

# **Aerodrome safety inspection and report**

***This publication is only advisory. It gives the preferred method for complying with the Civil Aviation Regulations. It is not the only method, but experience has shown that if you follow these procedures you will comply with the Civil Aviation Regulations.***

***Always read this advice in conjunction with the appropriate CARs.***

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## **The relevant regulations**

- Civil Aviation Regulation 89ZA
- And CARs 89ZB and 89ZC

## **Who this CAAP applies to**

- Operators of licensed aerodromes.
- Operators of unlicensed aerodromes used for regular public transport
- (RPT) operations by aircraft with more than 9 passenger seats.
- Aircraft operators conducting RPT operations.
- Aerodrome and aircraft operators who wish to introduce RPT operations.
- Persons who carry out the aerodrome safety inspection and make the report.

## **Why this publication was written**

The regulations governing the safety inspection of aerodromes used for RPT operations by aircraft with more than 9 passenger seats changed in December 1992.

Aerodrome operators are now required to arrange for a safety inspection of the aerodrome and prepare a report. The first aerodrome safety inspection report is due by December 1993.

The purpose of this CAAP is to provide guidance on what needs to be inspected, how to carry out the inspection and how to prepare the aerodrome safety inspection report.

## **Status of this CAAP**

This is the first CAAP to be written on aerodrome safety inspection reports.

## **For further information**

Contact the CAA District Office closest to you.

**Purpose of the aerodrome safety inspection report**

An aerodrome safety inspection report provides the aerodrome operator with an annual technical assessment of the safety condition of the aerodrome, covering:

- published or reported aerodrome information;
- adopted aerodrome operating procedures;
- standards for aerodrome facilities and equipment.

And gives the aerodrome operator an assurance that the more critical or significant aerodrome deficiencies will be detected.

Please note that this inspection is different to the “aerodrome serviceability inspection” carried out by the Reporting Officer, which is specified in Chapter 9 of the *Rules and Practices for Aerodromes*.

**Which aerodromes require a safety inspection and report?**

Licensed aerodromes and unlicensed aerodromes used for RPT operations by aircraft with more than 9 passenger seats.

**Who conducts the aerodrome safety inspection?**

**THE AERODROME SAFETY INSPECTOR**

The aerodrome safety inspection must be carried out by, or under the direction of, an Aerodrome Safety Inspector (ASI) who meets the requirements of CAR 89ZB.

The ASI must be appointed by the aerodrome operator.

The aerodrome operator can appoint a person to be an ASI who is either:

- an engineer with qualifications acceptable by the Institution of Engineers Australia, with at least 3 years' experience in aerodrome planning, operation or maintenance, and with a sound knowledge of the regulations, standards, practices and procedures applicable to the operation and maintenance of aerodromes; or
- a technical officer with a certificate in engineering or surveying, or the holder of an overseer's certificate, with at least 3 years' experience in aerodrome planning, operation or maintenance, and with a sound knowledge of the regulations, standards, practices and procedures applicable to the operation and maintenance of aerodromes.

The aerodrome operator may appoint a person with equivalent qualifications, experience and knowledge only after that person has been approved by the CAA.

- In general this person will only be approved for specific aerodromes and may be subject to specified conditions.

### **SPECIALIST ASSISTANCE**

Where the ASI does not have a good understanding of a subject area, specialist assistance can be used. For example, ornithologist for bird control, electrical engineer or electrician to check on lighting defects, etc.

### **When is the aerodrome safety inspection carried out?**

The first aerodrome safety inspection and report for existing aerodromes is required by December 1993.

Subsequent aerodrome safety inspections must be conducted not later than 15 months after the previous inspection.

All aerodromes used for RPT operations require an aerodrome safety inspection under CAR 89ZA. This includes any aerodrome currently licensed under the old CAR 88, if they are used for RPT operations.

### **Conducting the aerodrome safety inspection**

#### **LICENSED AERODROMES**

- Verify that the aerodrome information in the Aeronautical Information Publication - Enroute Supplement Australia (AIP-ERSA) and in any NOTAM is current.
- Check that the aerodrome operator is complying with the aerodrome operating procedures documented in the Aerodrome Manual and whether the procedures are proving effective.
- Check that the aerodrome operator is complying with the safety standards for the aerodrome facilities and equipment set out in the Rules and Practices for Aerodromes.

#### **UNLICENSED AERODROMES**

- If the aerodrome data is published in AIP-ERSA, check that the published aerodrome information and that contained in any NOTAM is current.
- If the aerodrome data is not published in AIP-ERSA, check that the aerodrome information provided to aircraft operators is current and that there are procedures to inform aircraft operators of any changes to the condition of the aerodrome.
- Check that the aerodrome operator is complying with established operating procedures and whether the procedures are proving effective. If aerodrome operating procedures have not been established, check reason why and suggest procedures to be adopted. The CAA suggests

that the procedures be documented in a similar manner to those in the Aerodrome Manual for licensed aerodromes.

- Assess the physical condition of the aerodrome facilities and equipment for compliance with the safety standards set out in the *Rules and Practices for Aerodromes*.

The safety inspection should focus on known or recurring problem areas as highlighted from serviceability inspections or accident and incident reports.

Effort should not be wasted in situations where problems are unlikely to be found. For example, when verifying the strength of a runway, a visual assessment of the condition of the surface of the runway is sufficient to confirm the reported strength. If the condition of the runway is unsatisfactory a pavement evaluation may be sought.

Aerodromes licensed under the old CAR 88, without an aerodrome manual should be treated as unlicensed during the transition period, for the purpose of the aerodrome safety inspection report.

### **The aerodrome safety inspection report**

The aerodrome operator must send the completed report to the CAA within 30 days after the inspection.

We suggest that the aerodrome safety inspection report follow the format shown in the example attached.

The body of the report should provide details of the inspection findings and recommendations on what action to take to rectify any discrepancies or deficiencies found by the aerodrome safety inspection.

To assist the ASI's in carrying out the aerodrome safety inspection and presenting the findings, the following suggested checklists are also included in the attachment:

- aerodrome information checklist;
- aerodrome operating procedures checklist; and
- aerodrome facilities and equipment checklist.

Records and findings pertinent to the report should be retained for a minimum of two years and made available to the CAA for audit purposes.

### **NON-COMPLIANCE WITH OPERATIONAL PROCEDURES**

Where non-compliance with operating procedures is noted, the report should recommend that compliance be ensured or, alternatively, that the Aerodrome Manual or established procedures be revised to reflect current practice.

Where the operating procedures fail to ensure compliance with the aerodrome standards, the report should recommend that established operating procedures be revised and the relevant sections of the Aerodrome Manual amended.

### **NON-COMPLIANCE WITH AERODROME STANDARDS**

Where the aerodrome facilities and equipment do not comply with the safety standards the report should recommend the appropriate remedial action to be taken.

### **CERTIFICATION**

The aerodrome safety inspector should certify on the report that the report is an accurate record of the inspection and that the aerodrome (conditional upon rectification of any recorded deficiencies) is operated in compliance with the applicable safety standards.

### **REMEDIAL ACTION FOR DEFICIENCIES**

When submitting the aerodrome safety report the aerodrome operator should advise the CAA what remedial action will be taken where deficiencies or discrepancies have been found.

### **AVAILABILITY OF REPORTS TO AIRCRAFT OPERATORS**

The licensed aerodrome operator should give a copy of the report to each airline operator on request.

The unlicensed aerodrome operator should give a copy of the report to each airline operator conducting RPT operations at the aerodrome.

## **Attachments**

Attachments to this CAAP are as follows:

- 1 Suggested Format for Aerodrome Safety Inspection Report
- 2 Suggested Aerodrome Information Checklist
- 3 Suggested Aerodrome Operating Procedures Checklist
- 4 Suggested Aerodrome Facilities and Equipment Checklist

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**SUGGESTED FORMAT FOR  
AERODROME SAFETY INSPECTION REPORT**

**1 Certification**

I have carried out a safety inspection of ..... Aerodrome  
for the year ..... on .....

I meet the requirements of Part 1 (a)  , (b)  or (c)  of Schedule 11. (please indicate as applicable)

The aerodrome safety inspection was conducted in accordance with the requirements set by the Civil Aviation Authority. The safety inspection procedure included an examination of evidence recorded in the course of the year and documented in the reports listed below.

The opinion expressed in this report has been formed on the above basis.

I hereby certify that to the best of my knowledge, and conditional upon rectification of any indicated deficiencies, the published aerodrome data is correct and that the aerodrome operating procedures and aerodrome facilities and equipment meet the applicable safety standards.

.....  
(Signature of Aerodrome Safety Inspector)

.....  
(Full Name of Aerodrome Safety Inspector)

.....  
(Date)

**2 The Year in Brief**

(Briefly outline the significant events at the aerodrome during the year)

- eg developmental works
- major maintenance works
- accidents or incidents
- aircraft activity at aerodrome
- other

### **3 Documents and Reports Reviewed**

(List relevant reports/documents prepared in the course of the year which have been considered)

eg      serviceability inspection logbooks  
         accident and incident reports  
         works/maintenance records  
         emergency exercise reports  
         specialist reports (eg pavements, bird hazards)  
         NOTAMs issued

### **4 Report Summary**

Provide a summary of the aerodrome safety inspection, highlighting, if applicable, those areas which are substandard and what corrective action is recommended.

## Suggested Aerodrome Information Checklist

This checklist can be used by the aerodrome safety inspector to assess the accuracy of published (AIP-ERSA) or reported aerodrome information.

The aerodrome information may also be verified from the physical inspection of the aerodrome facilities and equipment.

### **Aerodrome location and contact**

- Operator's name, address, contact telephone number and facsimile number
- Aerodrome location
  - at a new aerodrome confirm geographic co-ordinates of the aerodrome reference point

### **For each runway (check NOTAMS if there are changes to runway data from development or major maintenance works)**

- Designation
- Strength
  - adequacy of reported strength for the aircraft using (assessed from condition of runway surface)
- Surface type
  - paved/ gravel/ natural
- Length, width and strip width
- Declared distances
  - TORA, TODA, ASDA and LDA
- Supplementary take-off distances

### **Lighting and visual aids**

- Are systems current and operational?

### **Ground services**

- Are these correct?

### **Special procedures eg movement area manoeuvrability**

- Do these still apply?

### **Notices eg pavement restrictions animal hazards**

- Do these still apply?

### **Other published data**

Does it still apply?

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## Suggested Aerodrome Operating Procedures Checklist

The checklist provided below can be used by the aerodrome safety inspector when assessing the aerodrome operating procedures documented in the Aerodrome Manual, or provided by the aerodrome operator.

Not all the checklist items will apply, particularly at the smaller aerodromes.

### Aerodrome emergency plan

Assess from the emergency plan established for the aerodrome, reports on aerodrome emergency exercises, or actual emergencies:

- Aerodrome emergency committee
  - current membership and contact arrangements
  - frequency and adequacy of meetings
  - are all participating/responding authorities appropriately represented?
- Aerodrome emergency exercise
  - are overall objectives of the exercise and those for each responding organisations clearly stated?
  - procedures for testing the adequacy of the plan and reviewing the results
  - frequency of conducting exercises
  - are changes to the plan required?
- Notification and response
  - accuracy of notification checklists
  - adequacy of equipment supplies
- Procedures for reviewing exercises/emergencies
  - are these adequate?

### Aerodrome lighting

Use logbooks and field observation to assess:

- Staff
  - adequacy and suitability of resources
- Inspection content
  - adequacy of checklist
- Inspection and maintenance system
  - staff attitudes
  - interface with ATS
- Frequency
  - adequacy of inspection frequency
  - adequacy of call out arrangements
- Recording inspection results
  - adequacy of records
  - follow up action of noted defects

**Aerodrome reporting**

Use logbooks, AIP amendments, NOTAMs issued, comment by ATS and field observation to assess:

- Staff and organisational requirements
  - adequacy and suitability of resources
- Report content
  - accuracy and efficiency of reports and NOTAM format
  - staff understanding of requirements
- Reporting arrangements
  - interface with ATS
  - interface with AIS
  - staff attitudes
- Promptness
  - are reports/NOTAMs issued promptly on detecting an unserviceability, or change in AIP data?
- Recording
  - adequacy
  - recording of verbal reports to ATS
  - do current reports/NOTAMs correlate with the field situation?

**Access to aerodrome**

Use field observations and questioning to assess whether aerodrome staff are aware of their responsibilities.

Use examples of security breaches to assess adequacy of procedures.

**Aerodrome inspections**

Use logbooks, comments by ATS and field observation to assess:

- Staff and organisational arrangements
  - adequacy and suitability of resources
  - effectiveness of training program
- Inspection content
  - adequacy of checklist
  - staff understanding of requirements
- Inspection practice
  - adequacy of inspection method
  - staff attitudes
  - interface with ATS
- Frequency
  - adequacy of inspection frequency
  - adequacy of call out arrangements
- Logbook
  - adequacy of records
  - has follow up action been taken when defects were noted?

- do recent entries correlate with the field situation?

**Aerodrome works safety**

Use logbooks to assess:

- Staff
  - adequacy and suitability of resources
  - efficiency of training program
- Works planning and documentation
  - current list of organisations involved in work co-ordination
  - current list of fixed based operators
  - adequacy of consultation for works planning and draft Method Of Works Plans (MOWP)
  - adequacy of notice of planned works
  - consistency of MOWP format and content
  - adequacy of MOWP distribution list
  - availability and suitability of visual aids for marking unserviceabilities
- Execution of works
  - safety officer attitude, competence and awareness of safety arrangements
  - suitability of procedures for setting out visual aids
  - conduct of works in accordance with MOWP
  - conduct of time limited works in accordance with RPA Chapter 13
  - interface with ATS
- Logbook
  - are work related accidents/incidents noted and follow-up action taken?

**Aircraft parking control**

Observe aircraft parking arrangements/ procedures to assess:

- Control procedures
  - currency of apron parking plans
  - allocation of aircraft parking positions
  - arrangements with ATS for engine start and push back

**Airside vehicle control**

Discuss the administrative arrangements and generally observe vehicle movements entering airside and operating on the manoeuvring area, aprons, and perimeter roads, to assess:

- Vehicle control procedures
  - adequacy of system for approving airside vehicle operations
  - use and adequacy of driver competency testing
  - consistency/adequacy of rules for airside vehicle operations

- General rules of compliance
  - are rules (speed limits, stop signs, etc) being observed?
  - marking/lighting of vehicles or arrangements for safety officer escort
  - driver attitudes
  - adequacy of aerodrome operator surveillance measures
  - adequacy of disciplinary action
  - adequacy of radio procedures by staff using vehicles on the movement area

### **Bird hazard management**

Use logbooks, comments by ATS, birdstrike statistics and field observations to assess:

- Staff
  - adequacy and suitability of resources
  - adequacy of training programs, including use of firearms
- Surveillance and harassment
  - staff understanding of requirements
  - adequacy of inspection, bird count and harassment/dispersal techniques
  - effectiveness of environmental management
  - consistency and effectiveness of the recording/reporting process
- Logbook
  - adequacy of logbook detail
  - do recent entries correlate with the field situation?
  - has all necessary follow-up action been taken?

### **Obstacle control**

Review the administrative arrangements and use field observation to assess:

- CA(BC)Rs or obstacle limitation surface plans
  - currency and adequacy
  - adequacy of arrangements for production of schedules/plans
- Local Government legislation/control
  - adequacy of local government by-laws or other legislation
  - efficiency of arrangements with local authority for referral of building applications
- Height control
  - adequacy of system for checking likely obstacles
  - reliability of system for referral to CAA for aeronautical assessment
  - arrangements for obstacle marking and lighting

<b>Disabled aircraft removal</b>	Assess likely effectiveness or review an actual occurrence:
	<ul style="list-style-type: none"> <li>• Notification and response <ul style="list-style-type: none"> <li>– accuracy of checklists</li> <li>– staff knowledge of requirements and general preparedness</li> <li>– adequacy/suitability of equipment</li> </ul> </li> <li>• On-scene co-ordination and control <ul style="list-style-type: none"> <li>– effective deployment of available resources</li> <li>– efficiency in determining/reporting operational restrictions</li> <li>– interface with BASI and ATS</li> </ul> </li> </ul>
<b>Hazardous material</b>	Use field observation to assess:
	<ul style="list-style-type: none"> <li>• Handling arrangements <ul style="list-style-type: none"> <li>– adequacy of precautions for delivery, storage, dispensing of hazardous materials</li> <li>– staff understanding of requirements</li> <li>– effective separation/isolation of storage from public areas</li> </ul> </li> </ul>
<b>Radar and navigational aids</b>	Use field observation to assess:
	<ul style="list-style-type: none"> <li>• Arrangements <ul style="list-style-type: none"> <li>– adequacy of controls over the erection of structures - adequacy of controls over site maintenance</li> <li>– warning signs</li> <li>– security fencing and fire breaks</li> </ul> </li> <li>• General level of compliance <ul style="list-style-type: none"> <li>– are rules generally being observed?</li> <li>– staff awareness/complacency</li> </ul> </li> </ul>
<b>Low visibility operations</b>	Applicable at aerodromes where low visibility operations are conducted, and aerodrome operators are required to carry out the measurement of the runway visual range.
	Use logbooks and field observations to assess:
	<ul style="list-style-type: none"> <li>• Staff <ul style="list-style-type: none"> <li>– adequacy and suitability of resources</li> </ul> </li> <li>• Measurement <ul style="list-style-type: none"> <li>– accuracy/efficiency of method</li> <li>– interface with ATS</li> </ul> </li> <li>• Frequency <ul style="list-style-type: none"> <li>– adequacy of call out arrangements</li> </ul> </li> </ul>

## **Suggested Aerodrome Facilities and Equipment Checklist**

This checklist can be used by the aerodrome safety inspector when assessing the aerodrome facilities and equipment for compliance with the safety standards.

### **For each runway**

- Dimensions (if altered)
  - AIP-ERSA check
- Declared distances
  - AIP-ERSA check
- Surface
  - texture
  - roughness
  - cleanliness
  - natural surface grass height
  - other faults (cracks, holes, oversized stones, rutting, etc)
- Strength
  - AIP-ERSA check
  - adequate for aircraft using
- Shoulders
  - surface material
  - width
  - adequate strength for aircraft using
  - slope
- Strip
  - width, graded and ungraded
  - surface condition (subsidence, depressions, loose stones, grass height)
  - drainage (drains, ponding)
  - obstructions
- RESA, Clearways, Stopways
  - surface material
  - strength
  - slope
  - obstruction
- Runway Lighting
  - permanent, high intensity lighting
  - portable lighting
  - standby power
  - PAL system
- Markers and marking
  - in accordance with standards

- Obstacle limitation surfaces and obstruction marking and lighting
    - new obstructions
    - infringements
    - obstruction lighting
- Each taxiway and apron area**
- Taxiway width
    - adequate for aircraft using
  - Apron dimensions
    - adequate for aircraft using
  - Surfaces
    - texture (especially high speed taxiways)
    - roughness (slopes, bird baths, undulations)
    - cleanliness (loose aggregate, loose stone, debris)
    - maintenance of grassed areas
  - Other faults
    - poor drainage
    - cracks, holes, rutting
  - Strength
    - adequate for aircraft using
  - Taxiway and Apron Shoulders
    - surface material
    - width (adequate for aircraft using)
    - strength (adequate for aircraft using)
    - slope/shape for drainage
    - obstructions (eg drains, movement area guidance signs, fences near parking area, equipment infringement, etc)
  - Taxiway Strip
    - frangible objects
  - Markings and Markers
    - in accordance with standards
  - Aircraft Tie-Down Areas
    - cables, pegs, rings
    - location
    - marked/sign posted
  - Lighting
    - condition of permanent/portable lighting
    - condition of apron flood lighting
  - Ground earthing points
- Wind direction indicators**
- Primary and Secondary
    - in accordance with standards

**Bird hazards**

- Known problems
- Harassment action
- Environmental action taken to minimise bird activity

**Animal hazard**

- Evidence of kangaroos or other animals on the movement areas

**Aerodrome based navigational sites**

- Security
- Signs
- Ground maintenance

**Fences**

- Adequacy of aerodrome boundary fences and terminal area fences
  - control of entry
  - condition
  - signs