

RA 1410 – Occurrence Reporting and Management

Rationale

Accurate and timely Occurrence reporting with effective investigation is fundamental to identifying Air Safety Risks and delivering effective mitigation. Without a simple, robust reporting and management system, that includes investigation and feedback, these events will re-occur, leading to increased Risk to personnel, equipment and the public. This RA requires the Regulated Community to report all Air Safety Occurrences, and take appropriate action, in order to reduce the overall number of events.

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Occurrence Reporting and Management

1410(1) Aviation Duty Holders (ADH), Accountable Managers (Military Flying) (AM(MF)), Accountable Managers (AM)¹, and Heads of ADH-Facing Organizations^{2, 3} **shall** ensure that all Air Safety reportable Occurrences are reported, managed and appropriate action taken.

Acceptable Means of Compliance 1410(1)

Occurrence Reporting and Management

1. Air Safety Occurrences **should** be reported in accordance with (iaw) Annex A and the Air Safety Information Management System (ASIMS) User Manual (hosted on the MAA websites).
2. ADHs, AM(MF)s, AMs, and Heads of ADH-Facing Organizations with access to ASIMS⁴ **should** ensure that:
 - a. All Air Safety Occurrences are reported, investigated, the results recorded, and any identified actions recorded and closed using the ASIMS as the primary management tool.
 - b. A Significant Occurrence Notification (SON) is raised following any Accident, or any serious or sensitive Incident utilizing the template held on the MAA websites and accessible through the ASIMS homepage.
 - c. An ASIMS Occurrence Reporting Structure is maintained and managed.
3. ADHs, AM(MF)s, AMs and Heads of ADH-Facing Organizations without access to ASIMS **should** ensure that:
 - a. All Air Safety Occurrences are reported in the first instance to the MOD in the form of a PDF Defence Air Safety Occurrence Report (DASOR) within the timescales detailed in Annex A. Subsequent actions, including the following may be completed via an appropriate local Occurrence Management System and uploaded to ASIMS upon completion:
 - (1) Investigating the cause,
 - (2) Recording the result of the investigation,
 - (3) Identifying any recovery actions and recording their closure.
 - b. A SON is raised following any Accident, or any serious or sensitive Incident utilizing the template held on the MAA websites.

¹ Those AMs within: ADH-Facing Organizations; Maintenance Approved Organizations; or Air Traffic Management Equipment Approved Organizations. This RA excludes those AMs within Design Approved Organizations.

² 'Heads of ADH-Facing Organizations' includes but is not limited to: Aviation Delivery Team Leaders, Commodity Delivery Team Leaders (DTL), Heads of Establishment (HoE), Military Continuing Airworthiness Managers (Mil CAMs).

³ Where the Air System is Civilian-Owned, ownership of regulatory responsibility by either the Type Airworthiness Authority (TAA) or Type Airworthiness Manager (TAM) needs to be agreed within the Sponsor's approved model for Type Airworthiness (TAw) management; refer to RA 1162 – Air Safety Governance Arrangements for Civilian Operated (Development) and (In-Service) Air Systems, or refer to RA 1163 – Air Safety Governance Arrangements for Special Case Flying Air Systems. Dependant on the agreed split of TAw responsibilities TAM may be read in place of TAA as appropriate throughout this RA.

⁴ ► <https://asims.ice.mod.gov.uk/MODCas/login> ◀

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- c. A local Occurrence Reporting Structure is maintained and managed.
4. Air Safety Occurrences involving civil registered Aircraft, MOD civil derived Aircraft or applicable agencies **should** be reported as a DASOR and distributed as a Mandatory Occurrence Report (MOR) iaw paragraph 17 and European Regulation 376/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018. ADHs, AM(MF)s, AMs, and Heads of ADH-Facing Organizations **should** ensure that any MOR received from civil aviation, which might affect Defence Aviation, is also reported as a DASOR. MORs **should** be attached to the DASOR for ease of information transfer.
5. ADHs, AM(MF)s, AMs and Heads of ADH-Facing Organizations **should** ensure that all DASORs relating to their platform or equipment type(s) are routinely reviewed, assessed for safety and / or Airworthiness impact with appropriate activity undertaken by individuals who are Suitably Qualified and Experienced Persons (SQEP)⁵. This activity includes, but is not limited to, actions against the Hazard Log and equipment safety assessment.
6. ADHs, AM(MF)s, AMs and Heads of ADH-Facing Organizations **should** ensure that:
- Their Air Safety Management System⁶ explicitly trends and tracks applicable Occurrence Investigation recommendations to closure.
 - Applicable Occurrence Investigation recommendations that affect their Air System Safety Case (ASSC) are reviewed as part of the periodic ASSC review⁷; especially those from Service Inquiries (SI) and Director General Defence Safety Authority (DSA-DG) Non-Statutory Inquiries (NSI).
7. TAAs and Commodity DTLs **should** ensure that a brief summary of activity relating to each DASOR is added in a timely manner to inform and support the relevant investigation; this summary **should** also include reference of any Special Instructions (Technical) raised, references to Airworthiness management tools (eg RESOLVE), and other supporting documentation as required.
8. DASOR information transmitted via ASIMS **should** be classified no higher than Official⁸. Where relevant information attracts a higher classification, ADHs, AM(MF)s, AMs and Heads of ADH-Facing Organizations **should** maintain a record on an appropriately classified system that refers to the corresponding DASOR.
9. DASORs **should** be distributed to all areas, such as other ADHs, AM(MF)s, AMs and Heads of ADH-Facing Organizations that may be affected or provide / gain benefit through awareness.
10. ADHs, AM(MF)s, AMs and Heads of ADH-Facing Organizations **should** assure the quality of the reports within their Area of Responsibility.

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11. Air Safety Occurrences fall into one of 3 types: Accidents, Incidents or Hazard Observations⁹. To reduce the likelihood of re-Occurrence, all Air Safety Occurrences and failures of safety controls (including those that originate in areas such as logistics, infrastructure and other support) need to be reported and investigated to a suitable depth in order that causes are understood and lessons identified, promulgated and appropriate action taken. Examples of Air Safety reportable Occurrences are detailed in Annex B.
12. Timely and accurate Occurrence reporting is required across Defence Aviation to:

⁵ The individuals who are SQEP might not just be TAA / Delivery Team personnel; this may include forwarding Occurrences to relevant stakeholders (ie: Design Organizations, Original Equipment Manufacturers, etc). Refer to RA 1015 – Type Airworthiness **► Management ◀** – Roles and Responsibilities.

⁶ Refer to RA 1200 – Air Safety Management.

⁷ Refer to RA 1205 – Air System Safety Cases.

⁸ Information marked Official-Sensitive cannot be transmitted via ASIMS.

⁹ A quick reference guide and definitions are at Annex A.

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- a. Notify all relevant agencies of actual and potential Hazards.
 - b. Identify the cause and causal factors.
 - c. Initiate further investigation where appropriate.
 - d. Highlight recommendations to address identified issue(s).
 - e. Enable data capture and analysis.
13. **Reporting Types.** There are three main Occurrence report types:
- a. **Significant Occurrence Notification.** It is essential that a SON is submitted as soon as possible following any applicable reportable Occurrence, see Annex A, and updated as additional information becomes available, so that senior military leadership is notified as quickly and as accurately as possible. Units / Organizations submitting a SON are to ensure their Chain of Command and supporting organizations, such as ADH chain / AM(MF), TAAs etc, are appropriately informed independently of the SON. SONs need to be supported by a linked DASOR, where possible. The format for a SON and the report addressees are available in the SON template held on the MAA websites and accessible through the ASIMS homepage.
 - b. **Defence Air Safety Occurrence Report.** All Occurrences (including those described in a SON) need to be reported and distributed using a DASOR submitted via ASIMS. Other documents may be referenced where either classification or sensitivity markings mean they are inappropriate for transmission via ASIMS.
 - c. **Unit Level Forms.** An alternative method for the initial reporting of Hazard Observations may be in use at unit level such as InForms and / or for Navy Command Aircraft Operating Authority Units, the Flight Safety Log, nevertheless all Air Safety related observations need to be recorded via a DASOR.
14. **Non-ASIMS Organizations.** For organizations not using ASIMS as its primary management tool, an editable DASOR template can be found on the MAA websites. This will result in organizations dual reporting to ensure that all interested parties are aware of the Occurrence.
15. **Reporting Procedures.** Air Safety reporting procedures including required timelines will be iaw Annex A.
16. **ASIMS Training.** Individuals ►may◄ complete the ►◄ online training, which is available within ASIMS on the launch ►page◄, for their respective roles and responsibilities within the reporting process, prior to the use of ASIMS. MAA sponsored ASIMS role training is available via Safety Training for Error Prevention (STEP), the suite of which is highlighted in RA 1440¹⁰.
17. **Civil Occurrence Reporting**¹¹. The European Union (EU) MOR scheme¹¹, as detailed in European Regulation 376/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018, is comprised of MORs and Voluntary Occurrence Reports (VOR). The MOD requires DASORs for a wider selection of Occurrences than the civilian MORs and VORs¹². The Occurrence Manager needs to select the ASIMS MOR function for all appropriate DASORs (for both civilian MORs and civilian VORs), using the following breakdown:
- a. **MORs.** Occurrences which may represent a significant Risk to aviation safety, such as Occurrences related to:
 - (1) The operation of the Air System.
 - (2) Technical conditions, Maintenance and repair of the Air System.
 - (3) Air navigation services and facilities.

¹⁰ Refer to RA 1440 – Air Safety Training.

¹¹ <http://www.caa.co.uk/Our-work/Make-a-report-or-complaint/MOR/Occurrence-reporting>.

¹² Civilian aviation authorities reportable Occurrence are detailed in EU Commission Implementing Regulation 2015/1018 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018.

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- (4) Aerodromes and ground services.
- b. **VORs.** Occurrences which:
 - (1) May not be captured as a MOR.
 - (2) Are perceived by the reporter as an actual or potential Hazard to aviation safety.

Reporting of Occurrences Involving Other Nations¹³

18. Significant Occurrences involving other nations' military Air Systems which occur in the UK Flight Information Regions or in UK overseas territories¹⁴, or are under the control of or hosted by a UK Service unit or Contractor Flying Organization, need to be reported via a SON.

19. Where an Occurrence, significant or otherwise, takes place under the control of or hosted by a UK Service unit or Contractor Flying Organization a DASOR also needs to be raised by the controllers or hosts respectively.

Confidential Reporting

20. **General.** There may be occasions where an individual may not wish to raise an issue with their immediate superior or colleagues through the DASOR reporting system. In this circumstance reports may be raised through the pan-Defence confidential reporting scheme directly to an appropriate sponsor.

21. **Defence Confidential Occurrence Report Scheme (DCORS).** The DCORS aims to encourage the reporting of such Incidents directly to the appropriate Command Flight Safety Officer (CFSO) or MAA as per the DCORS form. If desired, the author's anonymity is guaranteed and names will only be released with appropriate consent. Reports submitted anonymously will still be staffed, but they are less likely to be concluded satisfactorily, and originators will not receive feedback. Those reports that do include the author's details enable the recipient to seek further detail / clarification, if needed, and allow feedback.

22. **Procedure.** The DCORS procedure is as follows:

- a. **Forms.** The DCORS form and addresses are available on the MAA website and accessible through the ASIMS homepage. Forms may be submitted in a plain envelope addressed to the appropriate sponsor.
- b. **Progression.** Only the individual to whom it is addressed may open the letter. The MAA or the relevant CFSO will reply to the originator with a full progress report.
- c. **Publication of DCORS.** Information from DCORS may be published for educational purposes; however, CFSOs will maintain confidentiality. If, for any reason, an originator feels that a report may not be used for any subsequent publicity this will be explicitly stated.
- d. **Forms Supply.** ADHs, AM(MF)s and CFSOs will ensure that a supply of DCORS forms is readily available.

Investigations

23. All Air Safety Occurrences will be investigated. The aim of the investigation is to determine what happened, why it happened and provide formally recorded recommendations or mitigation¹⁵ to prevent recurrence. There are three main types of investigation:

- a. **Service Inquiries (SI)^{16, 17}.** When mandated by law or policy, or where DSA-DG deems appropriate, DSA-DG will convene a SI iaw The Armed Forces (Service Inquiry) Regulations 2008 and RA 1420. When DSA-DG deems that a

¹³ For the avoidance of doubt paras 18 and 19 apply to non-UK military-registered Aircraft.

¹⁴ For the avoidance of doubt this includes Sovereign Base Areas.

¹⁵ Mitigations are used within ASIMS, to record local actions or activity, to prevent a further Occurrence, that do not require Delivery Duty Holder / Operating Duty Holder / AM approval. Further details are contained within the ASIMS User Manual.

¹⁶ SIs are statutory inquiries, in that they are governed by statute – The Armed Forces (Service Inquiries) Regulations 2008. Any investigations below a SI – such as an OSI or LI – are often called “Non-Statutory Inquiries” (NSI).

¹⁷ Refer to RA 1420 – Service Inquiries and Non-Statutory Inquiries.

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SI is not required, the DSA-DG may direct that an NSI be conducted by the relevant authority (such as the ADH).

b. **Occurrence Safety Investigation (OSI).** An OSI is a non-statutory and flexible investigation that provides a standard Defence investigation format within ASIMS that can be used to record an investigation into any Air Safety Occurrence. An OSI also provides additional levels of scrutiny through the Occurrence Review Group (ORG).

c. **Local Investigation (LI).** For Occurrences that do not require a SI or OSI, the depth of the investigation may be tailored by the local Occurrence Manager to suit the nature of the Occurrence.

24. **Investigation Support.** The Defence Accident Investigation Branch (DAIB) will support the SI and can also provide advice and assistance to the NSI. Following notification by SON, DAIB staff acting on behalf of DSA-DG will review the Occurrence and, subject to information available, may deploy to undertake Triage investigation. All personnel are to assist DAIB investigators during the Triage process to ensure that an accurate Risk picture can be established and the most appropriate follow-on investigation can be instigated¹⁸.

25. **Recommendations.** Recommendations provide a mechanism for managed change within the Air Safety environment based on the conclusions from investigations. As such, they will have a clear and justifiable purpose and a reasonable timescale for implementation. Recommendations can be used to address particular causal factor issues or wider preventative / corrective / mitigating action. All recommendations arising from the investigation need to be recorded on ASIMS with any actions taken corroborated with an auditable record of supporting evidence. There are specific requirements with regard to recommendations arising out of SIs.

Airprox Investigation and follow-up actions

26. **Airprox Reporting.** An Airprox form will be raised by the Aircraft commander whenever an Airprox is deemed to have occurred. All parties involved in an Airprox (eg the Aircraft commander, Air Traffic Control (ATC) controllers, Flt Ops Assistants, etc) who are advised that they have been involved in an Airprox, irrespective of whether or not they were aware of the occurrence or considered that it constituted an Airprox, will submit a DASOR which is independent but linked to the Airprox prime DASOR.

27. **Investigation.** ADHs, AM(MF)s and AMs will ensure that any Airprox involving their Air Systems are investigated. Results of investigations will be placed on a DASOR and linked to any other report pertinent to that Airprox.

28. **Follow-up Action.** Airprox within UK and delegated airspace will be assessed by the UK Airprox Board (UKAB). Any recommendations from the Director UKAB are to be actioned where required and notified once complete.

¹⁸ Refer to RA 1430 – Aircraft Post Crash Management and Significant Occurrence Management.

ANNEX A

AIR SAFETY OCCURRENCES REPORTING QUICK REFERENCE GUIDE

	Unit Level Forms	DASOR Occurrence Types			SON (see note 4)
		Haz / Obs	Incident	Accident	
Accident see notes 1 and 6.				✓	✓
Incident see notes 2 and 6.			✓		As required
Hazard Observation see notes 3 and 6.	✓	✓			As required
SON Consideration					
Sensitive (Air Safety). VIP involved, possible societal, media or ministerial interest, including damage to commercial and / or public property.			Recorded on originating DASOR		✓
Suspension or Restriction. An Air Safety Occurrence that has led to, or may lead to, the suspension of flying operations or a significant restriction being imposed such as an 'op pause'.			Recorded on originating DASOR		✓
Non-UK NATO Aircraft in the UK. On notification of an Accident or serious Occurrence involving a non-UK NATO Aircraft in the UK.			Recorded on originating DASOR		✓
To be reported within: see note 5	48 hrs	48 hrs	48 hrs (or 24 hrs for Airprox)	24 hrs	ASAP (<1 hr)

Notes:

- Accident.** An Air Safety related Occurrence which has resulted in any or all of the following conditions:
 - A person being killed; or,
 - A person suffering a specified injury^{19, 20} lasting over seven days. In the event that an injury severity is not known or confirmed (eg not immediately determinable, awaiting a medical examination, etc) when initially reported (as per the reporting quick reference guide above), then the injury **should** be assumed to last for over seven days and be reported accordingly. When the injury severity is confirmed the report **should** be updated accordingly; or,
 - An Air System sustaining 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). Derived from ICAO Annex 13; or,
 - An assessment of Air System Repair Category 4 or (including provisional) Category 5.
- Incident.** An Air Safety related Occurrence which has not resulted in an Accident but has resulted in any or all of the following conditions:
 - A person receiving a specified injury lasting seven days or less²¹; or,
 - An event which compromises Air Safety; or,
 - An assessment of Air System Repair Category 1, 2 or 3 damage.
- Hazard Observation.** A report used to provide information on a specific situation or set of circumstances which did not actually result in an Air Safety Incident but where the potential for an Air Safety Incident to occur in the future was identified. Air Safety related Hazard Observations reported on Unit Level Forms need to be transferred to a DASOR.
- SON.** The format and contact details for a SON are detailed within the SON template held on the MAA websites and accessible through the ASIMS homepage.
- DASOR Reporting Timeline.** DASOR reporting timelines refer to the submission and initial distribution of the report by the Occurrence Manager.
- Remotely Piloted Air System (RPAS).** For RPAS investigations see also the appropriate RA in the RA 1600 series.

¹⁹ Injuries are defined in the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations (RIDDOR) 2013 Regulation 4: <http://www.hse.gov.uk/riddor/> and <http://www.legislation.gov.uk/ukxi/2013/1471/contents/made>.

²⁰ Refer to JSP 375 Part 2 Volume 1 Chapter 16 Annex A – Accident/Incident Reporting and Investigation.

²¹ The report (DASOR and SON if applicable) **should** be subsequently recategorized depending on the outcome, within 15 days of the occurrence.

ANNEX B
GUIDE TO REPORTABLE OCCURRENCES

1. Example Occurrences for which DASORs are required include (this list is not exhaustive; if in any doubt, a DASOR is to be submitted):

a. General:

- (1) Errors that significantly reduce the levels of safety normally expected.
- (2) Occurrences involving a serious increase in workload which correspondingly reduces safety margins due to fatigue; this includes cumulative fatigue.
- (3) Damage to an Air System sustained during any activity whilst on the ground occurring outside the period of operation of the Aircraft.
- (4) Flight simulator Occurrences or Occurrences in a synthetic environment which may be of benefit to the wider Defence Aviation community, but excluding those of a Health and Safety at Work nature.
- (5) Real-event Occurrences that held elevated Risk due to negative consequences or learned behaviours from experiences in a synthetic environment.
- (6) Real-event Occurrences that had a cause tangibly-linked to experiences in a synthetic environment and may be of benefit to the wider Defence Aviation community.
- (7) Occurrences involving Foreign Object Debris or loose articles either in or on an Air System and whether or not any damage results.
- (8) Significant failure or unforeseen degradation of any safety critical system.

b. Air Traffic Management:

- (1) ATC / Area Control Centre (ACC) Incidents and Accidents – involving and reported by personnel of ATC and ACC disciplines.
- (2) Any Occurrence where ATC procedures, military flying regulations and / or, where appropriate, civil legislation are breached.

c. Continuing Airworthiness:

- (1) Maintenance Occurrences – occurring during Maintenance of an Air System²².
- (2) Maintenance error where the potential for an Air Safety Incident to occur was identified.
- (3) Maintenance errors identified after Certification.
- (4) Serious equipment faults identified during Maintenance.
- (5) Misleading, incorrect or insufficient applicable Maintenance data or procedures that could lead to significant Maintenance errors.
- (6) Incorrect control of the Air System Maintenance schedule.
- (7) Releasing an Air System to service from Maintenance in which the material state endangers flight safety.
- (8) Releasing an Air System to service from Maintenance in which the documented state of the Air System does not match the physical state of the Air System and could compromise Flight Safety.
- (9) Where insufficient or inadequate resources are available to conduct safe Maintenance operations.
- (10) The use of products, components or materials, from unknown, suspect origin, or unserviceable critical components.

d. Flight Operations:

²² Where applicable Health and Safety Executive & Service specific reporting (eg the Navy Lessons and Incident Management System (NLIMS)) needs to be raised and cross referred to within the applicable DASOR.

- (1) Incidents and Accidents – occurring during the period of operation of the Air System under the control of Flight Crew personnel.
- (2) Uncharted Obstructions.
- (3) Other Occurrences – in support of flying operations²².
- (4) Occurrences that represent an actual or potential Flight Safety Hazard.
- (5) Abandoned take-offs or unintentionally leaving a runway, taxiway or Aircraft operating surface.
- (6) Unplanned autorotative landing.
- (7) Aircraft forced landing.
- (8) Aircraft hard landing.
- (9) Unauthorised exceedances of the flight envelope.
- (10) Deviations from the Release To Service.
- (11) A significant loss of thrust / engine power.
- (12) Flying control system failure or malfunction, or un-commanded flying control movement (UFCM) however momentary.
- (13) Any item that becomes detached from or falls from an Aircraft.
- (14) Helicopter external load malfunctions, including unusual load behaviour which led or could have led to irregular release, giving rise to significant concern for safety.
- (15) Serious reduction in Aircraft performance due to weather or icing.
- (16) Severe turbulence, wake turbulence or wind shear.
- (17) Any loss of prescribed separation between Aircraft.
- (18) When the Aircraft Commander has received and responded to a Traffic Collision Avoidance System Resolution Advisory, regardless of the cause.
- (19) When an individual during Air System operations has been adversely affected by injury; incapacitated due to illness, the use of drugs or alcohol; or affected by noxious fumes or food poisoning. This includes Aircrew or support personnel who, for any reason, are required to report to a medical officer after an Incident.
- (20) Lightning strike.
- (21) Aircraft self-damage by weapons.
- (22) Losses due to hostile action.
- (23) Irregular release / discharge of weapons.
- (24) Inadvertent release of towed targets.
- (25) Occurrences resulting from fast roping or abseiling from Aircraft.
- (26) Equipment failure or deficiencies causing significant concern to the user.
- (27) Wildlife strikes or near wildlife strikes.
- (28) Bird strikes or near bird strikes.
- (29) Wire strikes or near wire strikes.
- (30) Instances of laser equipment being used against Aircraft and personnel in direct support of flying operations.
- (31) Parachute deployment irregularities such as any difficulty experienced by a free fall parachutist in locating or pulling their base of container toggle or difficulties experienced by a Parachute Jump Instructor drogue setting for a tandem parachutist.
- (32) Any parachuting equipment issues experienced by a parachutist either during or prior to a military parachute descent.
- (33) All occasions when a Runway or Aerodrome Movement Area Incursion has occurred.
- (34) Any Operation of a Personal Locator Beacon.