

## TRAINING AND COMPETENCY: AERODROME SAFETY PERSONNEL

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### 1. Outline

- 1.1 This recommended practice (**RP**) aims to ensure that personnel engaged in wildlife hazard management functions at an aerodrome are appropriately trained and are competent.
- 1.2 This document has been developed through the Australian Aviation Wildlife Hazard Group (**AAWHG**). It has drawn upon information available from the AAWHG membership, local industry representatives and also from international sources.
- 1.3 The practices outlined in this document should be considered by industry representatives to ensure that aerodrome safety and support personnel:
  - are trained in the available tools, techniques and procedures to address aviation wildlife hazards.
  - are competent in their functions related to wildlife hazard management.
- 1.4 It is recommended that this document should be read in conjunction with:
  - RP 1.3 Wildlife Risk Assessment and Analysis
  - RP 4.0 Wildlife Hazard Mitigation (reserved)
- 1.5 This document will be subject to regular review through the Australian Aviation Wildlife Hazard Group.

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### 2. Regulatory context

#### National Requirements

- 2.1 The Civil Aviation Safety Authority (CASA) Part 139 (Aerodromes) Manual of Standards 2019 requires that persons engaged in reporting functions, including those for wildlife hazards, have been adequately trained for the role and possess relevant experience.
- 2.2 Advisory Circular 139-26 furthermore recommends that for wildlife hazard monitoring and mitigation, personnel should be suitably trained and in the latter case, qualified as appropriate.

#### International Standards

- 2.3 ICAO Doc 9137 Airport Services Manual, Part 3 – Wildlife Hazard Management, Fourth Edition-2012 requires airport wildlife control personnel to receive formal training before their initial engagement as a wildlife controller. Staff should be trained, competent and equipped for detection and dispersal tasks. Airports should include procedures for the training of staff involved in wildlife control in their wildlife management programs.
- 2.4 ICAO Doc 9981 Procedure for Air Navigation Services, Aerodromes, Amendment 3
- 2.5 International Bird Strike Committee (IBSC) Recommended Practices No. 1 ‘Standards for Aerodrome Bird/Wildlife Control’ require airport personnel to be trained and equipped.

### 3. Definitions

- 3.1 The following terms are used within this recommended practice:

<b>Training</b>	The transfer of knowledge and the attainment of skills and competencies as a result of an educational process. Training has a specific goal of improving the capability, capacity, productivity and performance of a trainee.
<b>Competency</b>	The demonstrated attainment of an ability or skill by the trainee.
<b>Assessment</b>	To evaluate and measure the academic readiness, learning progression and skill acquisition of a trainee.
<b>Commensurate</b>	In proportion. Corresponding in size or degree.

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### 4. General principles

- 4.1 All personnel undertaking a safety function related to wildlife hazard management should receive prior training and pass an assessment of their competency.
- 4.2 Any training and competency program, however, should not be limited to those personnel who are directly engaged in identification and mitigations tasks (i.e. 'in the field'). Wildlife hazard management is a complex system. Many support personnel also provide input which is integral to its successful function, such as:
- document management
  - database management
  - environmental management
  - planning
  - security/access control
  - financial management
  - information management.
  - human resource management
  - senior/executive management.
- 4.3 For personnel engaged in wildlife hazard management or working in a safety support role, both the training provided, and any resultant assessment of competency should be commensurate to their engagement in the wildlife hazard management system.
- 4.4 In general, the educational syllabus for wildlife hazard management should ensure commensurate training is provided for, but not limited to, the following areas:
- wildlife hazard management definitions, concepts, principles and legal context
  - risk assessment and risk management
  - wildlife observation and identification (including off aerodrome hazards)
  - strike remains collection
  - wildlife hazard and strike reporting
  - mitigation measures (both active and passive)
  - data and document management.
- 4.5 Each of the above points will be expanded upon further in this RP.
- 4.6 Once provided, competency should be assessed post training, and then on an ongoing basis through continuous monitoring. Renewal or remedial training may be required for personnel in the future. Please refer to sections 13 and 14 of this RP for more information.

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### Wildlife Hazard Management Training Outline

#### 5. Wildlife hazard management definitions, concepts, principles and legal context

5.1 Aerodrome wildlife control and support personnel should receive commensurate training in wildlife hazard management definitions concepts, principles and legal context. This training should include, but not be limited to:

- The context and nature of wildlife hazards and the risk to aircraft operations
- The role and functions of both CASA and the ATSB
- Wildlife hazard definitions in CASA Advisory Circular (AC) 139-26
- Safety Acts, regulations and standards including those from CASA, the ATSB and the applicable workplace health and safety authority in the relevant state or territory
- Note: Australian airports must meet the training requirements outlined in CASA Part 139 (Aerodromes) s.17.07 'Training'
- National and/or state/territory environmental acts and regulations
- National and/or state/territory prevention of cruelty to animals acts and regulations
- National and/or state/territory firearm acts and regulations
- Common law considerations, including negligence and duty of care.
- Rare, special concern and endangered species which may be present at the aerodrome or within its environs. This also includes any relevant regulations and conservation policies which apply, as well as culturally significant species.
- An understanding of the aerodrome manual, the aerodrome safety management system (SMS) and the specifics of the aerodrome wildlife hazard management plan and its subsequent procedures.

#### 6. Risk assessment and management

6.1 Any training provided on risk assessment and management should include, but not be limited to, the following:

- Availability and selection of risk assessment and analysis tools
- The correct application of the risk assessment and analysis technique(s)
- The consequences of wildlife strike on aircraft systems, structures and propulsion systems
- Integration with the aerodrome's SMS
- Understand the risk assessment to identify high-risk species.

6.2 For further information on wildlife risk assessment and analysis, please refer to RP 1.3

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### 7. Wildlife observation and identification

7.1 Any training provided on wildlife observation and identification should include, but not be limited to, the following:

- wildlife ecology and biology to assess wildlife populations and describe their behaviour
- wildlife observation practices
- accurate wildlife identification (including the use of field guides)
- wildlife strike identification procedures
- available services for scientific strike remains identification
- the monitoring of wildlife hazards off aerodrome and within its environs.

### 8. Strike remains collection

8.1 Any training provided on strike remains collection should include, but not be limited to, the following:

- locating strike remains
- the safe collection of strike remains
- correct preservation, storage and transfer of strike remains
- identification of wildlife involved in a strike
- identification of damage to an aircraft.

8.2 Education on the safe handling of remains should include awareness of zoonotic diseases and prevention measures including but not limited to:

- types of zoonosis
- transmission
- prevention
  - appropriate use of PPE
  - personal sanitisation
  - decontamination of equipment and vehicles.

### 9. Wildlife hazard and strike reporting

9.1 Any training provided on wildlife hazard and strike reporting should include, but not be limited to, the following:

- report the outcomes of observation, monitoring and strike collection activities.
- publishing wildlife hazard information in Aeronautical Information Publication (AIP).
- raising NOTAMs for wildlife hazards
- reporting wildlife strikes to the ATSB (as defined under the Transport Safety Investigation Regulations)
- distributing reports and safety communication to key stakeholders.

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9.2 For further information on wildlife hazard reporting, please refer to CASA AC 139-26 and to the ATSB website: <http://atsb.gov.au>.

### 10. Mitigation measures

10.1 Regarding wildlife hazard mitigation, aerodrome wildlife control and safety support, personnel should receive training in both passive and active mitigation measures commensurate to their role.

#### 10.2 Passive mitigation

10.2.1 Any training provided on passive mitigation should include the following:

- identification of attractants on the aerodrome and within its environs
- airport habitat management, vegetation policies, infrastructure protection and drainage system management
- assessment of the effectiveness of the mitigation measure.

#### 10.3 Active mitigation

10.3.1 Any training provided on active mitigation should include the following:

- how to engage in active wildlife management without causing a hazard to aviation safety
- the correct selection of the most appropriate mitigation technique/equipment
- the safe and effective use of the applicable mitigation technique/equipment
- the humane use of the applicable mitigation technique/equipment on wildlife.
- procedures for coordinating tactically with air traffic control or a certified air/ground radio operator (if applicable).
- procedures for the notification and/or reporting of active mitigation activities (as applicable)
- assessment of the effectiveness of the mitigation measure.

10.3.2 If the mitigation activity may require entry onto the movement area of an aerodrome, this training should cover:

- aircraft familiarisation, including aircraft identification, aircraft design and propulsion system hazards
- the impact of wildlife strikes and foreign object debris (FOD) on aircraft systems.
- aerodrome (airside) driver training, including on the aerodrome
- familiarisation and air traffic control communications (if applicable).
- aerodrome signs and markings

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- navigational aids and clearance areas
  - aerodrome operations and safety
  - any other matters the aerodrome operator deems appropriate.
- 10.3.3 If equipment for active mitigation includes the use of a firearm, this training should cover:
- state or territory requirements on the use of firearms
  - correct storage and security of the firearm
  - correct operation of the firearm
  - the correct use of personal protective equipment
  - procedures for misfire and hang-fire events.
- 10.3.4 For more information on the safe use of firearms, please refer to RP 3.2.1.
- 10.3.5 If active mitigation includes the destruction of wildlife (including eggs or wildlife carrying unborn young), this training should cover:
- relevant state/territory wildlife protection legislation, including any required permits
  - *Environment Protection Biodiversity Conservation Act* legal status and documents (i.e. conservation status, recovery and threat abatement plans) (<http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>)
  - non-statutory status—global status through the International Union for Conservation (IUCN) Red List of Threatened Species (<https://www.iucnredlist.org/>) and non-government organisation (NGO) documents (e.g. 'The Action Plan for Australian Birds 2010')
  - culturally significant species
  - correct identification of the wildlife and/or nesting site(s).
  - humane destruction techniques
  - safe and correct disposal techniques.
- 10.3.6 If equipment for active mitigation includes the use of pyrotechnics, this training should cover:
- relevant national, state or territory legislative requirements on the use of pyrotechnics
  - correct storage and security of the pyrotechnics
  - operational safety
  - the correct use of personal protective equipment.

## 11. Off-airport management

- 11.1 Any off-airport management training provided should include, but not be limited to, the following:
- requirement during the aerodrome serviceability inspection to monitor and record wildlife activity in the vicinity of the aerodrome, or from the aerodrome (i.e. within 13 km radius of the airfield)

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- if monitoring is conducted at off-airport locations, the procedures to do this
- roost sites (e.g. flying-fox and ibis) to understand the potential for fly-outs and incursion into aircraft flight paths
- location and land use of sites within 13 km radius of the aerodrome that attract wildlife.

### **12. Document and data management**

- 12.1 Aerodrome wildlife control and support personnel should receive commensurate training on the completion and maintenance of documentation for wildlife hazard management, including:
- policy and procedures for documentation and record maintenance (e.g. the completion of a wildlife log or aerodrome reporting log)
  - recording of wildlife populations, location and behaviour
  - recording of dispersal activities and the use of consumables (i.e. ammunition)
  - recording of proactive and reactive actions taken to decrease the number of present wildlife and the results thereof
  - recording of wildlife incidents, strikes and damaging strikes
  - the correct interpretation of the data sets related to their role
  - collection and recording of weather and lighting conditions.

### **13. Wildlife hazard management resources**

- 13.1 Wildlife hazard management personnel must have access to wildlife identification materials and equipment such as a field guides, identification books, scopes or binoculars, active management tools, carcass handling tools, identification kits and relevant personal protective equipment (PPE).
- 13.2 Wildlife hazard management personnel must be trained in the safe use of all equipment and the correct use of PPE.

### **14. Recurrent training**

- 14.1 In order to maintain competence, recurrent training should be conducted to include a selection of general topics covered in wildlife control initial training and to provide updates to personnel on the following key issues:
- changes in legislation
  - changes in local environment
  - recent wildlife events at the aerodrome
  - changes in active and passive measures
  - any other matter the that the aerodrome operator deems appropriate.

### **15. Selection and appointment of training providers/personnel**

- 15.1 Wildlife hazard management training should be conducted by qualified persons or specialists with proven and relevant experience.
- 15.2 Personnel appointed to provide training in wildlife hazard management should hold:
- qualifications in wildlife control (or possess relevant experience)
  - qualifications in aerodrome operations (or possess relevant experience)
  - qualifications in education or training and assessment.

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- 15.3 The selected training product/package should address the core elements recommended throughout this document. Suitable training courses can be sourced from universities, registered training providers, wildlife hazard management consultancies and from other education service providers.
- 15.1 For nationally recognised training, the government website: [www.training.gov.au](http://www.training.gov.au) encompasses a national register of registered training organisations (RTOs) and recognised training products. With regard to wildlife hazard management, the AVI-Aviation Training Package <https://training.gov.au/Training/Details/AVI> contains some relevant units of competency. These include:
- identify risk and apply risk management processes
  - inspect and report on aerodrome serviceability
  - apply aviation work health and safety procedures
  - maintain basic situation awareness in the aviation workplace
  - use firearms on an aerodrome to control wildlife hazards
  - participate in environmentally sustainable work practices.
- 15.2 **Please note:** *The use of an RTO nor alignment with AVI08 is not mandated for wildlife hazard management training. To the knowledge of the AAWHG, AVI08 does not cover every area of training and competency recommended under Para 4.4 above. Accreditation in these Aviation Training Package modules, however, has the benefit of a standardised training and assessment program. The trainee will also obtain a nationally recognised qualification upon the completion of a sufficient number of modules.*
- 16. Assessment of competency**
- 16.1 The successful completion of the training program should be demonstrated by passing a theoretical and practical competency assessment.
- 16.2 Following the completion of training and the attainment of competency, written confirmation or certification should be provided to the trainee.
- 16.3 If a published training procedure is not provided or cannot be readily referenced, the assessor should attest **in writing** the fields, skills or units of competency that the trainee has successfully completed.
- 17. Recurrence training and reassessment of competency**
- 17.1 Once personnel are initially trained and assessed as being competent, regular refresher training should be provided at periodic intervals. This will ensure their knowledge is kept current with any changes to procedures, policies, their working environment, and advances in technology.
- 17.2 The host organisation should provide a system for monitoring the knowledge and competency of their staff in wildlife hazard management. If personnel are subsequently assessed as having gaps in their knowledge and/or skills, remedial

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training and assessment needs to be provided.

- 17.3 Verification of skills and competency is recommended at a minimum of every two years as well after an extended period of leave.

### **18. Integration with aerodrome or procedures manuals**

- 18.1 The policies and procedures for aerodrome wildlife hazard management training should be documented.

- 18.2 For a certified aerodrome, these details should be recorded in the relevant section of their aerodrome manual and/or wildlife hazard management plan (WHMP).

- 18.3 For a registered aerodrome, these should be recorded within their documented safety procedures.

### **19. Review of training procedures**

- 19.1 The procedures for training should be subject to regular review.

- 19.2 It is recommended that these reviews should be conducted at yearly intervals to align with the annual risk assessment and aerodrome technical inspection.

### **20. Records management**

- 20.1 The maintenance of records for training is vitally important to support the process. These records can also be used to substantiate an organisation's mitigation strategy.

- 20.2 The aerodrome operator must create training records for its monitoring and reporting personnel to show compliance with the MOS Part 139 (Aerodrome) Section 17, subsections (1) and (2). Each record must be kept in safe custody for a period of at least 3 years after the record was created.

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### 21. References

- 21.1 International Organization for Standardization, 2009, Geneva, *International Standard 31000:2009*
- 21.2 International Civil Aviation Organisation, 1991, *Airport Services Manual Bird Control and Reduction* (Doc 9137-AN/901 Part 3)
- 21.3 Civil Aviation Safety Authority, 1998, Australia, *Civil Aviation Safety Regulations 1998*, <[www.comlaw.gov.au](http://www.comlaw.gov.au)>
- 21.4 Civil Aviation Safety Authority, 1998, Australia, *Civil Aviation Regulations 1988 1988*, <[www.comlaw.gov.au](http://www.comlaw.gov.au)>
- 21.5 Civil Aviation Safety Authority, 2012, Australia, *Civil Aviation Orders*, <[www.comlaw.gov.au](http://www.comlaw.gov.au)>
- 21.6 Civil Aviation Safety Authority, Part139 (Aerodromes) Manual of Standards 2019, <https://www.legislation.gov.au/Details/F2019L01146>
- 21.7 Civil Aviation Safety Authority, 2011, Australia, *Advisory Circular AC 139-26*, <[www.casa.gov.au](http://www.casa.gov.au)>
- 21.8 Civil Aviation Safety Authority, 2020, Australia, *Advisory Circular AC 139. C-02v1.0 Aerodrome personnel*, <[www.casa.gov.au](http://www.casa.gov.au)>
- 21.9 Defence Aviation Safety Regulations 139- Aerodromes
- 21.10 International Bird Strike Committee, 2014, *Standards for Aerodrome Bird/Wildlife Control No. 2. (Not yet published)*.
- 21.11 European Aviation Safety Agency, 2014, *Wildlife strike hazard reduction - Training for wildlife control. (Not yet published)*.

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0	12/2014	AAWHG Recommended Practice 'Training and Competency: Aerodrome Safety Personnel'	Jill Brix Darren Angelo	Wendy Weir	
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## TRAINING AND COMPETENCY: AERODROME SAFETY PERSONNEL

### Wildlife Hazard Management Training Syllabus

A typical training syllabus may contact the topics below:

<b>INDUCTIONS</b>
Workplace Health and Safety Induction
Environment Management Induction
Airside Awareness
<b>POLICIES</b>
Workplace Health and Safety Policy
Environment Policy
Drug and Alcohol
<b>RELEVANT ORGANISATIONS</b>
Role of CASA
Role of ATSB
Role of external stakeholders
<b>PLANS</b>
Aerodrome Manual
Aerodrome Safety Management System
Environment Management Plan
Wildlife Hazard Management Plan (incl Species Action Plans)
<b>PROCEDURES</b>
Company Wildlife Hazard Management Procedures
Company Firearm Procedures
<b>AERODROME REPORTING OFFICER AND WORKS SAFETY OFFICER</b>
Complete an Aerodrome Reporting Officer and Works Safety Officer Course
<b>AIRFIELD AWARENESS AND TRAINING</b>
Aerodrome familiarisation
Location of Navigational Aids (NAVAIDS) and their exclusion zones
Airside Safety Essentials on-line course (AAA)

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Carbon fibre awareness course (for dealing with wildlife strike incidents) through the Airservices Aviation Rescue Fire Fighting Service (ARFFS)
NOTAM Awareness on-line course (AAA)
Aerodrome Weather Information Service (AWIS)
<b>AIRCRAFT IDENTIFICATION</b>
Familiarisation of aircraft that operate at airports
<b>AIRSIDE DRIVING</b>
Airside Driving training
Airside Driving Authority (ADA) Licence
<b>RADIO COMMUNICATION</b>
Airport radio familiarisation.
Aeronautical Radio Operator Certificate (AROC)
<b>FORMAL WILDLIFE HAZARD MANAGEMENT TRAINING</b>
Formal training
Company Wildlife Hazard Management training
OHS issues for wildlife hazard management
<b>FIREARM TRAINING</b>
Firearm Safety Course
Firearm Licence relevant to wildlife hazard management requirements
Company Firearm Training and Competency
Disposal of ammunition
<b>WILDLIFE HAZARD MANAGAEMENT</b>
<b>Wildlife Identification</b>
Species identification and an understanding of the behaviour of wildlife on and in the vicinity of the airport.
Wildlife protection status (including birds, mammals and reptiles)
Binocular and other identification equipment (thermal)
Field Guide Use
<b>Risk Assessment</b>
Wildlife risk species and risk areas

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Critical zones for managing risk
<b>Wildlife Patrols/Inspections</b>
Wildlife Patrols procedures
Inspections after rainfall
Fence lines
Escalation of inspections (triggers)
<b>Wildlife Counts</b>
Wildlife counts
Wildlife count route
Record wildlife counts
<b>Wildlife Hazard Notification</b>
Communicating immediate hazard to Pilots and ATC
Reporting wildlife hazard internally
NOTAM generation to Airservices Australia.
Aeronautical Information Publications (AIP) – Enroute Supplement (ERSA)
NOTAM review
Company Wildlife Hazard Notification
<b>Identification and Handling of Wildlife Remains</b>
Handling wildlife remains and associated biological material safely.
DNA, feathers and photos for wildlife identification analysis.
Handling captured/injured wildlife ethically and safely.
Euthanasia requirements.
Carcass disposal location.
<b>Wildlife dispersal and lethal control</b>
Dispersal tools used at the airport.
Basic dispersal techniques
Situational Awareness when conducting dispersal and lethal control
Specific species dispersal management
Species list on Damage Mitigation Permit/ Permit to Cull

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Lethal control
<b>PASSIVE MANAGEMENT</b>
Airfield habitat and its attraction to wildlife.
Grass management and company policy on grass height
Wildlife attractants – waste removal, landscaping, drainage
<b>ENVIRONMENTAL CONDITIONS</b>
Seasons and its influence on wildlife
Weather and climate conditions
Low/reduced visibility operations and the impact on wildlife
<b>OFF AIRPORT ATTRACTANTS</b>
Off-airport land use and the sites within 13km of the airport that are wildlife attractants
<b>ADMINISTRATION</b>
Reporting, records and registers
<b>INCIDENT REPORTING AND INVESTIGATION</b>
Complete a wildlife strike incident form on ATSB
Complete a wildlife strike investigation
<b>WILDLIFE HAZARD MANAGEMENT COMMITTEE (WHMC)</b>
WHMC requirements and collaboration (Refer to Separate RP)