms used in this list' of the Annex to Directive 2009/43/EC of the European Parliament and of the Council(2).

**1. AIRCRAFT OTHER THAN COMPLEX MOTOR-POWERED AIRCRAFT EXCLUDING SAILPLANES AND LIGHTER-THAN-AIR VEHICLES**

*Remark:* This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

**1.1. Air operations**

- (1) Unintentional loss of control.
- (2) Landing outside of intended landing area.
- (3) Inability or failure to achieve required aircraft performance expected in normal conditions during take-off, climb or landing.
- (4) Runway incursion
- (5) Runway excursion.
- (6) Any flight which has been performed with an aircraft which was not airworthy, or for which flight preparation was not completed, which has or could have endangered the aircraft, its occupants or any other person.



(7) Unintended flight into IMC (Instrument Meteorological Conditions) conditions of aircraft not IFR (Instrument flight rules) certified, or a pilot not qualified for IFR, which has or could have endangered the aircraft, its occupants or any other person.

(8) Unintentional release of cargo<sup>(3)</sup>.

## 1.2. Technical occurrences

(1) Abnormal severe vibration (for example: aileron or elevator 'flutter', or of propeller).

(2) Any flight control not functioning correctly or disconnected.

(3) A failure or substantial deterioration of the aircraft structure.

(4) A loss of any part of the aircraft structure or installation in flight.

(5) A failure of an engine, rotor, propeller, fuel system or other essential system.

(6) Leakage of any fluid which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or risk to occupants.

## 1.3. Interaction with air navigation services and air traffic management

(1) Interaction with air navigation services (for example: incorrect services provided, conflicting communications or deviation from clearance) which has or could have endangered the aircraft, its occupants or any other person.

(2) Airspace infringement.

## 1.4. Emergencies and other critical situations

(1) Any occurrence leading to an emergency call.

(2) Fire, explosion, smoke, toxic gases or toxic fumes in the aircraft.

(3) Incapacitation of the pilot leading to inability to perform any duty.

## 1.5. External environment and meteorology

(1) A collision on the ground or in the air, with another aircraft, terrain or obstacle<sup>(4)</sup>.

(2) A near collision, on the ground or in the air, with another aircraft, terrain or obstacle<sup>(4)</sup> requiring an emergency avoidance manoeuvre to avoid a collision.



- (3) Wildlife strike including bird strike which resulted in damage to the aircraft or loss or malfunction of any essential service.
- (4) Interference with the aircraft by firearms, fireworks, flying kites, laser illumination, high powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (5) A lightning strike resulting in damage to or loss of functions of the aircraft.
- (6) Severe turbulence encounter which resulted in injury to aircraft occupants or in the need for a post-flight turbulence damage check of the aircraft.
- (7) Icing including carburettor icing which has or could have endangered the aircraft, its occupants or any other person.

## 2. SAILPLANES (GLIDERS)

*Remark:* This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.

### 2.1. Air operations

- (1) Unintentional loss of control.
- (2) An occurrence where the sailplane pilot was unable to release either the winch cable or the aerotow rope and had to do so using emergency procedures.
- (3) Any release of the winch cable or the aerotow rope if the release has or could have endangered the sailplane, its occupants or any other person.
- (4) In the case of a powered sailplane, an engine failure during take-off.
- (5) Any flight which has been performed with a sailplane which was not airworthy, or for which an incomplete flight preparation has or could have endangered the sailplane, its occupants or any other person.

### 2.2. Technical occurrences

- (1) Abnormal severe vibration (for example: aileron or elevator 'flutter', or of propeller).
- (2) Any flight control not functioning correctly or disconnected.
- (3) A failure or substantial deterioration of the sailplane structure.





- (4) A loss of any part of the sailplane structure or installation in flight.

### 2.3. Interaction with air navigation services and air traffic management

- (1) Interaction with air navigation services (for example: incorrect services provided, conflicting communications or deviation from clearance) which has or could have endangered the sailplane, its occupants or any other person.
- (2) Airspace infringements.

### 2.4. Emergencies and other critical situations

- (1) Any occurrence leading to an emergency call.
- (2) Any situation where no safe landing area remains available.
- (3) Fire, explosion, smoke, or toxic gases or fumes in the sailplane.
- (4) Incapacitation of the pilot leading to inability to perform any duty.

### 2.5. External environment and meteorology

- (1) A collision on the ground or in the air, with an aircraft, terrain or obstacle<sup>(5)</sup>.
- (2) A near collision, on the ground or in the air, with an aircraft, terrain or obstacle<sup>(5)</sup> requiring an emergency avoidance manoeuvre to avoid a collision.
- (3) Interference with the sailplane by firearms, fireworks, flying kites, laser illumination, high powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (4) A lightning strike resulting in damage to the sailplane.

## 3. LIGHTER-THAN-AIR VEHICLES (BALLOONS AND AIRSHIPS)

*Remark:* This Section is structured in such a way that the pertinent occurrences are linked with categories of activities during which they are normally observed, according to experience, in order to facilitate the reporting of those occurrences. However, this presentation must not be understood as meaning that occurrences must not be reported in case they take place outside the category of activities to which they are linked in the list.



### 3.1. **Air operations**

- (1) Any flight which has been performed with a lighter-than-air vehicle which was not airworthy, or for which an incomplete flight preparation has or could have endangered the lighter-than-air vehicle, its occupants or any other person.
- (2) Unintended permanent extinction of the pilot light.

### 3.2. **Technical occurrences**

- (1) Failure of any of the following parts or controls: dip tube on fuel cylinder, envelope pulley, control line, tether rope, valve seal leak on burner, valve seal leak on fuel cylinder, carabiner, damage to fuel line, lifting gas valve, envelope or ballonnet, blower, pressure relief valve (gas balloon), winch (tethered gas balloons).
- (2) Significant leakage or loss of lifting gas (for example: porosity, unseated lifting gas valves).

### 3.3. **Interaction with air navigation services and air traffic management**

- (1) Interaction with air navigation services (for example: incorrect services provided, conflicting communications or deviation from clearance) which has or could have endangered the lighter-than-air vehicle, its occupants or any other person.
- (2) Airspace infringement.

### 3.4. **Emergencies and other critical situations**

- (1) Any occurrence leading to an emergency call.
- (2) Fire, explosion, smoke or toxic fumes in the lighter-than-air vehicle (beyond the normal operation of the burner).
- (3) Lighter-than-air vehicle's occupants ejected from basket or gondola.
- (4) Incapacitation of the pilot leading to inability to perform any duty.
- (5) Unintended lift or drag of ground crew, leading to fatality or injury of a person.

### 3.5. **External environment and meteorology**

- (1) A collision or near collision on the ground or in the air, with an aircraft, terrain or obstacle<sup>(6)</sup> which has or could have endangered the lighter-than-air vehicle, its occupants or any other person.



- (2) Interference with the lighter-than-air vehicle by firearms, fireworks, flying kites, laser illumination, high powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.
- (3) Unexpected encounter of adverse weather conditions which has or could have endangered the lighter-than-air vehicle, its occupants or any other person.

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- (1) Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 ([OJ L 281, 13.10.2012, p. 1](#)).
  - (2) Directive 2009/43/EC of the European Parliament and of the Council of 6 May 2009 simplifying terms and conditions of transfers of defence-related products within the Community ([OJ L 146, 10.6.2009, p. 1](#)).
  - (3) This item applies only to commercial operations within the meaning of Article 3(i) of Regulation (EC) No 216/2008.
  - (4) Obstacle includes vehicle.
  - (5) Obstacle includes vehicle.
  - (6) Obstacle includes vehicle.

