



**Australian Government**

# **AVIB3005A Inspect and report on aerodrome serviceability**

**Release 1**

# **AVIB3005A Inspect and report on aerodrome serviceability**

## **Modification History**

Release 1. This is the first release of this unit.

This unit replaces and is equivalent to AVIB3001B Inspect and report on an aerodrome.

## **Unit Descriptor**

Not applicable.

## **Application of the Unit**

Work must be carried out in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA).

Use for Australian Defence Force (Defence) Aviation is to be in accordance with relevant Defence Orders and Instructions.

Work is performed under limited supervision.

Work involves the application of relevant regulations, principles, protocols and procedures when inspecting and reporting on aerodrome serviceability as part of aerodrome operations.

All activities are carried out in accordance with relevant organisational policy and workplace procedures.

## **Licensing/Regulatory Information**

Legislative/regulatory and/or personnel licensing/certification requirements are applicable to this unit.

## **Pre-Requisites**

Nil.

## **Employability Skills Information**

This unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

<b>Inspect aerodrome serviceability</b>	1.1	Access to aerodrome is arranged with appropriate authorities
	1.2	Aerodrome is inspected for hazards and serviceability
	1.3	Situations resulting in unserviceability of the aerodrome are identified in accordance with workplace procedures
	1.4	Hazardous situation or unserviceability is rectified or made safe as required, in accordance with workplace procedures and regulatory requirements
<b>Report hazardous situations and unserviceabilities</b>	2.1	Requirements for official notification of hazardous situations or unserviceabilities, are assessed
	2.2	Relevant authorities or organisations are notified of hazardous situations or unserviceabilities in accordance with workplace procedures and regulatory requirements
	2.3	Reports are completed, filed and disseminated in accordance with workplace procedures
<b>Facilitate repairs</b>	3.1	Hazardous situations and unserviceabilities are rectified in accordance with workplace procedures and regulatory requirements with minimal disruption to aircraft operations
	3.2	Relevant authorities or organisations are notified of works that may disrupt aircraft operations in accordance with workplace procedures and regulatory requirements
	3.3	Temporary markers, markings and/or temporary aerodrome lighting are deployed as necessary to facilitate repairs
<b>Report restoration of aerodrome serviceability</b>	4.1	Restoration of aerodrome serviceability is confirmed in accordance with workplace procedures and regulatory requirements
	4.2	Temporary markers, markings and/or temporary aerodrome lighting used to facilitate repairs are removed
	4.3	Relevant authorities are notified of restoration of aerodrome serviceability in accordance with workplace procedures and regulatory requirements

## Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

### Required knowledge:

- Aerodrome layout, including access routes
- Aircraft schedules and their use in inspection and reporting on aerodrome serviceability
- Different operating conditions:
  - all weather conditions
  - day and night
  - various forms of transport such as vehicle, other motorised/towed equipment
  - variety of terrain conditions
- Equipment used in the inspection and reporting on aerodrome serviceability:
  - computer
  - hand tools
  - lights
  - maintenance equipment
  - markers
  - radio/s (airband/VHF radio, non-ops/UHF radio)
  - spills response kit
  - telephone
  - vehicle with flashing light
- Functions of an aerodrome reporting officer (ARO) and a works safety officer (WSO) as defined in Manual of Standards (MOS) Part 139
- Navigational aids:
  - Distance Measuring Equipment (DME)
  - Instrument Landing System (ILS)
  - Non-directional Beacons (NDBs)
  - VHF Omni-directional Radio Range (VOR)
- Operation of airband radio equipment as used to communicate with Air Traffic Control (ATC) and/or pilots
- Problems, safety hazards and risks that exist when inspecting an aerodrome and related assessment/management measures that may need to be taken
- Procedures for servicing and minor maintenance of equipment used in inspecting and reporting on aerodrome serviceability
- Purpose and application of:
  - aerodrome markers, markings and temporary lighting
- Method of Working Plan (MOWP)

- Radio frequencies applicable to the aerodrome:
- Automatic Terminal Information Services (ATIS)
- Common Traffic Advisory Frequency (CTAF)
- other air traffic agencies (such as ATC or Flight Information Region (FIR))
- Aerodrome Weather Information Broadcast (AWIB)
- Relevant information and documents:
- Aerodrome Emergency Plan (AEP) and procedures to be followed for each aerodrome emergency
- Aerodrome safety management system (SMS) and safety/security policies and principles of risk assessment and risk management
- aerodrome Drug and Alcohol Management Plan (DAMP)
- Aerodrome Manual
- Aeronautical Information Publication (AIP)
- AIP – En Route Supplement Australia (ERSA)
- airline timetables
- Airside Drivers Handbook and/or airside driving requirements for the aerodrome
- Civil Aviation Safety Regulations (CASRs)
- conditions of service, legislation and industrial agreements including workplace agreements and awards
- induction and training materials
- logbooks
- Manual of Standards (MOS) Part 139 - Aerodromes
- manufacturers specifications for equipment used when inspecting and reporting on aerodromes
- Notices to Airmen (NOTAMs)
- operational checklists
- plans and maps
- relevant forms and databases
- Wildlife Hazard Management Plan
- workplace procedures
- Relevant legislative and regulatory requirements relating to inspecting and reporting on the serviceability of an aerodrome as identified in:
- Civil Aviation Safety Regulations (CASRs) and Manual of Standards (MOS) Part 139
- Defence Orders and Instructions
- environmental sustainability
- standards and recommended practices (SARPs) of the International Civil Aviation Organization (ICAO)
- workplace relations
- work health and safety (WHS)/occupational health and safety (OHS) and environmental, procedures and regulations including Drug and Alcohol Management Plan (DAMP)

- Reporting procedures
- Requirements for completing relevant documentation and/or incident reporting
- Safety distances required from an aircraft wingtip to objects including other aircraft
- Unserviceability markers/markings:
  - displaced threshold markers
  - dumbbell markers
  - signal circle markers
  - unserviceability lighting
  - unserviceability cross markers
  - unserviceability cones
- Vehicle or other mobile obstacle markings and equipment:
  - company logo/identification
  - orange or yellow painting or distinctive marking (of vehicles regularly used on movement area)
  - warning lights (orange/amber/yellow) mounted to be visible through 360o
- Weather information and its implications for workplace operations
- Workplace procedures for inspecting and reporting on aerodrome serviceability

**Required skills:**

- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Adapt to differences in equipment and operating environment in accordance with workplace procedures
- Apply relevant systems (such as aerodrome SMS) and procedures to assess and/or mitigate risk that might arise during inspecting and reporting on aerodrome serviceability
- Communicate effectively with others when inspecting and reporting on aerodrome serviceability
- Complete documentation related to inspecting and reporting on aerodrome serviceability
- Identify and correctly use equipment required to conduct an inspection and reporting on aerodrome serviceability
- Implement WHS/OHS procedures and relevant regulations
- Interpret and follow operational instructions and prioritise work
- Modify activities according to workplace contingencies, situations and environments
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Operate electronic communications equipment to required protocol
- Read and interpret instructions, regulations, procedures and other information relevant to inspecting and reporting on aerodrome serviceability

- Report hazardous situations and unserviceabilities that may arise on an aerodrome
- Select and use required personal protective equipment (PPE) conforming to industry and WHS/OHS standards
- Work collaboratively with others when inspecting and reporting on aerodrome serviceability
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include demonstration of applying:

- the required knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement.

### **Context of and specific resources for assessment**

Performance is demonstrated consistently over time and in a suitable range of contexts.

Resources for assessment include access to:

- a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and equipment, and
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals..

### **Method of assessment**

Assessment of this unit must be undertaken by a registered training organization.

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur in an appropriate range of situations in the workplace.

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Aerodromes may include:
- aerodrome environs:
    - areas surrounding navigational aids
    - buildings
    - drainage systems
    - fences and gates
    - obstacle limitation surfaces (OLS)
    - permanent or temporary structures in the aerodrome environment
  - certified aerodromes
  - registered aerodromes
  - Defence aerodromes
  - joint-user aerodromes
  - other (unclassified) aerodromes
- Workplace may include:
- aerodrome environs
  - airside
  - entire aerodrome
  - landside
  - office
- Workplace procedures may include:
- airside driving rules
  - company procedures
  - enterprise procedures
  - organisational procedures
  - standard operating procedures (SOPs)
- Workplace hazards may include:
- aircraft noise
  - aircraft movements
  - aircraft propellers and rotors
  - dust
  - exposed electrical leads and connections
  - foreign object debris (FOD)
  - fumes
  - hazardous/toxic materials
  - high voltage electrical cables
  - jet blast, propwash
  - other vehicles in the vicinity of the aircraft
  - personnel in the vicinity of the aircraft
  - slippery surfaces
- Regulatory requirements may include:
- Civil Aviation Safety Regulations (CASRs)



- Defence Orders and Instructions
- standards and recommended practices (SARPs) of the International Civil Aviation Organization (ICAO)
- Manual of Standards (MOS) Part 139 - Aerodromes
- state/territory and commonwealth regulations concerning:
  - workplace health and safety (WHS)/occupational health and safety (OHS), including drug and alcohol management
  - workplace relations
  - environmental sustainability

Aerodrome hazard and serviceability inspections must include:

- animal and bird hazards and objects becoming hazards within obstacle limitation areas
- movement areas:
  - apron
  - clearway
  - runway and runway strip
  - runway end safety area (RESA)
  - taxiway and taxiway strip

Procedures for initiating repairs or dealing with hazards and/or unserviceabilities may include:

- accessing current weather information and public/aviation forecasts for the worksite
- closing the aerodrome to all air traffic
- contacting the aerodrome users
- dealing with the hazard
- ensuring that lighting required to carry out works does not represent a hazard to aircraft operations
- extinguishing lighting to hazardous section of the movement area
- notifying appropriate aerodrome maintenance personnel or contractors
- marking unserviceable area
- notifying relevant aerodrome personnel
- partial closure of the movement area
- reporting by NOTAM
- serviceability inspection following repairs/rectification
- undertaking the repairs

Hazardous situations requiring reporting may include:

- aerodrome works
- changes to temporary or permanent published aerodrome information
- circuit failure

Relevant authorities for reporting purposes may include:

Persons that may need to be notified regarding aerodrome serviceability may include:

Hazardous situations leading to aerodrome unserviceability may include:

- failure of:
  - aerodrome beacon
  - lighting to the wind indicator
  - obstacle lights
  - Pilot Activated Lighting (PAL)
- hazardous situations resulting in some or all of the aerodrome becoming unserviceable
- partial lighting failures (such as described in MOS Part 139 – Aerodromes)
- power supply failure
- restoration of aerodrome serviceability
- aerodrome operator or delegated person
- aerodrome users
- Air Traffic Control (ATC)
- Australian Defence Forces Command for military bases
- Civil Aviation Safety Authority (CASA)
- NOTAM Office (Airservices Australia)
- aerodrome tenants/users
- Air Traffic Control (ATC)
- airline personnel and managers
- contractors
- emergency services personnel
- other aerodrome/workplace personnel and managers
- relevant technical staff
- security personnel
- safety personnel
- bird or animal activity
- aerodrome works (such as Time Limited Work, major works requiring Method of Working Plan (MOWP))
- changes or loss of runway surface frictional characteristics
- damaged fences or open gates
- damaged wind indicator
- disabled aircraft, vehicles, and equipment
- excessive loose materials
- faulty drains
- flooding
- fuel and oil spills
- incorrect or unclear markers and unclear runway

markings

- long grass, surface cracks, stones and debris
  - loss of runway shape
  - loss of visibility of markings
  - potholes, cracks, scouring, ruts
  - runway edge fretting, and drop off
  - stripping
  - situations restricting effective operation of navigational aids such as:
    - obstructions (trees, vehicles, structures)
    - vehicle movements within restricted areas
  - unsatisfactory bearing capacity
  - vehicles, plant and equipment on the movement area
- Temporary aerodrome lighting may include:
- battery powered lights
  - hard-wired portable lights
  - kerosene flares
  - solar powered lights
- Suitable means of reporting may include:
- Method of Working Plan (MOWP)
  - Notice to Airmen (NOTAM)
  - verbal communications
  - written communication such as fax or email

## Unit Sector(s)

Not applicable.

## Competency Field

B - Equipment Checking and Maintenance