



Part 139 Guide to Sample Aerodrome Manual

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This document contains guidance material intended to assist CASA officers, delegates and the aviation industry in understanding the operation of the aviation legislation. However, you should not rely on this document as a legal reference. Refer to the civil aviation legislation including the Civil Aviation Act 1988 (Cth), its related regulations and any other legislative instruments—to ascertain the requirements of, and the obligations imposed by or under, the law.

Preface

As a Commonwealth government authority, CASA must ensure that the decisions we make, and the processes by which we make them, are effective, efficient, fair, timely, transparent, properly documented and otherwise comply with the requirements of the law. At the same time, we are committed to ensuring that all of our actions are consistent with the principles reflected in our Regulatory Philosophy.

Most of the regulatory decisions CASA makes are such that conformity with authoritative policy and established procedures will lead to the achievement of these outcomes. Frequently, however, CASA decision-makers will encounter situations in which the strict application of policy may not be appropriate. In such cases, striking a proper balance between the need for consistency and a corresponding need for flexibility, the responsible exercise of discretion is required.

In conjunction with a clear understanding of the considerations mentioned above, and a thorough knowledge of the relevant provisions of the civil aviation legislation, adherence to the procedures described in this manual will help to guide and inform the decisions you make, with a view to better ensuring the achievement of optimal outcomes in the interest of safety and fairness alike.

Shane Carmody Chief Executive Officer and Director of Aviation Safety

Instructions

To satisfy the requirements of the Civil Aviation Safety Regulations 1998 (CASR), and the associated Part 139 (Aerodromes) Manual of Standards 2019 (Part 139 MOS), CASA has prepared the Aerodrome Sample Manual template in two formats:

- (1) a version in CASA's free online programme Manual Authoring and Assessment Tool (**MAAT**), with:
 - (a) editable sample texts for operators to select and reflect aerodrome operations
 - (b) guidance with tips on how best to draft the manual
 - (c) attachment and inclusion functionality
 - (d) CASR and MOS references in relevant sections
 - (e) MAAT tips on editing
 - (f) simultaneous editing functionality (multiple authors)
- (2) a Word template with:
 - (a) a template with pre-established headings and subsections
 - (b) editable sample texts for operators to modify to reflect actual aerodrome operations
 - (c) a Guide to the Sample Manual template with tips on how best to draft the manual
 - (d) CASR and MOS references in relevant sections
 - (e) some relevant technical guidance.

Aerodrome operators interested in using the MAAT version can <u>register</u> to obtain a login and take online training (approx. 1 hour).

Aerodrome operators are not compelled to use either of these two formats. Operators may prefer to produce their aerodrome manual in Microsoft Word, in a format similar to the Sample Manual template that aligns with this Guide.

The content in this Guide, in the associated Word template and in the MAAT template has been structured in a logical order and provides clear references to the legislative requirements.

It is important to note that this is a Guide and, therefore, its content is intended as guidance information only and should not appear in the aerodrome manual submitted to CASA.

Where possible, sample text / procedures have been developed. Alternate provisions are representative of the varying complexities of the operating environment and the scalable certification structure. Where procedures are prescriptive, there is limited scope to deviate from the mandatory legislative requirements. Aerodrome-specific procedures will require tailoring to reflect the uniqueness of the aerodrome's facilities and operations.

Aerodrome operators who adopt any of the sample text provided in the sample manual template are to ensure they can demonstrate that they are operating in accordance with those procedures. It is therefore recommended that the procedures are carefully considered prior to the aerodrome manual being submitted to CASA.

Subsidiary materials

Additional documents can be introduced as subsidiary materials to the aerodrome manual provided they are clearly referenced in the manual. Subsidiary materials are to be provided to CASA on their initial adoption. After this, aerodrome operators are not compelled to provide subsidiary materials to CASA unless CASA issues a written request for the materials.

Where the Part 139 MOS explicitly requires information to be recorded in the manual, it is acceptable to attach the required information as an appendix to the manual as the subsidiary material provision does not apply to this content.

Some parts of this sample manual may not be relevant to some aerodromes. In this case, the aerodrome manual must include specific information that:

- identifies the relevant MOS provision
- states that the provision is NOT APPLICABLE or N/A.

MOS and CASR provisions are referenced throughout the Guide and the Sample Manual template to facilitate when verifying specific requirements.

All aerodromes are required to be operated in accordance with the procedures set out in their aerodrome manual, unless a temporary non-compliance is necessary to ensure the safety of aircraft, aircraft operations, or individuals using the aerodrome.

A permanent change to operations requires an amendment to the aerodrome manual. Written notice of the change, and a copy of the altered part of the manual clearly identifying the modification, are to be provided to CASA within 30 days.

Irrespective of whether the manual is retained in hard copy or electronic form, the aerodrome manual must be readily accessible and usable by aerodrome personnel whenever the aerodrome is operational.

CASA has produced an advisory circular (AC139.C-01 Aerodrome manual) that provides additional guidance on developing and maintaining an aerodrome manual.

Revision history (of this Guide)

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Revisions to this Guide are dated and a new version number will be assigned. A summary of the changes or amendments, and the date on which the change was made, is also recorded.

Version no.	Date of release	Section / page	Written summary of change(s)	Date change made
1.0	May 2020	All	First issue	N/A

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Appendix A. Heading

Amendment record

(Part 139 MOS - 10.03)

When amendments are made to an aerodrome manual, they must be noted in this section, regardless of whether the MAAT version or the Word template have been used.

See MAAT tips for amendment features concerning section and page numbers.

As required by section 10.03 of the Part 139 MOS, the aerodrome manual must:

- display an up-to-date version number
- show the date for the change was made to each section or page of the manual
- identify what changes or amendments have been made.

The table provided in the Sample Manual template aligns with subparagraph 10.03(2)(b), which is also detailed in subsection 1.4.2 of the template.

Distribution list

(Part 139 MOS - 10.02(2); 10.03(3)(a)(b))

The aerodrome manual must be kept at the premises of the aerodrome operator and if requested be made available to CASA.

This section contains a distribution list to ensure proper distribution of the aerodrome manual and the demonstrate to CASA that all relevant employees have access to the relevant information. The manual can be made available electronically or in hard copy, and this should be reflected in the distribution list / table.

If a hard copy of the aerodrome manual is made available to anyone, it is the aerodrome operator's responsibility to ensure that:

- those using such copies are aware that hard copies of manuals are considered uncontrolled and that they may not be the most updated version
- such hard copies are as up-to-date as possible.

It is recommended that aerodrome operators that issue hard copies include some text to make users of their manuals aware of these issues, for example:

"This manual is occasionally printed, but {insert aerodrome name} Airport emphasises that any hard copies are uncontrolled and may not be the most up-to-date version. {insert aerodrome name} makes its best effort to ensure that such hard copies are as up-to-date as possible."

Operators should ensure:

- the aerodrome manual is made available and is understood by all required personnel
- all amendments to operations are incorporated in the manual in a timely fashion
- all copies are updated with the latest changes
- obsolete copies of the manual are removed when a new revision is issued.

Acronyms and abbreviations

See Sample Aerodrome Manual

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Definitions

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Reference material

Document type	Title
Regulation	Part 139 of the Civil Aviation Safety Regulations 1998
Regulation	Part 175 of the Civil Aviation Safety Regulations 1998
Manual of Standards	Part 139 (Aerodromes) Manual of Standards 2019

1 Aerodrome administration

1.1 Operator's statement

(CASR 139.110(5)(c))

The objective of this statement is to demonstrate the authorisation holder's commitment to ensuring the information in the aerodrome manual meets the expected standard of performance required to safely operate and maintain their aerodrome.

The operator's statement should be signed by the person at the highest level of the organisation who has overall responsibility for safety.

1.2 Organisational structure

(Part 139 MOS - 11.02(a)(i))

In their aerodrome manual, aerodrome operators are required to include an organisational chart that shows the aerodromes management and administration structure.

1.3 Key personnel

The CASRs and the Part 139 MOS identify several key roles and functions that are integral to the safe operation and maintenance of the aerodrome.

In this section of the aerodrome manual, aerodrome operators are required to record the following:

- management positions responsible for the maintenance of the aerodrome, including the accountable manager
- details of the individuals or positions responsible for aerodrome manual control
- details of the individuals or positions responsible for aerodrome operations and safety functions

Individuals / positions with procedural responsibilities are identified in the respective sections of this guide.

Some sections in the manual may require specific personnel information. e.g. Emergency response personnel are to be included in the Aerodrome Emergency Response section of the aerodrome manual; reporting officers are to be included in the inspection positions subsection of the aerodrome manual etc.

1.3.1 Accountable Manager

(CASR 139.110(1)(5); Part 139 MOS - 11.02(a)(ii); 13.02; 16.08(3); 25.04(2)(4))

To satisfy subparagraph CASR 139.110(1), operators of certified aerodromes are required to nominate an accountable manager for their aerodrome. The responsibilities of the accountable manager are outlined in subparagraph CASR 139.110(5).

Section 13.02 of the Part 139 MOS requires the accountable manager to have a general knowledge of the relevant civil aviation safety legislation and standards that are applicable to the inspection, reporting, operation and maintenance of their aerodrome.

To satisfy section 13.01 of the Part 139 MOS, an aerodrome operator is required to record the name, position and responsibilities of the accountable manager.

To effectively carry out their functions, the accountable manager should have:

- appropriate seniority with the organisation
- an appropriate level of authority to ensure that activities are carried out to the standard required
- an understanding of the requirements for competence of aerodrome personnel
- knowledge and understanding of the key issues of operational risk management within the aerodrome.

In addition to the functions nominated in this section of the manual, the accountable manager may have other responsibilities within this manual, i.e. the aerodromes Safety Management System (SMS) framework and works planning processes. Where applicable, these should be addressed in the relevant sections.

1.3.2 Management positions (aerodrome operation and maintenance)

(Part 139 MOS - 11.02(a)(ii))

Aerodrome operators are required to record the management positions responsible for the operation and maintenance of their aerodrome in their manual. At larger or more complex aerodromes, the roles and functions pertaining to the operation and maintenance of the aerodrome will likely be separated and may extend across multiple personnel.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome. Copy and paste the sample text for each additional management position and add as necessary.

1.3.3 Aerodrome operations and safety functions

(Part 139 MOS - 11.02(c)(ii))

An aerodrome operator is required to record the individuals or positions responsible for aerodrome operations and safety functions in the aerodrome manual.

Copy and paste the sample text for each additional responsible position and add as necessary.

1.4 Aerodrome manual administration

(Part 139 MOS - 10.01(1)(2)(3); 10.02(1)(3)(4); 10.04(1)(2)(b)(c); 11.02(b))

Operators of a certified aerodrome must have an aerodrome manual that addresses all requirements set out in the Part 139 MOS. In the event information required to be included in the aerodrome manual is not relevant, the aerodrome manual is required to include information that:

- uses the heading NOT APPLICABLE or N/A, and
- identifies the MOS requirement by reference to the relevant provision of the MOS.

The aerodrome certificate holder should be satisfied as to the appropriateness of each provision in their manual.

Other manuals, plans, standard operating procedures, databases, files, data, lists or systems may be adopted as subsidiary materials to the aerodrome manual, provided they are clearly referenced in the relevant section of the manual.

The distribution list in the aerodrome manual should establish whether the aerodrome manual is issued in hard copy or electronic form, or a combination of hard copy and electronic form. It should also confirm that the manual is conveniently accessible and usable to aerodrome personnel at all times during normal hours of aerodrome operation.

1.4.1 Manual control

(Part 139 MOS - 10.01(4); 11.02(b))

Aerodrome operators are required to nominate one or more persons or positions to be functionally responsible for control of the aerodrome manual.

Although ensuring compliance with format, content, retention, and amendment requirements are attributable to the functions for manual control, the accountable manager is ultimately responsible for procedural compliance.

Where more than one individual / position is nominated, additional lines need to be added to the bottom of the table provided in the Word template so that all individuals / positions can be appropriately recorded.

1.4.2 Manual amendment

(Part 139 MOS - 10.03(1)(2)(3))

The need to amend the aerodrome manual should be considered when there are changes to:

- the Civil Aviation Safety Regulations 1998
- the Part 139 (Aerodromes) Manual of Standards 2019
- published aerodrome information
- operating procedures, including new procedures
- aerodrome facilities
- operations that occur at the aerodrome
- the organisational structure and / or contact details.

Where an amendment is made, the change in manual content must be easily identifiable to the reader. Operators using the Word template must adopt one of the following three methods as established in subparagraph 10.03(2) of the Part 139 MOS:

- 1. Tracked changes in which the changed information:
 - a. is shown in a different format to the unchanged information, and
 - b. includes reference to the date the change was made.

The first method would meet requirements by controlling track changes, shading, or coloured fonts in the Word template.

2. Updating the amendment record in the manual to include a written summary of each change and the date on which the change was made.

The second method would meet requirements by using the amendment record in the beginning of the Sample Aerodrome Manual template.

3. Another means (specify) which clearly illustrates the location, date and nature of the change.

The third method allows operators to include their own methodology in the Word template for tracking manual amendments provided that it meets the MOS requirements.

Note: The amendment record in the Sample Manual template has been structured to align with method 2.

In the event an amendment is made, the aerodrome operator is required to send written notification and a copy of the changed part of the manual clearly identifying the change to CASA of the change within 30 days.

1.4.3 Manual review

(Part 139 MOS - 12.09(6)(a)(ii))

Aerodromes that have 10,000 or more air transport passenger movements or 20,000 or more aircraft movements in a financial year are required to check, as part of their aerodrome technical inspection, the currency and accuracy of their aerodrome manual and any subsidiary materials.

All certified aerodromes below this trigger criterion are required to check the currency and accuracy of their aerodrome manual and any subsidiary materials as part of their aerodrome manual validation process.

Irrespective of which trigger criteria applies, a review of the aerodrome manual and any subsidiary materials is required to be completed at intervals not exceeding 12 months.

1.5 Authorisations

1.5.1 Aerodrome certificate – conditions

(Part 139 MOS - 11.01(3)(c))

In their aerodrome manual, aerodrome operators are required to record any conditions to which their aerodrome certificate is subject.

Provisions have been made in the sample text for new applicants and registered aerodromes that are deemed a certified aerodrome on commencement of the new rules; neither of which will have been issued an aerodrome certificate by CASA.

Existing certified aerodromes will also be deemed certified aerodromes on commencement of the new rules. Should a previously issued aerodrome certificate be subject to conditions, these conditions are to be recorded in the manual.

Aerodrome operators will be required to update this section of their manual whenever an aerodrome certificate is issued.

1.5.2 **Aerodrome instruments**

(Part 139 MOS - 11.01(3)(a))

In their aerodrome manual, aerodrome operators are required to record the details of any approvals, determinations, directions, exemptions or other instruments issued by CASA.

Operators may be required to include a copy of the approval, determination, direction, exemption or other instrument issued in the aerodrome manual. Where required, this will be stated on the documentation provided.

Sample text provided in the Word template should be edited to show the instruments the operator has been issued. Copy and paste the sample text table for each additional instrument and add as necessary.

2 Aerodrome Information

2.1 Aeronautical information

(Part 139 MOS - 11.01(1); Chapter 5)

In their aerodrome manual, aerodrome operators are required to record the aeronautical information referred in subparagraph 5.01(1) of the Part 139 MOS. This information is also required to be reported to the AIS provider (Airservices) for publication in the Aeronautical Information Package (AIP).

The integrity of aeronautical information is of paramount importance. This information must be recorded in accordance with the data quality requirements contained in the Data Product Specification (DPS) provided by Airservices. In the event there are no data quality requirements specified, the information must be recorded in accordance with Division 2, Chapter 5 of the Part 139 MOS.

To satisfy this requirement, aerodrome operators may elect to:

- directly record the information in the body of their aerodrome manual
- attach their aeronautical data package (ADP) as an Appendix to their manual
- use a combination of the above.

Should an aerodrome operator elect to refer to their ADP, it is the aerodrome operator's responsibility to ensure that all information that is required to be recorded in the aerodrome manual is present in the ADP.

At the time of submitting their application for certification, a new applicant may not have submitted their aeronautical information to Airservices, nor will they have an ADP. Irrespective of this, the required information is to be recorded in the proposed aerodrome manual that is submitted to CASA concurrently with the application for certification.

As the aerodrome manual is only required to contain the information that is reported to Airservices, information that is not applicable and subsequently not reported to Airservices is not required in the manual.

2.1.1 Aerodrome diagram

(Part 139 MOS - 11.01(1); 5.03(1)(a)-(j))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, a single aerodrome diagram that illustrates the following facilities (if applicable):

- the layout of runways, taxiways, and aprons
- the nature of the runway surfaces
- the designations and lengths of the runways
- the designations of the taxiways
- the location of illuminated wind direction indicators and / or non-illuminated wind direction indicators
- the location of the aerodrome reference point
- the location of the terminal buildings

- location of any helicopter runway type FATO areas or helicopter aiming points
- the location of glider runway strips (if located external to a runway strip)
- the location and type of VASIS.

/

2.1.2 Aerodrome administration statement

(Part 139 MOS - 11.01(1); 5.03(2)(a)-(c))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the following administrative information, as prescribed in subparagraph 5.03(2) of the Part 139 MOS:

- the aerodrome operators name, postal address, phone number, e-mail address, website and facsimile number (where applicable)
- the name and phone number of the person nominated by the operator to be the contact for any matters arising outside normal business hours
- whether the aerodrome is for part military use, public use, private use, or a combination of these uses.

The phone numbers, e-mail addresses and facsimile numbers provided must be numbers or addresses that are regularly monitored for incoming calls, e-mails or faxes.

2.1.3 Aerodrome location statement

(Part 139 MOS - 11.01(1); 5.03(4)(a)-(f))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the following information pertaining to the location of their aerodrome, as prescribed in subparagraph 5.03(4) of the Part 139 MOS:

- the aerodrome's name
- state or territory in which the aerodrome is located
- latitude and longitude based on the aerodrome reference point
- Y code
- elevation
- currency and accuracy of any Type A and B charts.

2.1.4 Movement area information – runways

2.1.4.1 Runway code number

(Part 139 MOS - 11.01(1); 5.04(1)(a))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the runway code number for each runway designation, as prescribed in subparagraph 5.04(1)(a) of the Part 139 MOS.

For aerodromes that have more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that the code number of each runway can be appropriately recorded.

2.1.4.2 Runway bearing, length, width, and surface type

(Part 139 MOS - 11.01(1); 5.04(1)(b)(c))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the bearing, length, width, and surface types for each runway, as prescribed in subparagraphs 5.04(1)(b) and (c) of the Part 139 MOS.

For aerodromes that have more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that the particulars of each runway can be appropriately recorded.

2.1.4.3 Threshold geographical location & elevation – instrument runways

(Part 139 MOS - 11.01(1); 5.04(1)(d)(i)(ii))

For each instrument runway, aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the geographical location coordinates and the elevation of the midpoint of each runway threshold, as prescribed in subparagraph 5.04(1)(d) of the Part 139 MOS.

The elevation of the midpoint of the runway threshold must be reported and measured in feet to an accuracy of one (1) foot, based on the Australian Height Datum (AHD).

For aerodromes that have more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that each runway direction can be appropriately recorded.

2.1.4.4 Runway pavement strength rating

(Part 139 MOS - 11.01(1); 5.04(1)(e))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the strength rating of the runway pavement, as prescribed in subparagraph 5.04(1)(e) of the Part 139 MOS.

The strength rating is required to be calculated using the ACN – PCN pavement rating system.

For aerodromes that have more than one runway, additional columns need to be added to the right of the table so that the particulars of each runway can be appropriately recorded.

2.1.4.5 Runway strip length and width

(Part 139 MOS - 11.01(1); 5.04(1)(f))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the length and the width of the runway strip(s), as prescribed in subparagraph 5.04(1)(f) of the Part 139 MOS.

For aerodromes that have more than one runway, additional lines need to be added at the bottom of the table provided in the Word template so that the particulars of each runway strip length and width can be appropriately recorded.

2.1.4.6 Runway slope

(Part 139 MOS - 11.01(1); 5.04(1)(g))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the runway slope for each runway, as prescribed in subparagraph 5.04(1)(g) of the Part 139 MOS.

For aerodromes that have more than one runway, additional lines need to be added at the bottom of the table provided in the Word template so that the particulars of each runway slope can be appropriately recorded.

2.1.4.7 Runway declared distances

(Part 139 MOS - 11.01(1); 5.04(1)(h))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the declared distance information for each runway direction, as prescribed in subparagraph 5.04(1)(h) of the Part 139 MOS.

The declared distances must be reported in metres and feet. Feet are to be segregated in parenthesis, i.e. metres to be reported as 1085 m; feet to be reported as (3560 ft).

If a runway direction cannot be used for take-off or landing, the declared distances must be reported as nil and accompanied by an explanation.

For aerodromes that have more than one runway, additional columns need to be added to the right of the table so that each runway's declared distances can be appropriately recorded.

2.1.4.8 Intersection departure take-off distances available

(Part 139 MOS - 11.01(1); 5.04(1)(h))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the intersection departure take-off distances for each runway direction, as prescribed in subparagraph 5.04(1)(h) of the Part 139 MOS.

Intersection departure take-offs assist in maintaining runway capacity and efficiency. Where air traffic procedures allow taxiway intersection departures, declared distances must be calculated in accordance with subparagraphs 5.12(3) and (4) of the Part 139 MOS.

For aerodromes that have more than one intersection departure, additional lines need to be added at the bottom of the table provided in the Word template so that the particulars of each intersection departure can be appropriately recorded.

2.1.4.9 Supplementary take-off distances available (STODA)

(Part 139 MOS - 11.01(1); 5.04(1)(h))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, supplementary take-off distances available for each runway direction, as prescribed in subparagraph 5.04(1)(h) of the Part 139 MOS.

For a take-off distance available (TODA) with an obstacle clear gradient of more than 1.6%, the STODA must be reported for obstacle clear take-off gradients of 1.6%, 1.9%, 2.2%, 2.5%, 3.3% and 5%, up to the gradient associated with the TODA, unless the corresponding STODA for a gradient is less than 800 m.

When calculating the STODA, care must be taken to ensure that a shielded object does not become critical for the lesser take-off distances. The slope of the runway must be considered.

For aerodromes that have more than one runway, additional columns need to be added to the right of the table so that the supplementary take-off distances for each runway end can be appropriately recorded.

2.1.4.10 Established OLS for the runway

(Part 139 MOS - 11.01(1); 5.04(1)(i))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the code number of the obstacle limitation surface (OLS) for each runway end, as prescribed in subparagraph 5.04(1)(i) of the Part 139 MOS.

For aerodromes that have more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that the OLS for each runway end can be appropriately recorded.

2.1.4.11 Type A charts

(Part 139 MOS - 11.01(1); 5.04(1)(j)(i))

If applicable, the Type A charts for any significant obstacles within the take-off area up to 10km from the end of the runway are to be provided to the AIS provider and recorded in the aerodrome manual.

Aerodrome operators must prepare a Type A chart for each runway at the aerodrome that is used in scheduled international air transport operations. The obstacle data to be collected and the way the Type A chart is presented must be in accordance with the standards and procedures set out in ICAO Annex 4. For a Type A chart, obstacle data must be in a digital format and provided to the AIS provider in accordance with Subpart 175.E of the CASRs.

The requirement to include a copy of the Type A chart in the aerodrome manual is also contained in subsection 3.7.12.1 of the sample manual. To avoid a duplication in content, it is permissible to simply refer to that section in the manual.

2.1.4.12 Type B charts

(Part 139 MOS – 11.01(1); 5.04(1)(j)(ii))

If applicable, the Type B charts that identify any other obstacles around the aerodrome are to be recorded in the aerodrome manual.

A Type B chart is discretionary but may assist some operators of aircraft with a maximum take-off weight greater than 5,700 kg to identify obstacles around an aerodrome.

All Type B charts must:

- be in accordance with the standards and procedures set out in ICAO Annex 4
- include its obstacle data in a digital format
- be provided to the AIS provider in accordance with Subpart 175.E of the CASRs.

The requirement to include a copy of the Type B chart information in the aerodrome manual is also contained in section 3.7.12.2 of the sample manual. To avoid a duplication of content, it is permissible to simply refer to that section in the manual.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

2.1.4.13 Obstacle-free zone (OFZ)

(Part 139 MOS - 11.01(1); 5.04(1)(k))

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Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the identification of any obstacle free zone (OFZ), as prescribed in subparagraph 5.04(1)(k) of the Part 139 MOS.

A precision approach runway requires an OFZ. The OFZ refers to the airspace above the inner approach surface, inner transitional surface, and that portion of the runway strip which is bound by these surfaces.

2.1.4.14 Arrestor system

(Part 139 MOS - 11.01(1); 5.04(1)(I))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the location and description of an arrestor system (where provided), as prescribed in subparagraph 5.04(1)(I) of the Part 139 MOS.

Where the full length of a runway end safety area (RESA) cannot be provided, an arrestor system that is effective in arresting an aircraft overrun may be installed. An arrestor system may take the form of high energy absorbing material located at the end of a runway or stopway designed to crush under the weight of an aircraft as the material exerts deceleration forces on the aircraft landing gear.

For aerodromes that have more than one arrestor system, additional lines need to be added to the bottom of the table provided in the Word template so that each arrestor system can be appropriately recorded.

2.1.5 Movement area information – runway strip availability

(Part 139 MOS - 11.01(1); 5.04(2)(a)(b))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual the availability, any limitations on the availability of a runway strip that is prepared and made available for take-offs and landings, as prescribed in subparagraph 5.04(2) of the Past 139 MOS.

2.1.6 Movement area information – taxiways

(Part 139 MOS - 11.01(1); 5.04(3)(a)-(d))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the following information for each taxiway, as prescribed in subparagraph 5.04(3) of the Part 139 MOS:

- aerodrome reference code letter
- width
- surface type
- designation.

Each main taxiway and each short feeder taxiway must have a designation. A main taxiway must be a single letter without numbers. An alpha numeric designator may be used for each short feeder taxiway.

Where there is more than one taxiway at the aerodrome, additional lines need to be added to the bottom of the table provided in the Word template so that each taxiway can be appropriately recorded.

2.1.7 Movement area information – aprons

(Part 139 MOS - 11.01(1); 5.04(4)(a)-(c); 5.04(5)(a)(b))

Aprons with international operations or aprons where parking position designations have been provided to AIS for publication in AIP

For each apron that has international operations, aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the following information as prescribed in subparagraphs 5.04(4)(a)-(c) of the Part 139 MOS:

• surface type

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- location, elevation and designation of any aircraft parking position or stand (includes primary and secondary parking positions)
- details of any parking guidance provided.

Guidance for reporting parking positions:

- if a VDGS or an A-VDGS is provided the type of system (select from A_VDGS; AGNIS; AGNIS_PAPA; AGNIS_STOP; APIS; PAPA; SAFE_DOC; SAFE_GATE)
- if a pilot stop line is provided in lieu of a VDGS or an A-VDGS the word Pilot
- if a marshaller is provided in lieu of a VDGS or an A-VDGS the word Marshaller.

Aprons with no international operations and parking position designations have not been provided to the AIS for publication in AIP.

Where parking position designations have not been provided to the AIS for publication in the AIP, aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the surface type for each apron that does not have international operations, as prescribed in accordance with subparagraph 5.04(5) of the Part 139 MOS.

For aerodromes that have more than one apron, additional lines need to be added to the bottom of the tables provided in the Word template so that each apron, and if applicable each primary and secondary parking position, can be appropriately recorded.

2.1.8 Visual aids – approach and runway lighting systems

(Part 139 MOS - 1.01(1); 5.05)

Approach lighting provides alignment guidance to enable safe approach to a runway.

2.1.8.1 Approach lighting system(s) (ALS)

(Part 139 MOS - 1.01(1); 5.05(1)(a))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the type, length and intensity of the approach lighting system (ALS), as prescribed in subparagraph 5.05(1)(a) of the Part 139 MOS.

A simple ALS that meets the requirements of Division 6, Chapter 9, of the Part 139 MOS, may be installed on a non-precision approach or non-instrument runway.

A precision approach (PA) CAT I lighting system that meets the requirements of Division 7, Chapter 9, of the Part 139 MOS, should be provided to serve a PA CAT I runway supporting instrument approach operations with a visibility less than 1,500 m.

A PA CAT II or III lighting system that meets the requirements of Division 7, Chapter 9, of the Part 139 MOS, must be provided to serve a PA CAT II or III runway.

For aerodromes that have more than one runway approach served by an ALS, additional lines need to be added to the bottom of the table provided in the Word template so that each approach lighting system can be appropriately recorded.

2.1.8.2 Runway threshold lights and wing bars

(Part 139 MOS - 11.01(1); 5.05(1)(b))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the runway threshold lights, colour and wing bars, as prescribed in subparagraph 5.05(1)(b) of the Part 139 MOS.

Runway threshold lights are green and indicate the start of the available landing distance. Wing bars may be used to increase the conspicuousness of the threshold.

Additional lines need to be added to the bottom of the table provided in the Word template so that each runway threshold lighting system can be appropriately recorded.

2.1.8.3 Visual approach slope indicator system (VASIS)

(Part 139 MOS - 11.01(1); 5.05(1)(c))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the type of visual approach slope indicator system (VASIS) for each runway, as prescribed in subparagraph 5.05(1)(c) of the Part 139 MOS.

A VASIS provides pilots with approach slope guidance, as well as giving clearance over approach obstacles.

A VASIS that meets the requirements of Division 9, Chapter 9, of the Part 139 MOS, must be provided where a runway is used at least once a week in air transport operations by non-propeller driven turbine-engine aircraft, or where CASA, in the interests of aviation safety, has directed this in writing.

For aerodromes that have more than one runway end served by a VASIS, additional lines need to be added to the bottom of the table provided in the Word template so that each VASIS can be appropriately recorded.

2.1.8.4 Touchdown zone (TDZ) lighting

(Part 139 MOS - 11.01(1); 5.05(1)(d))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the length of the runway touchdown zone (TDZ) lighting, as prescribed in subparagraph 5.05(1)(d) of the Part 139 MOS.

The TDZ lights are required for precision approach CAT II or III operations. The two rows of touchdown zone lights should be symmetrically located on either side of the runway centreline lights and extend for 900 m or the overall length of the touchdown markings, whichever is less.

For aerodromes that have more than one runway with TDZ lighting, additional lines need to be added to the bottom of the table provided in the Word template so that each TDZ lighting system can be appropriately recorded.

2.1.8.5 Runway centreline lights

(Part 139 MOS - 11.01(1); 5.05(1)(e))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the length, longitudinal spacing, colour and intensity of the runway centreline lights, as prescribed in subparagraph 5.05(1)(e) of the Part 139 MOS.

White runway centreline lights are required for:

- take-off in RVR below 350 m
- precision instrument approach runways CAT II and III.

They must be located from the threshold to the runway end and spaced at:

- 30 m intervals on a runway intended for use in RVR conditions of 350 m or greater
- 15 m intervals on a runway intended for use in RVR less than 350 m.

For aerodromes that have more than one runway with runway centreline lights, additional lines need to be added to the bottom of the table provided in the Word template so that each runway centreline lighting system can be appropriately recorded.

2.1.8.6 Runway edge lights

(Part 139 MOS - Chapter 9, Division 10; 11.01(1); 5.05(1)(f))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the length, longitudinal spacing, colour and intensity of the runway edge lights, as prescribed in subparagraph 5.05(1)(f) of the Part 139 MOS.

Runway edge lights consist of two parallel rows of lights equidistant from the runway centreline. They must be provided for a:

- non-instrument or non-precision approach runway intended for use at night
- precision approach runway intended for use by day or night.

Longitudinal spacing of runway edge lights must be uniformly spaced at intervals of:

- 60 m for an instrument runway
- 90 m for a non-instrument runway.

Runway edge lights must conform to the characteristics described in Division 10, Chapter 9 of the Part 139 MOS.

For aerodromes that have more than one runway with edge lights, additional lines need to be added to the bottom of the table provided in the Word template so that each runway edge lighting system can be appropriately recorded.

2.1.8.7 Runway end lights

(Part 139 MOS - Chapter 9, Division 10; 11.01(1); 5.05(1)(g))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the colour of the runway end lights, and wing bars, as prescribed in subparagraph 5.05(1)(g) of the Part 139 MOS.

Runway end lights delineate the extremity of the runway as determined by the TORA, ASDA and LDA, and must be provided on a runway that has edge lights.

Runway end lights must conform to the characteristics described in Division 10, Chapter 9 of the Part 139 MOS.

The colour of wing bars is addressed in subsection 2.1.8.2 of the sample manual.

Additional lines may be added to the bottom of the table provided in the Word template so that lighting systems for each runway end can be appropriately recorded.

2.1.8.8 Stopway lights

(Part 139 MOS -11.01(1); 5.05(1)(h))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the length and colour of stopway lights, as prescribed in subparagraph 5.05(1)(h) of the Part 139 MOS.

Where provided, the stopway must be lit if it is:

- longer than 180 m, and
- intended to be used at night.

Stopway lights must show red in the direction of the runway and not be visible to pilots approaching to land over the stopway.

Additional lines need to be added at the bottom of the table provided in the Word template so that the stopway lights on each runway end can be appropriately recorded.

2.1.8.9 Starter extension lighting

(Part 139 MOS - 11.01(1); 5.05(1)(i))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the availability of starter extension lighting, as prescribed in subparagraph 5.05(1)(i) of the Part 139 MOS.

2.1.8.10 Runway threshold identification lights (RTIL)

(Part 139 MOS - 11.01(1); 5.05(1)(j))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the availability of runway threshold identification lights (RTIL), as prescribed in subparagraph 5.05(1)(j) of the Part 139 MOS.

The RTIL are used to mark a temporary displaced threshold, or where it is difficult to locate the runway threshold from the air during the day.

Additional lines need to be added at the bottom of the table for each runway designation that has RTIL.

2.1.8.11 Pilot activated lighting (PAL) system

(Part 139 MOS - 11.01(1); 5.05(1)(k))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the availability of a PAL system, as prescribed in subparagraph 5.05(1)(k) of the Part 139 MOS.

A PAL is activated by a coded carrier frequency signal from an airband VHF transmitter. The PAL system must turn on all the lighting facilities required for aircraft operations at night, unless the lighting facility is turned on by other means (e.g. a photo-electric switch or timer).

2.1.9 Visual aids – other lighting and secondary power supply

2.1.9.1 Aerodrome beacon

(Part 139 MOS - 11.01(1); 5.05(2)(a))

Aerodrome operators are required to report to the AIS provide, and to record in their aerodrome manual, the location, characteristics and hours of operation of any aerodrome beacon, as prescribed in subparagraph 5.05(2)(a) of the Part 139 MOS.

An aerodrome beacon is intended to assist pilots in locating and / or identifying an aerodrome at night. The provision of an aerodrome beacon is not mandatory, but where it is provided, it must be suitably located in accordance with section 9.37 of the Part 139 MOS and be visible from all angles of azimuth. At an international aerodrome or an aerodrome in a built-up area, the beacon must give two (2) alternating flashes: one (1) white, and the other one (1) green.

Additional lines need to be added at the bottom of the table provided in the Word template so that each aerodrome beacon can be appropriately recorded.

2.1.9.2 Taxiway lighting systems (including holding positions and stop bars)

(Part 139 MOS - 11.01(1); 5.05(2)(b))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the lighting systems for taxiways, including taxiway holding positions and stop bars, as prescribed in subparagraph 5.05(2)(b) of the Part 139 MOS.

Additional lines need to be added at the bottom of the table provided in the Word template so that taxiway lighting systems available on each taxiway can be appropriately recorded.

2.1.9.3 Apron lighting systems (including VDGS)

(Part 139 MOS - 11.01(1); 5.05(2)(c))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the lighting systems for aprons, including the location and type of VDGSs, as prescribed in subparagraph 5.05(2)(c) of the Part 139 MOS.

Additional lines need to be added at the bottom of the table provided in the Word template so that each apron lighting system can be appropriately recorded.

2.1.9.4 Other movement area – lighting systems

(Part 139 MOS - 11.01(1); 5.05(2)(d))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, any other movement area lighting systems, as prescribed in subparagraph 5.05(2)(d) of the Part 139 MOS.

2.1.9.5 Obstacle lighting for OLS infringements

(Part 139 MOS - 11.01(1); 5.05(2)(e))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, any lit obstacles that infringe the aerodromes OLS, as prescribed in subparagraph 5.05(2)(e) of the Part 139 MOS.

Additional lines need to be added at the bottom of the table provided in the Word template so that each lit obstacle can be appropriately recorded.

2.1.9.6 Secondary power supply (including switch-over time)

(Part 139 MOS - 11.01(1); 5.05(2)(f))

Where a secondary power supply is provided, aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the particulars of the secondary power supply and its switchover time, as prescribed in subparagraph 5.05(2)(f) of the Part 139 MOS.

Secondary power supply connects automatically and is different to standby power.

2.1.10 Navigation aids

(Part 139 MOS - 11.01(1); 5.06)

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the details of any navigation aid(s) that they provide, as prescribed section 5.06 of the Part 139 MOS.

Aerodrome operators are not required to report on navigation aids that are provided by an air navigation service provider.

Additional lines need to be added at the bottom of the table provided in the Word template so that each navigation aid provided by the aerodrome operator can be appropriately recorded.

2.1.11 Aviation rescue and fire-fighting services (ARFFS)

(Part 139 MOS - 11.01(1); 5.07)

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the category of any aviation rescue and fire-fighting services (ARFFS) provided by the aerodrome operator and based at the aerodrome, as prescribed in section 5.07 of the Part 139 MOS.

Aerodrome operators are not required to report the category of ARFFS if they are provided by a service provider.

2.1.12 Ground services

2.1.12.1 Fuel suppliers

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(Part 139 MOS - 11.01(1); 5.08(a))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the details of fuel suppliers: name(s), during and after hours contact details and fuel types, as prescribed in subparagraph 5.08(a) of the Part 139 MOS.

Additional lines need to be added at the bottom of the table provided in the Word template so that each fuel supplier can be appropriately recorded.

2.1.12.2 Weather information broadcasts

(Part 139 MOS - 11.01(1); 5.08(b))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the weather information broadcasts that they provide, as prescribed in subparagraph 5.08(b) of the Part 139 MOS.

Aerodrome operators are not required to report on weather information broadcasts provided by weather information providers.

2.1.12.3 Ground-to-air communication systems

(Part 139 MOS - 11.01(1); 5.08(c))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the ground-to-air communications systems and approved air-ground operator services that they provide, as prescribed in subparagraph 5.08(c) of the Part 139 MOS.

Ground-to-air communication systems include UNICOM, aerodrome frequency response units (AFRU) and approved air-ground operator services. The aerodrome operator is only required to report ground-to-air communication systems that they provide, not those provided by other organisations.

2.1.12.4 Other aviation-related services made available to pilots

(Part 139 MOS - 11.01(1); 5.08(d))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the details of any other aviation-related services that they make available to pilots, as prescribed in subparagraph 5.08(d) of the Part 139 MOS.

2.1.13 Aerodrome operational procedures – standard taxi routes

2.1.13.1 Standard taxi routes determined by aerodrome operator

(Part 139 MOS - 11.01(1); 5.09(1)(a))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the location and designation of standard taxi routes determined by the aerodrome operator, as prescribed in subparagraph 5.09(1)(a) of the Part 139 MOS.

2.1.13.2 Standard taxi routes determined by the ATS provider

(Part 139 MOS - 11.01(1); 5.09(1)(b))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the location and designation of standard taxi routes determined by the ATS provider, as prescribed in subparagraph 5.09(1)(b) of the Part 139 MOS.

2.1.14 Aerodrome operational procedures – special procedures

(Part 139 MOS - 11.01(1); 5.09(2))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, any special procedures unique to their aerodrome which pilots would reasonably be expected to know in the interests of aviation safety, as prescribed in subparagraph 5.09(2) of the Part 139 MOS.

2.1.15 Aerodrome operational procedures – notices

(Part 139 MOS - 11.01(1); 5.09(3))

Aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, cautionary or administrative information related to the safe operation of their aerodrome, as prescribed in subparagraph 5.09(3) of the Part 139 MOS.

Local hazards that may adversely affect aviation safety must be recorded, including the following:

- operating restrictions on the manoeuvring area
- continual wildlife hazards at the aerodrome or in its vicinity, including descriptions, locations, and times or seasonal information
- apron or parking restrictions outside daylight hours
- any activities within the circuit area that are hazardous to aviation, for example shooting ranges, explosive areas (such as mine sites or military practice areas), wind farms, or sources of gaseous plumes (such as gas driven generators, refineries or furnaces)
- other aviation activities such as helicopter, ultralight or glider operations within the circuit area.

2.1.16 Aerodrome operational procedures – low-visibility procedures

(Part 139 MOS - 11.01(1); 5.09(4)(a)(b)(c))

As prescribed in subparagraph 5.09(4) of the Part 139 MOS, if low-visibility procedures are established at the aerodrome, aerodrome operators are required to report to the AIS provider, and to record in their aerodrome manual, the following:

- the runways and equipment used under low-visibility procedures
- the defined meteorological conditions under which low-visibility procedures are initiated, used and terminated
- the ground markings and lighting used under low-visibility procedures.

Additional lines need to be added at the bottom of the table provided in the Word template for each runway that can be used in low-visibility operations.

2.2 Aerodrome site plan

(Part 139 MOS – 11.01(2)(a)(i)-(v))

In their aerodrome manual, aerodrome operators are required to include a scaled plan of their aerodrome site that shows:

- the movement area
- each wind direction indicator
- the aerodrome boundary
- each visual approach slope indicator system (if installed)
- each approach lighting system (if installed).

The scaled plan can be inserted in this section or attached as an appendix to the aerodrome manual.

2.3 Site plan – facilities outside the aerodrome boundary

(Part 139 MOS - 11.01(2)(b))

In their aerodrome manual, aerodrome operators are required to include a plan that shows all the aerodrome facilities or equipment they own and that are located outside the boundaries of the aerodrome.

The scaled plan can be inserted in this section or attached as an appendix to the aerodrome manual.

2.4 Aerodrome reference code (ARC) nominations

(Part 139 MOS – 4.01; 11.01)

An aerodrome reference code (ARC) links the aerodrome design criteria to the operational and physical characteristics of an aircraft type. The aerodrome operator is required to nominate the ARC for each facility so that aircraft operators can make informed decisions on the use of the facility. The ARC system consists of three elements:

- a reference code number based on the aeroplane reference field length for which the runway is intended
- a reference code letter based on the aeroplane wingspan for which the facility is intended
- outer main gear wheel span (OMGWS) of the aeroplane for which the facility is intended.

The code is not intended to be used for determining runway length or pavement strength requirements.

The aerodrome reference codes are listed in section 4.01 of the Part 139 MOS.

2.4.1 Runways

(Part 139 MOS - 11.01(2)(c))

For each runway, aerodrome operators are required to nominate, and to record in their aerodrome manual, the following:

- aerodrome reference code number
- aerodrome reference code letter
- the OMGWS.

The determination of a runway's reference code also links to the identification of obstacle limitation surfaces associated with that runway.

Additional lines need to be added to the bottom of the table provided in the Word template so that each runway reference code nomination can be appropriately recorded.

2.4.2 Taxiways and taxilanes

(Part 139 MOS – 11.01(2)(c))

For each taxiway and taxilane, aerodrome operators are required to nominate, and to record in their aerodrome manual the following:

- the aerodrome reference code letter
- the OMGWS.

Additional lines need to be added to the bottom of the table provided in the Word template so that the aerodrome reference code nominations for each taxiway and taxilane at the aerodrome can be appropriately recorded.

2.4.3 Aircraft parking positions

(Part 139 MOS - 1.08(2))

For each marked aircraft parking position, aerodrome operators are required to nominate, and to record in their aerodrome manual, the aerodrome reference code (ARC) letter of the most demanding aircraft type the parking position is designed to accommodate.

Additional lines need to be added to the bottom of the table provided in the Word template so that the ARC nomination for each aircraft parking position can be appropriately recorded.

2.4.4 Holding bays (aircraft)

(Part 139 MOS - 1.08(2); 6.55(2))

For each designated aircraft holding bay, aerodrome operators are required to nominate, and to record in their aerodrome manual, ARC letter of the most demanding aircraft type that the holding bay is designed to accommodate.

A holding bay is a defined area where an aircraft can be held or bypassed to facilitate efficient surface movement of aircraft.

Additional lines need to be added to the bottom of the table provided in the Word template so that the aerodrome reference code nomination for each holding bay can be appropriately recorded.
2.5 Instrument classification of each runway

(Part 139 MOS - 3.01(2); 11.01(2)(d))

Aerodrome operators are required to nominate, and to record in their aerodrome manual, the instrument classifications for each runway.

Instrument classifications are defined in Chapter 3 of the Part 139 MOS, and include:

- a non-instrument runway
- a non-precision instrument runway
- precision approach runway (CAT I, II, III).

Additional lines need to be added to the bottom of the table provided in the Word template so that the instrument classification for each runway end can be appropriately recorded.

2.6 Deviations from preferred standards

(Part 139 MOS - 1.08(3)(4); 11.01(3)(d))

In accordance with subparagraph 1.08(3) of the Part 139 MOS, a preferred value, matter or thing should be complied with in all instances unless it is impracticable to do so. If an aerodrome operator believes that compliance with a preferred standard is impracticable, the onus rests with the aerodrome operator to demonstrate the impracticability.

In the event the aerodrome operator cannot meet the preferred standard – for instance, where a maximum value is stated – that maximum value must not be exceeded.

Likewise, where a minimum value is stated, that minimum value must be met.

Where a preferred matter, thing or value is not met, to satisfy subparagraph 1.08(4) of the Part 139 MOS, in their aerodrome manual, aerodrome operators are required to record:

- a statement to that effect
- the reasons for non-compliance
- the alternative matter, thing or value that is complied with.

Other sections in the Part 139 MOS may permit alternate values. These may require a safety analysis to ensure the alternate values that have been applied are demonstrably safe for aircraft operations. Recording these matters in the aerodrome manual is also mandatory.

To assist aerodrome operators, this section of the Guide and the Word template identifies all sections within the Part 139 MOS in which a deviation from a preferred standard, or an alternate value, may be permitted.

While aerodrome operators are only required to record, in their aerodrome manual, the circumstances where a deviation, or an alternate standard has been applied, compliance provisions have been included should the aerodrome operator choose to maintain the headings provided.

2.6.1 Location of runway threshold

(Part 139 MOS - 6.01(3)(4)(6); 8.26)

If there are no obstacles penetrating the approach, the threshold of a runway is normally located at the extremity of the runway. In accordance with subparagraphs 6.01(3) and (4) of the Part 139 MOS, a runway threshold may be displaced from the extremity of the runway if:

- the OLS would otherwise be infringed by an obstacle
- the PANS-OPS airspace would otherwise be infringed by an obstacle
- an immovable object or structure would otherwise extend above the approach surface
- a written direction is issued by CASA in the interests of aviation safety.

Where a runway threshold is permanently displaced, the aerodrome operator is required to record in their aerodrome manual the details of, and reasons for, the permanent displacement.

Additional lines need to be added to the bottom of the table provided in the Word template, if the aerodrome has more than one permanent threshold displacement, so that each permanent threshold displacement can be appropriately recorded.

2.6.2 Runway turn pad / bypass pad

(Part 139 MOS - 6.03(2)(3))

The objective of a runway turn pad is to facilitate a safe 180-degree turn by an aircraft at the end of a runway that is not served by a taxiway.

A bypass pad allows an aircraft to taxi around the runway threshold without proceeding directly through the marked threshold.

In accordance with subparagraph 6.03(2) of the Part 139 MOS, a runway turn pad or bypass pad is required to be located on the right-hand side of a runway as viewed when looking in the direction of take-off from that runway end.

A turn pad or bypass pad may be located on the opposite side of the runway only if:

- the presence of aerodrome facilities or infrastructure makes it impracticable to locate the turn pad or bypass pad on the right-hand side, and
- the placement on the left-hand side does not adversely affect safety for the take-off and landing of aircraft, and
- the placement is described and recorded in the aerodrome manual.

Additional lines need to be added to the bottom of the table provided in the Word template where there is more than one runway turn pad or bypass pad located on the left hand side of the runway when looking in the direction of take-off so that each runway turn pad or bypass pad located on the left-hand side of the runway (when looking in the direction of take-off) can be appropriately recorded.

2.6.3 Runway longitudinal slope values

(Part 139 MOS - 6.06(1)-(7))

The safety objective of limiting the longitudinal runway slope is to enable stabilised and safe use of the runway by an aircraft.

The maximum runway longitudinal slope values expressed in subparagraphs 6.06(1)-(6) of the Part 139 MOS do not apply at the intersection of a runway with another runway or taxiway if:

- there are conflicting draining requirements or slope requirements, and
- alternative runway longitudinal slope values are as follows:
 - arrived at after a safety analysis using the aerodromes safety management system and the risk management plan
 - as close as practicable to the values expressed in subparagraphs 6.06(1)-(6)
 - demonstrably safe for aircraft operations
 - recorded in the aerodrome manual.

When more than one longitudinal slope value has been exceeded, additional lines need to be added to the bottom of the table provided in the Word template so that all exceeded runway longitudinal slope values can be appropriately recorded.

2.6.4 Runway transverse slope values

(Part 139 MOS - 6.08(2)(3))

The safety objective of runway transverse slopes is to promote the most rapid drainage of water from the runway. Therefore, the transverse slope on any part of a runway must not permit the pooling or ponding of water on that runway.

The runway transverse slope values expressed in Table 6.08(2) of the Part 139 MOS do not apply at the intersection of a runway with another runway or taxiway if:

- there are conflicting draining requirements or slope requirements, and
- alternative runway transverse slope values are as follows:
 - arrived at after a safety analysis using the aerodromes safety management system and the risk management plan
 - as close as practicable to the values expressed in Table 6.08(2)
 - demonstrably safe for aircraft operations
 - recorded in the aerodrome manual.

When more than one runway transverse slope value has been exceeded, additional lines need to be added to the bottom of the table provided in the Word template so that all exceeded runway transverse slope values can be appropriately recorded.

2.6.5 Runway surfaces

2.6.5.1 Average surface texture depth

(Part 139 MOS - 1.08(4), Table 6.09(1)-1)

The surface of a runway should be constructed without irregularities that would impair the runway surface friction characteristics or otherwise adversely affect the take-off or landing of aircraft.

In accordance with Table 6.09(1)-1, the preferred average surface texture depth is 1 mm. Where the preferred average surface texture depth has not been met, the minimum average surface texture depth of 0.625 mm must be met.

Where a preferred matter, thing or value is not complied with, the aerodrome manual must contain:

- a statement to that effect
- the reasons for non-compliance
- the alternate matter, thing or value that is complied with.

Where the preferred average surface texture depth of 1 mm has not been met on more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that all circumstances where the preferred average surface texture depth have not been met can be appropriately recorded.

2.6.5.2 Friction values

(Part 139 MOS - 1.08(4); Table 6.09(1)-2)

The surface of a runway should be constructed without irregularities that would impair the runway surface friction characteristics or otherwise adversely affect the take-off or landing of aircraft.

A paved runway should be constructed or resurfaced as to provide surface friction characteristics at or above the preferred level.

The runway surface friction levels at an aerodrome used for scheduled international air transport operations should, unless it is impracticable to do so, continuously achieve the preferred friction levels stated in Table 6.09(1)-2 of the Part 139 MOS. Where it is not practicable to achieve the preferred standard, the minimum friction levels stated must be met.

Where a preferred matter, thing or value is not complied with, the aerodrome manual must contain:

- a statement to that effect
- the reasons for non-compliance
- the alternate matter, thing or value that is complied with.

Where the preferred values for continuous friction have not been met on more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that each runway's friction level that does not meet the preferred standard can be appropriately recorded.

2.6.6 Longitudinal slope design values on graded runway strip

(Part 139 MOS - 6.18(1)(2))

The safety objective of longitudinal runway strip slope is to define maximum gradient values that should not interfere with the safe use of the runway strip by an aircraft. Longitudinal slope changes on a graded runway strip must be as gradual as practicable and abrupt changes or sudden reversals of slope are not permitted.

The design longitudinal slope values stated in subparagraph 6.18(1) of the Part 139 MOS do not apply at the intersection of a runway strip with another runway strip or taxiway strip if:

- there are conflicting draining requirements or slope requirements, and
- alternative runway strip longitudinal slope values are as follows:
 - arrived at after a safety analysis using the aerodromes safety management system and the risk management plan
 - as close as practicable to the values expressed in subparagraph 6.18(1)
 - demonstrably safe for aircraft operations
 - recorded in the aerodrome manual.

Where the design longitudinal slope values have been exceeded on more than one runway, additional lines need to be added to the bottom of the table provided in the Word template so that all design longitudinal slope values that have been exceeded can be appropriately recorded.

2.6.7 Runway end safety area (RESA)

(Part 139 MOS - 1.08(4); 6.26(4))

The safety objective of a runway end safety area (RESA) is to minimise risks to aircraft and passengers / crew in the event an aircraft overruns or undershoots the runway.

A RESA is required at both ends of the runway commencing at the end of the runway strip and extending to the preferred length as stated in Table 6.26(4) of the Part 139 MOS. Where the preferred length cannot be met, the minimum length stated must be achieved.

Where a preferred matter, thing or value is not complied with the aerodrome manual must contain:

- a statement to that effect
- the reasons for non-compliance
- the alternate matter, thing or value that is complied with.

Where more than one RESA does not meet the preferred value, additional lines need to be added to the bottom of the table provided in the Word template, so that all alternate RESA lengths can be appropriately recorded.

2.6.8 Taxiway longitudinal slope values

(Part 139 MOS - 1.08(4); 6.40(1)(2)(3))

The safety objective of limiting the longitudinal taxiway slope is to enable stabilised safe use of the taxiway by aircraft.

In accordance with subparagraph 6.40(3) of the Part 139 MOS, the maximum taxiway longitudinal slope values expressed in subparagraphs 6.40(1) and (2) may be exceeded at the intersection of a taxiway with another taxiway or runway if there are conflicting draining requirements or slope requirements.

Where the maximum taxiway longitudinal slope values at the intersection of a taxiway with a runway or another taxiway exceed the values expressed in subparagraphs 6.40(1) and (2) of the Part 139 MOS, additional lines need to be added to the bottom of the table provided in the Word template so that all exceeded taxiway longitudinal slope values can be appropriately recorded.

2.6.9 Taxiway transverse slope values

(Part 139 MOS - 6.41(2)(3))

The safety objective of taxiway transverse slopes is to promote the most rapid drainage of water from the taxiway.

The transverse slope on any part of a taxiway must not permit the pooling or ponding of water on the taxiway. The maximum taxiway transverse slope values stated in subparagraph 6.41(2) of the Part 139 MOS may be exceeded at the intersection of a taxiway with another taxiway or runway if there are conflicting draining requirements or slope requirements.

Where there are multiple incidents where the maximum taxiway transverse slope values at the intersection of a taxiway with a runway or another taxiway exceed the values expressed in subparagraph 6.41(2) of the Part 139 MOS, additional lines need to be added to the bottom of the table provided in the Word template so that all exceeded taxiway transverse slope values can be appropriately recorded.

2.6.10 Colour of aerodrome markings, markers, signals and signs

(Part 139 MOS – Table 8.03(1))

In accordance with subparagraph 8.03(1) of the Part 139 MOS, colours used in aerodrome markings, markers, signals and signs must meet Australian Standard AS 2700-2011 Colour Standards for General Purposes.

AS Code R13 'signal red' is the preferred red colour. If the operator of an aerodrome cannot source AS Code R13, an alternate red colour, either AS Code R14 or R15, may be used.

Where a preferred matter, thing or value is not complied with the aerodrome manual must contain:

- a statement to that effect
- the reasons for non-compliance
- the alternate matter, thing or value that is complied with.

2.6.11 Runway edge lights on a reduced runway width

(Part 139 MOS - 9.51(10)(11))

Runway edge lights are required on a runway intended for use at night, or for a precision approach runway intended for use by day or night.

In accordance with subparagraph 9.51(10) of the Part 139 MOS, runway edge lights are required to be placed along the declared edge of the runway or at a distance of no more than three (3) m outside the declared edge of the runway.

Where an aerodrome operator elects to reduce the published width of their runway, the runway edge lights may remain in their original location until they are replaced or upgraded provided the details are recorded in the aerodrome manual and published in the AIP-ERSA.

2.6.12 Spacing of taxiway edge lights

(Part 139 MOS - 9.92(1))

Provided that a description and explanation of the limitation and its effects is recorded in the aerodrome manual, the spacing of taxiway edge lights may not apply if any of the following make its application impossible:

- the alignment of the taxiway
- the radius of the taxiway curve
- the general taxiway environment.

2.7 Facilities with retained compliance

2.7.1 Non-compliant grandfathered facilities

(Part 139 MOS - 11.01(3)(b))

A grandfathered facility means an existing aerodrome facility, and the obstacle limitation surfaces (OLS) associated with an existing runway that, on commencement of the Part 139 MOS, do not comply with these standards, provided that:

- the facility and OLS complies, and continues to comply, with the standards that applied to that facility and the OLS immediately before the Part 139 MOS came into effect, and
- the aerodrome operator records in their aerodrome manual:
 - the particular facility / OLS, and
 - details on how the facility / OLS does not comply.

An aerodrome facility means any of the following physical things at an aerodrome:

- physical characteristics of the movement area (i.e. runways, taxiways, taxilanes, shoulders, aprons, primary and secondary parking positions, runway and taxiway strips).
- infrastructure
- structures
- equipment
- earthing points
- cables
- lighting
- signage
- markings.

A new aerodrome that is certified after August 2020 must comply with all standards set out in the Part 139 MOS. Grandfathering a facility to a previous standard is not permissible.

It is imperative that all facilities that do not comply with the new standards are declared. Facilities that are not declared may not be retrospectively grandfathered.

Where there is more than one facility to be grandfathered, additional lines need to be added to the bottom of the table provided in the Word template, so that each grandfathered facility can be appropriately recorded.

2.7.2 Grandfathered facilities – opted-in

(Part 139 MOS – 2.01 opted-in)

An aerodrome operator may voluntarily, without replacing or upgrading their facility, elect to bring a grandfathered facility into compliance with the Part 139 MOS.

In this circumstance, an aerodrome operator must record in their aerodrome manual:

- the facility
- the date the facility was bought into compliance with the Part 139 MOS.

An aerodrome operator is also required to notify CASA of their intention, as CASA is required to acknowledge in writing that the aerodrome operator has opted-in.

Additional lines need to be added to the bottom of the table provided in the Word template, so that each grandfathered facility that is voluntarily bought into compliance with the Part 139 MOS can be appropriately recorded.

3 Aerodrome operating procedures and systems

3.1 Reporting aeronautical data and information

In accordance with CASR Part 175, aerodrome operators are an aeronautical data originator for their aerodrome.

So that aeronautical data can be obtained through a quality-controlled process, Airservices is required to provide the aerodrome operator with a Data Product Specification (DPS). The DPS contains the conditions to be met when information is provided to the AIS, as well as information on data quality requirements for the aeronautical data.

The aerodrome operator can contact the AIS to obtain a DPS by e-mailing Airservices at:

ADO@airservicesaustralia.com

Sample text provided in the Word template should be edited to reflect the reporting procedures at the aerodrome.

3.1.1 Personnel with responsibilities – data originator

(CASR Part 175.445; Part 139 MOS - 11.05(3))

Aerodrome operators are required to nominate, and to record in their aerodrome manual, the individuals or positions responsible for making reports to the AIS provider and NOTAM Office (NOF).

In accordance with CASR Part 175, aerodrome operators are required to appoint:

- an AIP responsible person who can authorise a change to information that is published in the AIP
- NOTAM authorised person(s) who can request the issue of NOTAM advising of a temporary change to that information which is published.

3.1.1.1 AIP responsible person

(CASR Part 175.445(1)(2); Part 139 MOS - 11.05(3))

As required by subparagraph 175.445(1) of Part 175 of the CASRs, aerodrome operators are required to appoint a single senior manager as the AIP responsible person for their aerodrome.

The AIP responsible person is responsible for providing aeronautical data or aeronautical information, other than in NOTAMS, from the aerodrome operator (aeronautical data originator) to the AIS provider (Airservices).

To satisfy subsection 175.445(2) of the Part 175 of the CASRs, the appointed AIP responsible person must have the knowledge and competence required to carry out this function.

It is recommended an aerodrome operator include procedures in their manual so that, when there is a change to the AIP responsible person, immediate notification will be provided to Airservices, and the aerodrome manual will be updated accordingly.

3.1.1.2 NOTAM authorised person(s)

(CASR 175.445(4)(5); Part 139 MOS - 11.05(3))

To satisfy subparagraph 175.445(4) of Part 175 of the CASRs, aerodrome operators are required to appoint person(s) responsible for requesting the issue, review and cancellation of NOTAMS.

To meet the requirements of subparagraph 175.445(5) of the Part 175 of the CASRs, the appointed NOTAM authorised person(s) must have the knowledge and competence to carry out this function.

Although an aerodrome reporting officer must be suitably trained to carry out reporting functions stated in Part 175, aerodrome operators may limit the responsibilities for issuing, reviewing and cancelling NOTAMs to certain reporting officers only.

It is recommended that aerodrome operators include procedures in their manual so that, when there is a change to the NOTAM authorised person(s), the aerodrome manual and NAIPS group will be updated immediately.

Additional lines need to be added to the bottom of the table provided in the Word template, so that each person authorised to request the issue, review and cancellation of NOTAMs can be appropriately recorded.

3.1.2 Changes to published aeronautical information

(CASR Parts 175.455; 175.460; Part 139 MOS - 11.05(1)(a))

In their aerodrome manual, aerodrome operators are required to record the procedures for notifying the AIS provider of any changes to aeronautical data and information that is published in the AIP.

To satisfy section 175.455 of Part 175 of the CASRs, changes to published information must be made as soon as practicable after becoming aware of the change.

Before making a request for a change, the AIP responsible person should consult with the relevant aviation organisations that may be impacted by the change.

It is recommended that procedures include:

- making requests for changes
- obtaining and providing supplementary materials to make the request
- amending the Aeronautical Data Package (if applicable)
- updating the aerodrome manual to reflect changes made and submitted (if applicable)
- managing and incorporating changes into the AIP.

3.1.3 Advising NOTAM Office (NOF) of changes – aerodrome conditions / hazards

(CASR Part 175.470; Part 139 MOS - 11.05(1)(b)(c))

In their aerodrome manual, aerodrome operators are required to record the procedures for notifying the NOTAM Office (NOF) of any change to the condition of an aerodrome facility, or of any hazards that may adversely affect aviation safety.

A NOTAM is an immediate means to advise pilots and other persons about significant matters which may affect the safety of aircraft or, where there is a change to the condition of the aerodrome facility against the published information.

To satisfy section 175.470 of Part 175 of the CASRs, the request to issue a NOTAM must be made as soon as practicable after becoming aware of the circumstances that necessitate its issue.

In addition to the requirements above, it is recommended that aerodrome operators include procedures for:

- verifying the accuracy of NOTAMs issued
- reporting discrepancies if identified.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.1.4 Reporting hazards that may adversely affect aviation safety to ATC

(Part 139 MOS - 11.05(1)(d))

In their aerodrome manual, aerodrome operators are required to record the procedures for notifying ATC at a controlled aerodrome, of any hazards that may adversely affect aviation safety.

This procedure has been expanded to consider reporting hazards at a non-controlled aerodrome that may adversely affect aviation safety for aircraft en-route to the aerodrome, and that are of an urgent nature. In these situations, hazards should be reported to Brisbane or Melbourne ATC centre.

The Flight Information Regions (FIR) map available on the Airservices website defines the two Australian flight regions. The Australian Region does not include all remote islands or locations outside of Australian airspace to which Airservices provide ATS. Where applicable, contact information should be sought from the relevant service e.g. Auckland Oceanic.

3.1.5 Record keeping – reports

(Part 139 MOS - 11.05(2)(a)(b))

In their aerodrome manual, aerodrome operators are required to document the procedures for ensuring that each notification in the form of an aerodrome report:

- remains in the safety custody of the aerodrome operator for at least three (3) years after the report was created, and
- is readily accessible to the operator and to the individuals or positions responsible for making the aerodrome reports.

The currency and accuracy of active NOTAMs are required to be checked as part of the serviceability inspection process.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.1.6 Review of published information

(CASR Part 175.465; Part 139 MOS - 12.09(6)(a)(i); 12.11(11)(d)(i))

To meet the requirements of Part 175 of the CASRs and Division 2, Chapter 12 of the Part 139 MOS, aerodrome operators are required to review, at least once annually, the published aeronautical data and aeronautical information for which they are responsible.

Aerodrome operators are required to maintain evidence of each review and provide that evidence to CASA if requested.

Records of each review must be maintained for a minimum period of three (3) years.

Where inaccurate information is identified during the review, Airservices should be notified immediately.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.2 Aerodrome serviceability inspections

(Part 139 MOS - 11.03(1)(2))

Aerodrome operators are required to carry out regular inspections of the aerodrome and of its surrounds to ensure:

- safety standards are being maintained
- all runway, taxiway and apron surfaces are kept clear of foreign objects or debris that could cause damage to aircraft
- prompt corrective action is taken to eliminate unsafe conditions.

3.2.1 Inspection positions

(CASR 139.080(2); 139.085(2); Part 139 MOS - 11.03(2)(a)-(d); 13.03(a)-(f))

In their aerodrome manual, aerodrome operators are required to include the positions in the organisational structure that are responsible for:

- managing the inspections
- carrying out the inspections
- reporting the results of the inspections
- taking follow-up action if an unsafe condition is identified during the inspections.

A person who carries out aerodrome serviceability inspections is known as a reporting officer.

Reporting officers must be suitably trained and have:

- a sound knowledge of the physical characteristics of the aerodrome movement area, the aerodrome obstacle limitation surfaces, aerodrome markings, visual aids (including lighting) and the correct operation of essential aerodrome safety equipment
- an understanding of the aerodrome information published in the AIP
- the ability to carry out an aerodrome serviceability inspection in accordance with Chapter 12 of the Part 139 MOS
- the ability to carry out the reporting functions for the aerodrome in accordance with Chapter 12 of the Part 139 MOS and Part 175 of CASR
- the ability to carry out the wildlife monitoring and management functions for the aerodrome in accordance with Chapter 17 of the Part 139 MOS
- a knowledge of the aerodrome procedures in the aerodrome manual, including in relation to the following:
 - aerodrome works safety
 - aerodrome emergency planning and response
 - airside vehicle control (if applicable)
 - aircraft parking control (if applicable)
 - low-visibility operations (if applicable).

Reporting officers are not authorised to transmit on an aeronautical radio frequency unless they hold an Aeronautical Radio Operator Certificate (AROC).

For aerodromes that have multiple reporting officers, additional lines may be added to the table provided in the Word template so that each name, position and function can be appropriately recorded as required by section 13.01 of the Part 139 MOS.

3.2.2 Routine serviceability inspections

(Part 139 MOS - 11.03(1)(a)(i); 12.01(2)(3))

In their aerodrome manual, aerodrome operators are required to record the normal schedule for aerodrome serviceability inspections.

In accordance with subparagraphs 12.01(2) and (3) of the Part 139 MOS, the minimum frequency and timing to conduct routine serviceability inspections is dependent on the type of aircraft operations occurring at the aerodrome.

A minimum of two (2) aerodrome serviceability inspections are to be conducted each week (at least 48 hours apart). Additional inspections are required to be conducted at aerodromes that have scheduled air transport operations. At these aerodromes, an inspection is required on each day that an air transport movement is scheduled.

At aerodromes that have scheduled passenger air transport operations, the serviceability inspection is required to be completed before the first movement occurs. If the first movement occurs before first light, then at least the safety critical elements must be completed.

While the Part 139 MOS sets out minimum inspection requirements as a means to ensure the timely identification of any defects or potential hazards to the safety of aircraft or aerodrome operations, aerodrome operators should establish a monitoring and inspection programme which is commensurate with the traffic expected at their aerodrome.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

For aerodromes where more than two (2) inspections are carried out in the same week, additional lines need to be added to the bottom of the table provided in the Word template.

3.2.3 Additional serviceability inspections

(Part 139 MOS - 11.03(1)(a)(ii); 12.01(1)(a)-(d))

In their aerodrome manual, aerodrome operators are required to record procedures for conducting additional serviceability inspections following an incident, accident, or adverse weather event.

In addition to the requirement above, subparagraph 12.01(1) of the Part 139 MOS, requires the operator of a certified aerodrome to carry out additional serviceability inspections if any of the following circumstances arise:

- a severe wind event, a severe storm or a period of heavy rainfall
- if a hazard to aircraft may be present on the manoeuvring area
- when requested in writing by CASA
- when requested by ATC
- if a pilot or ARFFS provider reports a hazard.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.2.4 Inspection procedures

(Part 139 MOS - 11.03(1)(b))

In their aerodrome manual, aerodrome operators are required to record the procedures for conducting an inspection and the items to be inspected or checked.

To prevent runway incursions, aerodrome manuals should include procedures for conducting runway inspections, including the direction runway inspections are carried out, communication procedures, actions in the event of communication failure or vehicle breakdown, runway crossings etc.

It is also recommended that procedures ensure that the vehicles used to conduct the inspection are suitable.

Reporting officers should be instructed to maintain a continuous listening watch of the VHF radio at all times when operating on the manoeuvring area.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.2.4.1 Inspection items

(Part 139 MOS - 12.03(3)-(11))

As required by subparagraphs 12.03(3)-(11) of the Part 139 MOS, when conducting an aerodrome serviceability inspection, the aerodrome reporting officer is required to check:

- the surface condition of the movement area
- aerodrome markings, lighting, wind direction indicators and ground signals
- the cleanliness of the movement area
- any obstacles infringing the take-off, approach, transitional and PANS-OPS surfaces
- wildlife on, or in the vicinity of, the movement area
- the bearing strength of unrated runway pavements and runway strips (empirical assessment)
- aerodrome fencing and signage
- aerodrome frequency response unit
- currency of NOTAMs.

A checklist which includes the various inspection areas and the items to be inspected / checked should be developed. This can either be in hard copy or electronic form.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.2.5 Communicating with ATC during inspection (if applicable)

(Part 139 MOS - 11.03(1)(g))

In their aerodrome manual, aerodrome operators are required to record the arrangements for communicating with ATC during the inspections.

This requirement is not applicable to a non-controlled aerodrome.

It is recommended that procedures include:

- obtaining ATC approval to enter and operate within the manoeuvring area
- acknowledging and responding to ATC instructions
- radio communications
- terminology to be used
- procedural requirements when operating on the manoeuvring area.

3.2.6 Reporting inspection results

(Part 139 MOS - 11.03(1)(c); 12.03(12))

In their aerodrome manual, aerodrome operators are required to record the procedures for reporting the results of all serviceability inspections conducted.

To satisfy subparagraph 12.03(12) of the Part 139 MOS, when completing each inspection, the reporting officer is required to record:

- the date and time of completion of the inspection
- the results of the inspection
- a description of any action taken.

Any significant object found in the course of a serviceability inspection must be reported immediately to ATC. A significant object means any object that could reasonably be expected to have an adverse effect on the safety of aircraft. For example, a significant object would include any aircraft parts which may have fallen from an aircraft.

Reports to the Australian Transport Safety Bureau may also be required in accordance with the *Transport Safety Investigation Regulations 2003*.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.2.6.1 Reportable occurrences to the NOTAM Office (NOF)

(Part 139 MOS - 11.03(1)(c); 12.04(1)(a)-(i))

In accordance with subparagraph 12.04(1) of the Part 139 MOS, the following is a list of reportable occurrences that are required to be reported to the NOTAM Office (NOF):

- any change (whether temporary or permanent) in the published runway information, including any changes to information contained in current permanent NOTAMs or in the AIP made in accordance with Part 175 of the CASRs
- aerodrome works affecting the manoeuvring area or the obstacle limitation surfaces, including time-limited works that required more than 10 minutes to restore normal safety standards
- outage or unserviceability of aerodrome lighting or obstacle lighting, unless the outage or unserviceability is fixed immediately
- temporary obstacles to aircraft operations, unless the temporary obstacle is removed immediately
- any significant increase in, or concentration of, wildlife hazards on or near the aerodrome which constitute a danger to aircraft, unless the wildlife causing the hazard is dispersed immediately
- any change within the take-off climb area that is due to a new or changed obstacle which results in a change to the gradient of more than 0.05% from the published gradient data for the runway – unless a new or changed obstacle is dealt with immediately
- the emergency of new obstacles, unless the new obstacle is removed immediately
- that a radio navigation aid or landing aid owned by the aerodrome operator is unserviceable or has returned to service
- any other event which affects the safety of aircraft using the aerodrome, unless the event is ceased immediately.

3.2.7 **Prompt follow-up action to correct unsafe conditions**

(Part 139 MOS - 11.03(1)(d); 12.04(2)(3)(4))

When an unsafe condition is identified, immediate actions are required to be taken to ensure the continuing safety of aircraft operations and other personnel at the aerodrome. Markers and lighting that comply with the standards set out in the Part 139 MOS should be used to identify areas that are unserviceable.

These arrangements could also include notification to ATC, the NOF, removal of FOD, wildlife control, recording of events for further analysis etc.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.2.8 Technical inspection of identified unsafe condition

(Part 139 MOS - 11.03(1)(e); 12.08; 12.09; 12.10(2)(d))

To satisfy subparagraph 12.08(2) of the Part 139 MOS, when an unsafe condition is identified, a technical inspection of that particular aerodrome facility is required to be carried out immediately. This requirement applies equally to all aerodromes unconditionally.

When arranging a technical inspection, the following requirements stated in Division 2, Chapter 12 of the Part 139 MOS must be complied with:

- the person performing the technical inspection is to have the required technical qualifications and experience expressed in section 12.10 of the Part 139 MOS
- a copy of the person's qualifications and relevant experience are included in the resulting technical inspection report or maintained as part of the aerodrome manual
- a copy of the resulting technical inspection report is to be provided to CASA within 30 days of receiving the report
- a corrective action plan is prepared where corrective action is needed, a timeframe for implementation included
- documenting support for or rejection of corrective plans
- retaining reports for a period of three (3) years.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.2.9 Maintaining inspection records

(Part 139 MOS - 11.03(1)(f); 11.04(1)(d); 12.03(12))

To satisfy subparagraph 12.03(12) of the Part 139 MOS, aerodrome operators are required to maintain a copy of all serviceability inspection records for at least two (2) years after their creation.

It is recommended the aerodrome operator includes procedures for filing and storing inspection reports.

3.3 Aerodrome lighting

Aerodrome lighting is essential for aircraft and vehicles to operate safely during the hours of darkness or when visibility is reduced. Both the runway approach category and the take-off minimum influence the type of aeronautical ground lighting required.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.3.1 Personnel with responsibilities

(Part 139 MOS - 11.04(2)(a)-(f))

In their aerodrome manual, aerodrome operators are required to record the individuals or positions responsible for:

- carrying out the lighting inspections
- maintaining the records of the inspections
- taking follow-up action if an unsafe condition is identified during an inspection
- operating aerodrome lighting, including switching systems, back-up supply systems and portable lighting equipment
- performing maintenance on aerodrome lighting
- monitoring hazardous lights, lasers, and reflection or glare within the aerodrome boundary.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.3.2 Aerodrome lighting – inspection and maintenance

(Part 139 MOS - 9.136(2); 9.138(4); 11.04(1)(a))

In their aerodrome manual, aerodrome operators are required to include the procedures for inspecting and maintaining aerodrome lighting.

Regular inspection and maintenance of lighting installed on the aerodrome is necessary to ensure that the lights are correct and are easily seen.

To satisfy subparagraph 9.136(2) of the Part 139 MOS, aerodrome lights must be switched on and monitored during the serviceability inspection.

To satisfy subparagraph 9.138(4) of the Part 139 MOS, grass areas around lights must be maintained to ensure that the lights are:

- not in any way obscured
- free from dirt that could degrade the lights colour and conspicuity.

Additional lines need to be added to the bottom of the table provided in the Word template, so that each lighting system and their inspection and maintenance activities can be appropriately recorded.

3.3.3 Obstacle lighting maintained by aerodrome operator – inspection and maintenance

(Part 139 MOS - 11.04(1)(a))

In their aerodrome manual, aerodrome operators are required to record the procedures for inspecting and maintaining obstacle lighting that is maintained by the aerodrome operator.

Regular inspection and maintenance of obstacle lighting is necessary to ensure that the lights are correct and are easily seen.

Aerodrome operators should establish a system of corrective and preventative maintenance to ensure lighting reliability and serviceability.

Sample text and table provided in the Word template should be edited to reflect the procedures and actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template, so that each obstacle lighting type and their inspection and maintenance activities can be appropriately recorded.

3.3.4 Portable runway lights – inspection and maintenance

(Part 139 MOS - 9.07(3)(a))

Portable runway lights may only be used to support:

- a visual operation where the permanent lighting system is temporarily unserviceable
- a temporary emergency (such as medical emergencies or emergency landings) where a permanent lighting system is not required to be installed.

If an aerodrome is notified in AIP-ERSA as having portable runway lights, the portable runway lights must always be in a serviceable condition and ready to operate.

It is recommended that aerodrome operators consider and include:

- an inventory of portable lights available
- storage location of portable lights
- schedule for inspecting portable lights
- specific items to be inspected
- any maintenance activities.

Sample text and table provided in the Word template should be edited to reflect the procedures and actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template, so that each portable lighting type / colour and their inspection and maintenance activities can be appropriately recorded.

3.3.5 Monitoring secondary power supply

(Part 139 MOS - 9.04;9.05; 11.04(1)(b))

If provided, aerodrome operators are required to include the procedures for monitoring the secondary power supply in their aerodrome manual.

A secondary power supply enables the continued and complete operation of certain lighting systems in the event of a failure of the primary power supply.

Aerodromes that have runways intended for CAT I, II, or III operations, or a runway intended to take-off in RVR conditions less than 800 m, must have secondary power supply.

In the event of a failure of the primary power supply, a secondary power supply must enable the continued and complete operation of the lighting systems identified in section 9.04 of the Part 139 MOS.

The interval between the failure of the primary power supply and the complete restoration of power following switchover to a secondary power supply must meet the times specified in section 9.05 of the Part 139 MOS.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.3.6 Monitoring standby power supply

(Part 139 MOS - 11.04(1)(b))

If provided, an aerodrome operator is required to include the procedures for monitoring the standby power supply in their aerodrome manual.

In the event a standby power supply is provided, the AIP-ERSA must record whether the standby power supply is:

- automatic, or
- manually activated.

If the standby power is manually activated, aerodrome operators, in their aerodrome manual, are required to include the procedures to ensure that the power is activated by a responsible person.

Manual activation must occur as soon as possible after the need for activation arises, and as far as possible, never later than 15 minutes, after the need arises.

The manual expected activation time must be notified in AIP-ERSA.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.3.7 Lighting inspections and checks

(Part 139 MOS - 11.04(1)(c))

In their aerodrome manual, aerodrome operators are required to include the procedures for carrying out lighting inspections and checks, including specific items to be inspected or checked.

It is recommended that aerodrome operators consider and include:

- a list or checklist of specific items to be inspected
- the location of such a list or checklist.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.3.8 Maintaining lighting inspections records and follow-up actions

(Part 139 MOS - 11.04(1)(d))

In their aerodrome manual, aerodrome operators are required to include details on maintaining lighting inspection records and taking follow-up action.

An aerodrome lighting system or facility experiencing a lighting outage must be fixed as soon as possible after an outage is detected. A lighting outage may require the issue of a NOTAM unless the outage can be rectified before the next period of the lights use.

It is recommended the aerodrome manual include:

- the person responsible for recording inspection records
- the specific information to be recorded
- the format for recording such information
- procedures for recording outcomes of follow-up action
- procedures for monitoring such records.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.3.9 Switching lights on and off & intensity selection

(Part 139 MOS - 11.04(1)(e))

In their aerodrome manual, aerodrome operators are required to include the arrangements for switching lights on and off, including intensity selection.

Lighting intensity must be controlled so that, in conditions of minimum visibility, a pilot is not subjected to a light output that may have an adverse effect on aviation safety.

If a lighting system is operated by an ATS provider, CA/GRO, UNICOM operator, a person with 2-way radio communications with aircraft, or an aircraft using an aerodrome system that can be remotely controlled by the pilot, an automatic monitoring system will generate the following information:

- that the lighting system is, or is not, switched on
- the intensity of each lighting system that is switched on
- any fault in a lighting system used to control aircraft movement.

The automatic monitoring system must relay the information to the lighting system operator within five (5) seconds, or for a stop bar within two (2) seconds, of generating the information.

Data on the operating current and the corresponding intensity selection is required to be documented in the aerodrome manual.

3.3.10 Back-up arrangements for PAL system

(Part 139 MOS - 9.23(1)(b); 11.04(1)(e))

Where a PAL system is provided, aerodrome operators are required to include the back-up arrangements for the pilot-activated lighting (PAL) system in their aerodrome manual.

The electronic circuitry of the PAL must be designed so that, if the PAL fails, then the provision of aerodrome lighting will continue because:

- the lighting facilities will be automatically turned on in the event of a PAL failure
- a bypass switch will allow manual activation of the lights by a responsible person nominated in writing by the aerodrome operator.

Where the PAL is manually activated, to satisfy subparagraph 9.23(1)(b) of the Part 139 MOS, aerodrome operators are required to nominate, in writing, a responsible person.

The bypass switch must be readily accessible to the responsible person.

A sample text has been provided in the Word template, which should be edited to reflect the actual situation at the aerodrome.

3.3.11 Routine and emergency lighting maintenance

(Part 139 MOS - 11.04(1)(f))

In their aerodrome manual, aerodrome operators are required to include the procedures for carrying out routine and emergency maintenance.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.3.12 Partial or total power system failure

(Part 139 MOS - 11.04(1)(g))

In their aerodrome manual, aerodrome operators are required to include the procedures to be employed in the event of partial or total power system failure through secondary power, standby power or other means.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.3.13 Monitoring hazardous lights, lasers, reflection or glare

(Part 139 MOS - 9.143(2)(a)(3)(4)(5)(8); 9.144(2); 11.04(1)(h))

In their aerodrome manual, aerodrome operators are required to include the procedures for monitoring hazardous lights, lasers, reflection or glare within the aerodrome boundary.

To satisfy subparagraph 9.143(5) of the Part 139 MOS, aerodrome operators, before proceeding with installation, are required to immediately notify CASA in writing should they propose to install or use any installation, equipment or lasers inside the boundary that have or may have:

- a lighting or lighting intensity greater than that specified in Figure 9.144(2) of the Part 139 MOS
- multiple light colours emitting from a single source
- rapid changes in light colour
- flashing lights

• a capacity to reflect sunlight, e.g. solar panels, mirrors or reflective building cladding.

To satisfy subparagraph 9.143(2)(a), in the event the aerodrome operators become aware that a person is proposing to install or use any installation, equipment or laser outside the aerodrome boundary that may have lighting or lighting intensity greater than that specified in Figure 9.144(2) of the Part 139 MOS, they are required to notify CASA in writing as soon as possible.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.3.14 Commissioned lighting systems

(Part 139 MOS - 9.18(8))

To satisfy subparagraph 9.18(8) of the Part 139 MOS, the details of each ground check report, flight check report, and independent compliance statement or light fitting laboratory test report, used to support the commissioning, are to be included in the aerodrome manual.

For each lighting system, it is recommended the aerodrome manual include:

- the date commissioned
- verification of laboratory compliance
- ground check reports
- flight check reports.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.3.15 Commissioning a new or upgrading / replacing an existing lighting system

(Part 139 MOS - 9.17(1)-(10); 9.18(1)-(8))

Before an aerodrome lighting system is first used, including after an upgrade or a replacement, the lighting system must be commissioned.

Ground checks and flight checks must only be conducted by a person that has the relevant demonstrable lighting knowledge and experience as stated in Division 2, Chapter 9 of the Part 139 MOS.

Each ground check report, flight check report, and independent compliance statement or light fitting laboratory test report used to support the commissioning must be retained by the aerodrome operator as long as the lighting system remains in service.

To satisfy subparagraph 9.17(1)(b) of the Part 139 MOS, upon commissioning the ground check determination and flight check, reports must be provided to CASA.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.4 Unauthorised entry to aerodrome

(Part 139 MOS - 11.11)

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To satisfy section 11.11 of the Part 139 MOS, in their aerodrome manual, aerodrome operators are required to record the procedures for preventing the unauthorised entry onto the movement area (airside) of:

- persons
- vehicles
- equipment
- mobile plant
- animals (including land-based wildlife)
- other things that may endanger aircraft safety should be prevented.

Sample text has been provided in the Word template, which should be edited to reflect the actual situation at the aerodrome.

3.4.1 Controlling airside access

(Part 139 MOS - 11.11(a))

To prevent unauthorised access, aerodrome operators are required to record the procedures for controlling airside access in their aerodrome manual.

It is recommended the aerodrome manual include:

- unescorted and escorted access rules
- details on fences, gates and locking mechanisms
- signage on boundaries and fence lines
- control of animals.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.4.2 Monitoring airside access points and barriers

(Part 139 MOS - 11.11(b))

Aerodrome operators are required to record the procedures for monitoring airside access control points and barriers, such as fencing, in their aerodrome manual.

It is recommended the aerodrome manual include:

- perimeter inspections
- details on additional inspections
- recording and reporting on perimeter inspections
- follow-up action to inspection results.

3.5 Airside vehicle control

(Part 139 MOS - 11.14)

In their aerodrome manual, aerodrome operators are required to record the procedures to control surface vehicles operating on or near the movement area of their aerodrome.

In addition to the CASR and the Part 139 MOS requirements, regulated airports defined in the *Airports Act 1996* are obligated to comply with the provisions of the *Airports (Control of On-Airport Activities) Regulations 1997*.

3.5.1 Permit system for airside vehicles

(Part 139 MOS - 11.14(a); 14.02(a))

A permit system for the operation of airside vehicles is required at an aerodrome that, in a financial year, has more than 350,000 air transport passenger movements, or more than 100,000 aircraft movements.

It is recommended the aerodrome manual include:

- the authority issuing the permit(s)
- details on permit system
- relevant documentation.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.5.2 Vehicles and ground equipment operated airside

(Part 139 MOS - 14.03(1)(a)(b))

In their aerodrome manual, aerodrome operators are required to record procedures to ensure that airside vehicles, including ground equipment operated airside, are maintained so as to prevent:

- any avoidable breakdowns or unsafe operation
- any spillage of fuel, lubricant or hydraulic fluid.

It is recommended the aerodrome manual include:

- roadworthy evidence / vehicle condition statements (e.g. vehicle registration)
- evidence of lighting and radio features
- certificates of insurance
- inspection rules
- documentation and restrictions on denied vehicles.

3.5.3 Airside vehicle lighting requirements

(Part 139 MOS - 14.05(1)-(11))

An airside vehicle must be lit if moving or operating:

- on the movement area at night
- during periods of low visibility
- on a runway, runway strip, taxiway, or taxiway strip, during the day unless the vehicle is directly connected to an aircraft.

Vehicles under the escort of a lit vehicle, and plant that does not have the capacity to move without the assistance of a vehicle, do not need to meet airside vehicle lighting requirements.

For vehicles operating on the runway, runway strip, taxiway, and taxiway strip, the type and positioning of vehicle lighting is dependent on time (day / night) and the type of operations occurring at the aerodrome:

- at an international aerodrome, or an aerodrome with scheduled air transport operations, vehicles that are not under escort, are required to display a rotating or flashing light that meets the specifications stated in subparagraph 14.05(8) of the Part 139 MOS
- at all other aerodromes, if a light cannot be placed on top of an airside vehicle, additional lights must be provided in other locations on the vehicle to ensure visibility in all directions at night. During daylight hours only, it is permissible to display the standard manufacturer-fitted vehicle hazard warning lights.

It is recommended the aerodrome manual include:

- types of lights used on vehicles
- alternate lighting options for vehicles, (if applicable)
- lighting used when visibility is low, or at night
- lighting for vehicles connected to aircraft.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.5.4 Vehicles on manoeuvring area

(Part 139 MOS - 14.03(4)(8); 14.04)

In addition to vehicle lighting requirements, vehicles operating on the manoeuvring area are required to have a VHF radio receiver capable of monitoring the CTAF / ATC frequency (as applicable).

If there is a ground surveillance system in operation, vehicles operating in areas where the ground surveillance system is operational are also required to be fitted with surveillance equipment that meets the specifications stated in section 14.04 of the Part 139 MOS.

Vehicles operating under the escort of a driver that is responsible and equipped for radio communication are not required to have airband radio capability.

3.5.5 Airside drivers – training

(Part 139 MOS - 14.01(1)-(4), 14.02(b); 11.14(b))

In their aerodrome manual, aerodrome operators are required to record the procedures for establishing a method of instructing and testing drivers in relation to the traffic rules.

To safely operate a vehicle airside, a sound level of knowledge and understanding of the airside areas (including hazardous and prohibited areas), movement area terminology, and the significance of aerodrome visual aids and signs, are of fundamental importance.

An induction may take the place of formal training at those aerodromes that do not have scheduled air transport operations.

The competency of drivers must be verified at an aerodrome that has more than 350,000 air transport passenger movements, or more than 100,000 aircraft movements.

It is recommended the aerodrome manual include:

- details on induction programmes, including methods
- details on induction documentation and records
- details on training requirements / programmes
- details on training documentation and records
- regular competency checks, (if applicable)
- driver assessment.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.5.6 Vehicles in proximity to aircraft

(Part 139 MOS - 14.03(3))

In their aerodrome manual, aerodrome operators are required to record procedures to ensure that airside vehicles, except those required for servicing the aircraft, are not driven:

- under an aircraft
- within three (3) m of lateral clearance, or within one (1) m of overhead clearance, of any part of an aircraft.

It is recommended the aerodrome manual include details on:

- giving way to aircraft
- expected driving standards
- distances from aircraft when operating
- drug and alcohol rules.

3.5.7 Movement area speed limits

(Part 139 MOS - 14.03(2)(a))

Aerodrome operators are required to:

- establish speed limits for airside vehicles on the movement area
- have arrangements for the monitoring and enforcement of traffic rules, including speed limits.

It is recommended the aerodrome manual include:

- speed limits in specific locations at the aerodrome
- training / induction on speed limits
- signage on speed limits at the aerodrome.

Sample text and table have been provided in the Word template, which should be edited to reflect the actual situation at the aerodrome.

3.5.8 Escort service procedures

(Part 139 MOS - 14.01(5))

In their aerodrome manual, aerodrome operators are required to record procedures to ensure that any escort service provider who is not the aerodrome operator is monitored for compliance.

It is recommended the aerodrome manual consider and include:

- number of vehicles permitted to be escorted
- action to be taken for unsafe behaviour / driving
- record keeping on third-party providers.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.5.9 Monitoring and enforcing traffic rules

(Part 139 MOS - 14.03(2)(b))

Aerodrome operators are required to have arrangements for the monitoring and enforcing traffic rules, including speed limits.

It is recommended the aerodrome manual consider and include action(s) to deter unsafe behaviour / driving.

3.6 Aircraft parking control

(Part 139 MOS - 11.15(1))

In accordance with subparagraph 11.15(1) of the Part 139 MOS, aircraft parking control procedures must be established at an aerodrome with scheduled international air transport operations. Aircraft parking procedures may be established at any aerodrome where apron congestion creates a hazard to aircraft operations.

3.6.1 Aircraft parking control personnel

(Part 139 MOS - 11.15(2)(g)(i)(ii))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record:

- the names and roles responsible for planning and implementing aircraft parking control
- the phone number for contacting the relevant individuals during and after normal working hours.

Sample text and table have been provided in the Word template. These should be edited to reflect the actual situation at the aerodrome.

3.6.2 Liaison with ATC – apron management

(Part 139 MOS - 11.15(2)(a))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record the procedures for liaison between ATC and the individuals or positions responsible for apron management.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.6.3 Allocating aircraft parking positions

(Part 139 MOS - 11.15(2)(b))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record the procedures for allocating aircraft parking positions.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.6.4 Engine start and aircraft push-back clearances

(Part 139 MOS - 11.15(2)(c))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record the procedures for initiating engine start and ensuring clearances for aircraft push-back.

It is recommended the aerodrome manual consider and include:

- FOD checks
- anti-collision beacons
- ground handler responsibilities
- apron parking plans
- tug operator responsibilities.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.6.5 Aerodrome visual docking guidance systems

(Part 139 MOS -11.15(2)(d))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record the procedures for identifying and using the aerodrome VDGS.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.6.6 Marshalling service

(Part 139 MOS - 11.15(2)(e))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record the procedures for marshalling services.

It is recommended the aerodrome manual consider and include:

- those person(s) responsible for marshalling services
- relevant contact details (phone and radio)
- locations of marshalling services
- safe working procedures for conducting marshalling services.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.6.7 Leader (van) service or follow-me service

(Part 139 MOS - 11.15(2)(f))

In their aerodrome manual, aerodrome operators with established aircraft parking control procedures are required to record the procedures for leader (van) services or follow-me services.

It is recommended the aerodrome manual consider and include:

- those person(s) responsible for providing these services
- relevant contact details (phone and radio)
- safe working procedures for conducting a leader or follow-me service.

3.6.8 Apron safety management procedures

(Part 139 MOS - 11.15(3))

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Aerodrome operators are required to ensure that apron safety management procedures are followed by any organisation that conducts apron operational activities.

Acknowledging that airlines and ground handling companies all share responsibility for apron safety, the aerodrome operator has ultimate responsibility to ensure that the aerodrome is safe for use by aircraft, including leased areas within the aerodrome boundary.

It is recommended the aerodrome manual consider and include procedures to monitor:

- jet blast areas
- loose materials to avoid FOD
- equipment storage
- anti-collision efforts
- tug operators
- wheel chock positioning
- reviews of incidents and hazards.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.6.9 Alternative separation distances and apron markings

In particular circumstances, the Part 139 MOS allows for variations to the standards. Where aerodrome operators elect to apply a variation to a standard, a record in their aerodrome manual is required.

To assist aerodrome operators, the following subsections in this Guide and the Sample Manual template identify all provisions within the Part 139 MOS that permit a variation. If any of the following subsections apply to the aerodrome operations, operators should select the appropriate sample text.

3.6.9.1 Reduced separation distances – VDGS

(Part 139 MOS - 6.58(1)(4)(a)(b))

Table 6.58(1) of the Part 139 MOS sets out minimum separation distances for an aircraft from an object, structure or parked aeroplane.

Minimum separation distances may be reduced at Code D, E or F aircraft parking positions that have a VDGS provided that the aerodrome operator:

- conducts a written safety assessment that demonstrates a VDGS allows a reduced separation distance without creating a risk of damage to the aeroplane, and
- records in their aerodrome manual the reduced separation distances and the safety assessment.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that reduced separation distances are appropriately recorded.

3.6.9.2 Aircraft type designator markings

(Part 139 MOS - 8.49(3)(d))

Aircraft type designator markings are used to designate which aircraft types may be accommodated in the area to which the marking applies. Where an aircraft type designator marking is provided, the designation is to be marked using the list of aircraft type designators published in ICAO Doc 8643, Aircraft Type Designators.

In the event that a stop line or parking position is to accommodate a number of aircraft types, and there is insufficient space to designate all of the aircraft types, an alternate aircraft type designation may be used provided that:

- the alternate system of control prevents unsuitable aircraft types from using the stop line or parking position, and
- the alternate system of control is documented in this manual.

Sample text and table provided in the Word template should be edited to reflect the procedures and actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that alternate systems of control are appropriately recorded.

3.6.9.3 Alignment lines

(Part 139 MOS - 8.65(5))

An alignment line forward of the aircraft stop line is not required at an aircraft parking position serviced by a VDGS.

An alignment line beyond the stop line is mandatory at all other aircraft parking positions except at an aircraft parking position where a marshaller is present for all arriving aircraft and the requirement for a marshaller to be present is recorded in the aerodrome manual.

Sample text and table provided in the Word template should be edited to reflect the procedures and actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template, so that all aircraft parking positions without a VDGS that do not have an alignment line forward of the stop bar can be appropriately recorded.

3.6.9.4 Push-back operator guidance markings

(Part 139 MOS - 8.70(4))

Where provided, push-back vehicle operator guidance should be based on the nose wheel of the aircraft for which the markings are provided regardless of the contact point with the push-back vehicle.

Push-back vehicle operator guidance markings may be based solely on the main wheel tracks instead of the nose wheel of the aircraft provided that:

- aircraft clearance distances are maintained
- no hazard to aircraft operations is created
- aircraft operators are consulted and agree in writing
- methodology and procedures are communicated
- documentation is retained in the aerodrome manual.

In addition, the push-back design methodology and associated push-back safety procedures must be communicated to the relevant aircraft operators and associated ground handling organisations. Documentation that supports this communication is also to be retained in the aerodrome manual.

Sample text and table provided in the Word template should be edited to reflect the procedures and actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table, so all aircraft parking positions that are based on the main wheel tracks of the aircraft rather than the nose wheel of the aircraft can be appropriately recorded.

3.6.9.5 Passenger path markings

(Part 139 MOS - 8.76(2)(b))

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Passenger path markings may be provided on an apron to ensure the safe, secure and orderly movement of passengers. Where provided, passenger path markings must comply with either the:

- marking specifications stated in subparagraph 8.76(2)(b) of the Part 139 MOS
- the pedestrian crossing marking standards set by the relevant State or Territory roads authority.

Where the relevant State or Territory road authority markings are used, the relevant State or Territory standard is required to be referenced in the aerodrome manual.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.6.9.6 Miscellaneous area line markings

(Part 139 MOS - 8.77(2))

Miscellaneous area line markings may be used on aprons to define an area for a miscellaneous purpose provided there is no corresponding marking standard provided in the Part 139 MOS.

Where used:

- a miscellaneous area line marking must consist of a solid green line 0.15 m in width.
- the purpose and the location of the marking must be explained in the aerodrome manual.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table so that all the relevant miscellaneous area line markings and their purposes are appropriately recorded.

3.7 Aerodrome obstacle control

Aerodrome operators have a duty to monitor the airspace around the aerodrome, and the aerodromes manoeuvring area, to ensure they are maintained free from obstacles.

The purpose of the obstacle limitation surface is to define the airspace around the aerodrome that is to be maintained free from obstacles so as to permit the intended aircraft operations at the aerodrome to be conducted safely.

So that developments external to an aerodrome do not adversely affect aviation safety, aerodrome operators will need to establish liaisons with local shires and other stakeholders (proponents) who are responsible for assessing and / or controlling building developments that may encroach on the airspace required to be protected.

In addition to the CASR and the Part 139 MOS requirements, regulated airports defined in the *Airports Act 1996* are obligated to comply with the provisions of the *Airports (Protection of Airspace) Regulations 1996*.

3.7.1 Obstacle control personnel

(Part 139 MOS - 11.06(2)(a)-(d))

Aerodrome operators are required to identify, and to record in their aerodrome manual, the individuals or positions responsible for:

- monitoring the OLS, and PANS-OPS surfaces (where applicable)
- notifying CASA, and the procedure designer (where applicable), of any identified proposed or actual infringement
- implementing obstacle control within the aerodrome boundary
- liaison and facilitation of obstacle control outside the aerodrome boundary.

Additional lines need to be added to the bottom of the table provided in the Word template so that all obstacle control personnel and their responsibilities are appropriately recorded.

3.7.2 Monitoring take-off, approach and transitional surfaces

(Part 139 MOS - 11.06(1)(a)(i))

In their aerodrome manual, aerodrome operators are required to record the procedures for monitoring the take-off, approach and transitional surfaces for obstacles so that they can take appropriate action to mitigate the risks associated with the penetration of those surfaces.

The purpose of the approach surface is to protect an aircraft during the final approach to the runway. The transitional surface commences along the side of the runway strip and slopes upward to define the limit of the area available for buildings, structures, trees etc. The take-off climb surface protects an aircraft during take-off.

While the take-off, approach and transitional surfaces should be monitored daily, an instrument survey should be conducted annually as part of the aerodrome technical inspection / aerodrome manual validation process to verify:

no new obstacles are present

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• the accuracy of published information.

If an instrument survey of the take-off, approach and transitional surfaces is not conducted, the aerodrome operator will need to demonstrate an alternate means of verifying that the OLS is checked and that published information associated with the OLS is accurate.

It is recommended the aerodrome manual include:

- plans that show the prescribed airspace
- visual monitoring responsibilities / activities
- survey procedures, or alternative methods and procedures for verifying the take-off, approach and transitional surfaces remain free from obstacles.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.3 Proposed or actual infringement – OLS

(Part 139 MOS - 11.06(1)(d)(i))

The obstacle limitation surfaces define the limits to which objects may project into the airspace. The OLS helps to prevent the aerodrome from becoming unusable by particular aircraft type due to the growth of obstacles around the aerodrome.

In ideal circumstances, all surfaces should be free from obstacles; nevertheless, OLS infringements may be permissible.

With the exception of preparing a Type A chart, CASA is responsible for determining whether an object is shielded. A determination in writing from CASA will be required before the principles of shielding can be applied to a new obstacle.

3.7.3.1 Proposed OLS infringement

(Part 139 MOS - 7.18(1)(b); 11.06(1)(d)(i))

In their aerodrome manual, aerodrome operators are required to record the arrangements for notifying CASA of a proposed infringement of the OLS.

To satisfy subparagraph 7.19(1) of the Part 139 MOS, a proposed object or structure that is identified as likely to be an obstacle must be referred to CASA so that CASA can determine, in writing:

- whether the object or structure will be a hazard to aircraft operations
- any obstacle marking and / or obstacle lighting requirements.

As stated in Note 2 of subparagraph 7.01(1) of the Part 139 MOS, it is the responsibility of aerodrome operators to advise the relevant planning authority of the result of the assessment provided by CASA, and to liaise with that authority to ensure that hazardous obstacles are:

- not approved if they are an unacceptable risk to aviation, or
- appropriately mitigated, for example through charting, marking and lighting.

Temporary or transient obstacles in close proximity to an aerodrome that infringe the OLS must also be referred to CASA to determine whether the obstacle will be a hazard to aircraft operations.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.3.2 Actual OLS infringement

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(Part 139 MOS - 7.18(1)(b); 7.19(2); 11.06(1)(d)(i))

In their aerodrome manual, aerodrome operators are required to record the arrangements for notifying CASA of an actual infringement of the OLS.

To satisfy subparagraph 7.18(1)(b) of the Part 139 MOS, aerodrome operators must report, in writing, to CASA any infringements of the OLS so that CASA can determine:

- whether the object or structure will be a hazard to aircraft operations
- any obstacle marking and / or obstacle lighting requirements.

Temporary or transient obstacles in close proximity to an aerodrome that infringe the OLS must also be referred to CASA to determine whether the obstacle will be a hazard to aircraft operations.

When a new obstacle is identified, aerodrome operators must ensure that pilots are informed by NOTAM.

To satisfy subparagraph 7.19(2) of the Part 139 MOS, a runway must not be available for night use for the first time until:

- aerodrome operators have informed CASA of all obstacles within the OLS
- CASA has determined that the obstacles will not adversely affect the safety of night operations.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.4 Height of infringements – OLS

(Part 139 MOS - 11.06(1)(c)(i))

In their aerodrome manual, aerodrome operators are required to record the height of buildings, structures, plumes and other developments within the aerodrome vicinity that infringe the aerodromes OLS.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template, so that every structure / obstacle that infringes on OLS can be appropriately recorded.
3.7.4.1 Hazardous obstacles

(Part 139 MOS - 8.109(4); 8.110(1)-(8); 8.111(2)(a)(b))

In the event CASA has determined, in writing, that an obstacle, including a transient obstacle, is a hazardous obstacle, their marking and lighting requirements must be recorded in the aerodrome manual.

It is recommended the aerodrome manual include:

- obstacle types
- location of obstacles
- height of obstacles
- surface penetrated
- marking and lighting requirements.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template, so that every obstacle can be appropriately recorded.

3.7.5 Monitoring visual segment surfaces and critical obstacles

(Part 139 MOS - 11.06(1)(a)(ii))

In their aerodrome manual, aerodrome operators are required to record the procedures for monitoring the visual segment surface and critical obstacles associated with any published terminal instrument flight procedures at their aerodrome.

Where terminal instrument flight procedures have been established, the designer of those procedures is required to provide the aerodrome operator with information and drawings of the area around the aerodrome, showing the designed approach paths, visual segment surface, the circling areas, and the location of critical obstacles used to determine the procedures.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.6 Proposed or actual infringement – PANS-OPS

(Part 139 MOS - 7.20(3); 11.06(1)(d)(ii)(2)(b))

In their aerodrome manual, aerodrome operators are required to record the arrangements for notifying the procedure designer of the terminal instrument flight procedure on the identification of a proposed or actual infringement of the PANS-OPS.

In accordance with subparagraph 7.20(3) of the Part 139 MOS, an aerodrome operator must also, where identified, inform the terminal instrument flight procedure designer when:

- there is a change to the status of an existing critical obstacle
- there is a proposed development that is higher than the critical obstacle
- a new object or structure has been detected that is higher than the critical obstacle.

This notification may instigate discussions between the aerodrome operator, procedure designer and the applicable approving authority in order to resolve the proposed or actual infringement.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.7 Height of infringements – PANS-OPS

(Part 139 MOS - 11.06(1)(c)(ii))

In their aerodrome manual, aerodrome operators are required to record the height of buildings, structures, plumes and other developments with the aerodrome vicinity that infringe the surfaces or areas associated with any published terminal instrument flight procedures at the aerodrome as defined in the PANS-OPS.

The PANS-OPS should not be infringed. Procedures should be cancelled or amended if there is a penetration of the surface.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that every obstacle that infringes the surface or areas associated with the published terminal instrument flight procedures (as defined in the PANS-OPS) is appropriately recorded.

3.7.8 Obstacle control within aerodrome boundary

(Part 139 MOS - 11.06(1)(e))

In their aerodrome manual, aerodrome operators are required to record the arrangements for implementing obstacle control for proposed or actual infringements identified within their aerodrome boundary.

Approved visual and air navigation aids located within a runway strip should be made to meet frangibility requirements. A frangible object is one which retains its structural integrity up to a desired maximum load; however, when subjected to a greater load, it will break, distort or yield in such a manner as to present the minimum hazard to aircraft.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.9 Obstacle control outside aerodrome boundary

(Part 139 MOS - 11.06(1)(f))

In their aerodrome manual, aerodrome operators are required to record the arrangements for liaising with the relevant planning authorities and proponents to facilitate obstacle control outside the aerodrome boundary wherever possible.

Aerodrome operators should take all reasonable steps to ensure that the aerodrome and its airspace are, at all times, safe for use by aircraft.

3.7.10 Obstacle lights serviceability monitoring programme

(Part 139 MOS - 9.36(1)(3)(a))

To satisfy subparagraph 9.36(1) of the Part 139 MOS, aerodrome operators are required to establish an obstacle light serviceability monitoring programme for obstacle lights located within the OLS area of their aerodrome.

If obstacle lights have been determined by CASA, in writing, as essential for aviation safety, they will require monitoring whenever the aerodrome, or any specific runway where the obstacle lights are essential, is available for operations.

Inspection frequency for obstacle lights depends on the type of aircraft operations. Obstacle lights must be observed at least once in every:

- 24-hour period at aerodromes with scheduled international air transport operations occurring at night
- 48-hour period at aerodromes with scheduled domestic air transport operations occurring at night
- 7-day period at all other aerodromes, including obstacles with daytime lighting.

An aerodrome operator may request a longer period between monitoring. A safety assessment will be required.

If CASA has approved, in writing, that the obstacle lights may be inspected at longer intervals, aerodrome operators should specify the frequency of inspection and, in their aerodrome manual, record a copy of:

- the safety assessment
- CASA's written approval.

It is mandated that medium and high intensity lights are monitored regardless of their visibility from the aerodrome.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the right-hand side of the table provided in the Word template, so that every lit obstacle within the OLS area of the aerodrome can be appropriately recorded.

3.7.11 Obstacle light outage

(Part 139 MOS - 9.36(2)(3)(b))

To satisfy subparagraph 9.36(3)(b) of the Part 139 MOS, aerodrome operators are required to record the procedures to be followed when an obstacle light outage occurs in their aerodrome manual.

If there is an obstacle light outage on a hazardous obstacle located within the OLS of the aerodrome, to satisfy subparagraph 9.36(2) of the Part 139 MOS, aerodrome operators are required to:

- immediately request the issue of a NOTAM advising pilots of the details of the outage
- liaise with the owner of the obstacle light so that the outage is repaired as quickly as possible
- if the obstacle light has been determined by CASA, in writing, as essential for aviation safety:
 - immediately report the outage to any aircraft manoeuvring, or about to manoeuvre on the affected runway
 - immediately close the runway or close the aerodrome, as the case requires, until the outage is repaired
 - notify CASA as soon as possible.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.12 Charts published by the aerodrome operator

(Part 139 MOS - 11.06(1)(b))

In their aerodrome manual, aerodrome operators are required to record charts they have published, including Type A chart take-off surface (if applicable).

3.7.12.1 Type A charts

(Part 139 MOS -7.21)

A Type A chart must be prepared for each runway that is used in scheduled international air transport operations unless the same information is provided in the Aerodrome Terrain and Obstacle Chart – ICAO (Electronic).

The obstacle data collected, and the way the Type A chart is presented, must be in accordance with the standards and procedures set out in ICAO Annex 4.

If no obstacle exists within the take-off flight path area, as specified by ICAO Annex 4, a Type A chart is not required, but a statement to that effect with an explanatory note must be included in the aerodrome manual.

An Aerodrome Terrain and Obstacle Chart – ICAO can be produced in lieu of a Type A chart.

If a type A chart has been prepared or updated, a copy of the chart must be given to CASA as soon as reasonably practicable.

To satisfy subparagraph 7.21(9) of the Part 139 MOS, the aerodrome manual must contain either:

- an up-to-date distribution list of current Type A chart holders, or
- a reference to another document, including its location, which contains the list.

It is recommended the aerodrome manual include:

- person(s) responsible for distribution lists of charts
- person(s) responsible for chart reviews
- person(s) responsible for communicating chart updates to CASA and others.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.12.2 Type B charts

(Part 139 MOS - 7.22)

Aerodrome operators may prepare a Type B chart, but only in accordance with the standards and procedures set out in ICAO Annex 4.

A Type B chart is discretionary, however may assist some operators of aircraft with a maximum take-off weight greater than 5,700 kg to identify obstacles around the aerodrome.

If a Type B chart is prepared, obstacle data must be in a digital format and be provided to the AIS Provider in accordance with Subpart 175.E of CASR.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.12.3 Precision Approach Terrain Charts – ICAO

(CASR Part 175.D; Part 139 MOS - 7.23)

Precision Approach Terrain Charts must be prepared for each runway at an aerodrome that is CAT II, CAT III, SA CAT I, or SA CAT II, unless the same information is provided in the Aerodrome Terrain and Obstacle Charts – ICAO (Electronic).

The Precision Approach Terrain Chart must be prepared in accordance with the standards and procedures in ICAO Annex 4.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.7.12.4 Aerodrome Terrain and Obstacle Charts – ICAO (Electronic) (CASR Part 175.D; 175.E; Part 139 MOS – 7.24)

Aerodrome Terrain and Obstacle Charts are optional unless the runway is CAT II, CAT III, SA CAT I, or SA CAT II, and Precision Approach Terrain Charts – ICAO have not been prepared.

Aerodrome Terrain and Obstacle Charts must be prepared in accordance with the standards and procedures set out in ICAO Annex 4.

An Aerodrome Terrain and Obstacle Chart must be revised as soon as possible after any significant change occurs to the relevant terrain profile or obstacles.

3.8 Protection of communication, navigation, surveillance and meteorological facilities

(Part 139 MOS - 11.16)

In their aerodrome manual, aerodrome operators are required to record the procedures for the protection of communication, navigation, surveillance (CNS) and meteorological (MET) facilities located on their aerodrome, including procedures for:

- controlling activities near relevant facilities
- supplying and installing hazardous emissions warning signs, including electromagnetic and microwave radiation.

3.8.1 Controlling activities near CNS and MET facilities

(Part 139 MOS - 11.16(a))

In their aerodrome manual, aerodrome operators are required to record the procedures for controlling activities near CNS and MET facilities, including ground maintenance.

To satisfy section 19.02 of the Part 139 MOS, consultation with the service provider is necessary to ensure that maintenance activities do not interfere with the operation of the aid or facility.

Developments or activities within the aerodrome boundary, near or likely to affect an existing CNS or MET facility are to be referred to the service provider for a hazard and impact assessment.

Vehicles and plant must not enter or remain in an ILS critical area while the ILS is in use unless access has been coordinated with the relevant navigation service and facility provider.

It is recommended the aerodrome manual consider and include information on:

- restricted area boundaries
- permissions to work within the boundary
- vehicles and plant permissions
- notifications via ATC or NOTAM.

Additional lines need to be added to the bottom of the table provided in the Word template so that all CNS and MET facilities at the aerodrome can be appropriately recorded.

3.8.2 Supply and installation of warning signs

(Part 139 MOS - 11.16(b); 19.06(5))

In their aerodrome manual, aerodrome operators are required to record the procedures for supplying and installing hazardous emissions warning signs, including electromagnetic and microwave radiation.

To satisfy subparagraph 19.06(5) of the Part 139 MOS, aerodrome operators are required to place signs at each road access point to an ILS critical area in order to warn drivers and pedestrians against entering the area without authority.

It is recommended the aerodrome manual consider and include information on:

• responsibilities for supplying, installing and maintaining the signs.

3.9 Aerodrome technical inspections / manual validations

The requirement for an aerodrome technical inspection or aerodrome manual validation is based on the type and frequency of operations at the aerodrome.

Runways with sealed, concrete or asphalt surfaces are to be maintained in accordance with the surface and friction standards in the Part 139 MOS.

Technical inspections / manual validations are categorised based on the passenger and movement rates in a financial year.

Aerodromes that have 50,000 or more air transport passenger movements, or 100,000 or more aircraft movements, are required to complete all technical inspection elements each year.

Aerodromes that have 10,000 or more, but less than 50,000 air transport passenger movements, or 20,000 or more, but less than 100,00 aircraft movements, are required to complete an aerodrome technical inspection annually with the exception of pavement and lighting inspections which can be completed two-yearly.

Those aerodromes that have less than 10,000 air transport passenger movements, or less than 20,000 aircraft movements, are required to complete an aerodrome manual validation once every 12 months.

Although not mandatory, it is recommended that the procedures associated with aerodrome manual validations are recorded in the aerodrome manual.

3.9.1 Inspection personnel

(Part 139 MOS - 11.10(2)(a)-(e))

In their aerodrome manual, aerodrome operators are required to record the individuals or positions responsible for:

- managing the inspection programme
- planning the aerodrome technical inspections
- reporting inspection results and follow-up action
- receiving and considering inspection reports
- taking follow-up action if defects or deficiencies have been identified.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that all responsibilities are appropriately recorded.

3.9.2 Inspection items and timeframes

(Part 139 MOS - 11.10(1)(a)(b); 12.09; 12.11(11))

In their aerodrome manual, aerodrome operators are required to record procedures for identifying the items that must be inspected and the timeframes when those inspections are to be carried out.

The items to be inspected and their timeframes for inspection are based on the type and frequency of aircraft operations.

For an aerodrome technical inspection, matters to be inspected are listed in section 12.09 of the Part 139 MOS. Matters related to validation are listed in subparagraph 12.11(11) of the Part 139 MOS.

All elements of aerodrome manual validation must be carried out annually. While a technical inspection is also required to be carried out annually, depending on the type and frequency of operations, pavement, drainage, and testing of lighting and electrical reticulation systems, may extend to two-yearly.

Parts of the technical inspection programme / aerodrome manual validation may be carried out at different times provided that all elements of the inspection / validation are completed within the permitted intervals:

- annual inspections interval must not exceed 12 months from the date of the previous inspection
- two-yearly inspections intervals must not exceed 24 months from the date of the previous inspection.

Sample text and tables provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.9.3 Qualified personnel for technical inspections / manual validations

(Part 139 MOS - 11.10(1)(b); 12.10(3)(4); 12.11(13))

In their aerodrome manual, aerodrome operators are required to record procedures to ensure that only technically-qualified person(s) conduct inspections.

For aerodromes that are required to conduct aerodrome technical inspections, to satisfy subparagraphs 12.10(3) and (4) of the Part 139 MOS, records of qualifications and relevant experience, or demonstrable relevant technical experience, held by a person or persons conducting the inspection must be either:

- maintained as part of the aerodrome manual
- included in the report for the aerodrome technical inspection.

To satisfy subparagraph 12.11(13) of the Part 139 MOS, records of qualifications and experience held by a person, or persons conducting an aerodrome manual validation, must be either:

- maintained as part of the aerodrome manual
- included in the report for the annual aerodrome manual validation.

3.9.4 Scheduling inspections / manual validations and recording their results

(Part 139 MOS - 11.10(1)(c))

In their aerodrome manual, aerodrome operators are required to record procedures for scheduling the inspection programme and recording results of the inspections.

It is recommended the aerodrome manual include:

- person(s) responsible for maintaining an inspection / validation schedule
- a visible schedule showing inspection and / or validation due dates
- procedures for reminding personnel of inspection / validation duties
- procedures for updating calendar
- calendar review cycles.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.9.5 Briefing technical inspectors

(Part 139 MOS - 11.10(1)(d)(i)(ii); 12.08(4); 12.11(8))

In their aerodrome manual, aerodrome operators are required to record procedures for briefing technical inspectors on the scope, technical matters, and inspection locations.

A list of matters to be inspected / validated are itemised in subsections of the Word template.

To satisfy subparagraph 12.08(4) of the Part 139 MOS, a person(s) conducting technical inspections is required to include a record each of the following in their report:

- any non-compliance with MOS Part 139
- any defect or deterioration that could make the aerodrome unsafe for aircraft operations
- any incorrect aerodrome information published in the AIP / NOTAMS or reported to ATC (if applicable)
- any information in the aerodrome manual which is incorrect or not current
- any procedures which are not in accordance with the procedures in the aerodrome manual.

To satisfy subparagraph 12.11(8), of the Part 139 MOS, a person(s) conducing a manual validation is required to include a record of each of the following in their report:

- any non-compliance with MOS Part 139
- any incorrect aerodrome information published in the AIP / NOTAMS or reported to ATC (if applicable)
- any information in the aerodrome manual which is incorrect or not current
- any procedures which are not in accordance with the procedures in the aerodrome manual.

3.9.6 Post-inspection / validation corrective plan

(Part 139 MOS - 11.10(1)(e); 12.08(4))

In their aerodrome manual, aerodrome operators are required to record procedures for preparing and implementing a corrective action plan to ensure that defects identified in an inspection are corrected as soon as possible.

To satisfy subparagraph 12.08(4) of the Part 139 MOS, aerodrome operators, following an inspection, are required to prepare a plan for corrective action when needed. The plan must include a timeframe(s) for completion.

If a proposed action recommended by a technical inspector(s) is not supported by the aerodrome operator, the aerodrome operator is required to record their reasons for not supporting those recommendations in the corrective action plan.

It is recommended the aerodrome manual include details on:

- the person(s) responsible for maintaining and storing corrective plans
- review and update methodology for corrective plans.

Where a validation identifies any errors or anomalies, these must be corrected as soon as possible.

It is recommended the aerodrome manual include:

- the person(s) or position responsible for making corrections to the aerodrome manual
- procedures for ensuring relevant corrections are made to:
 - all supporting procedures used at the aerodrome
 - the information published in the AIP.

It is important to remember to document all corrections made to the manual in the amendment history, as well as re-distribute copies of updated manuals to relevant positions and person(s).

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.9.7 Providing CASA with inspection / validation reports

(Part 139 MOS - 11.10(1)(f); 12.08(7); 12.11(8))

Aerodrome operators are required to record the procedures for providing reports to CASA in their aerodrome manual.

For aerodromes conducting technical inspections, to satisfy subparagraph 12.08(7) of the Part 139 MOS, aerodrome operators are required to provide CASA a copy of the technical inspection report within 30 days of receiving the report.

A copy of the corrective action plan is only required to be provided to CASA should CASA make a request in writing. In the event CASA issues a written request, aerodrome operators have 30 days to provide CASA with a copy of the plan which is to include any progress made to address the actions.

For aerodromes conducting a manual validation, to satisfy subparagraph 12.11(8) of the Part 139 MOS, aerodrome operators are required to provide CASA with a report if the validation identified any of the following:

- any incorrect aerodrome information published in the AIP / NOTAMS or reported to ATC (if applicable)
- any information in the aerodrome manual which is incorrect or not current
- any procedures in use at the aerodrome which are not in accordance with, or conflicts with, the procedures in the aerodrome manual.

It is recommended the aerodrome manual include:

• the person(s) or position responsible for supplying CASA with reports and corrective action plans (if applicable).

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.9.8 Maintaining records of technical inspections / manual validations

(Part 139 MOS - 12.08(9); 12.11(10))

For aerodromes conducting technical inspections, to satisfy subparagraph 12.08(9) of the Part 139 MOS, aerodrome operators are required to keep the records of each technical inspection for a period of at least three (3) years.

For aerodromes conducting manual validations, to satisfy subparagraph 12.11(10) of the Part 139 MOS, aerodrome operators are required to keep records of the results of the validation for a period of at least three (3) years.

It is recommended the aerodrome manual include:

- the person(s) or position responsible for maintaining reports
- the location reports are to be stored.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.10 Aerodrome works safety

(Part 139 MOS - 11.07)

Aerodrome operators are required to establish and implement procedures to ensure that:

- aircraft safety is not compromised by works
- aerodrome works safety is not affected by aerodrome operational activities.

Construction or maintenance work on the movement area, or work affecting aerodrome operations should be planned, established, implemented, or approved by aerodrome operators.

Timely and comprehensive planning including consultation with stakeholders is necessary to identify unforeseen impacts created by the works and address the identified risks.

All works development proposals are to be referred to the CNS or MET service provider for a hazard and impact assessment. Aerodrome operators must not proceed with any development that is assessed by the CNS or MET provider as likely to:

• create a hazard to aircraft

- affect line of sight to an air traffic control or aviation rescue firefighting facility
- impact adversely on the operation of a CNS or MET facility

Aerodrome operators must be satisfied that unacceptable risks generated by the works have been identified and addressed in the planning process.

Resulting operational changes need to be effectively communicated to all relevant stakeholders. Aerodrome operators are to ensure that the plans and procedures that are provided to all stakeholders are followed to ensure safe operations.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.10.1 Works safety personnel

(Part 139 MOS - 11.07(1)(2); 13.01)

Aerodrome operators must appoint a works safety officer to ensure that aerodrome works do not create a hazard to aircraft, or cause confusion to pilots.

Aerodrome operators are required to ensure that works safety officers operating on the movement area, or other operational areas of the aerodrome, are suitably trained to undertake the following functions:

- ensure the safety of aircraft operations in accordance with:
 - the standards for aerodrome works, and
 - the procedures in the aerodrome manual, and
 - the procedures in the applicable MOWP (the MOWP).
- ensure that, (if applicable), aerodrome works are notified by the issue of a NOTAM whose text reflects the MOWP
- ensure that ATC (if applicable) is provided with whatever information is necessary for the safety of aircraft operations
- ensure that the works party or organisation is briefed, on a daily basis, on any matters necessary for the safety of aircraft operations
- ensure that unserviceable portions of the movement area, temporary obstructions, and the limits of the works area are correctly marked and lit in accordance with the standards in this MOS and the MOWP
- ensure that vehicles, plant and equipment carrying out aerodrome works are:
 - properly marked and lit, or
 - under works safety officer supervision, or
 - within a properly marked and lit works area.
- ensure that all other requirements of the directions within the MOWP are complied with relating to vehicles, plant, equipment and materials
- ensure that access to work areas is restricted to clearly identified access routes in accordance with the MOWP

- ensure that excavation is carried out in accordance with the MOWP and, in particular, so as to avoid damage or loss of calibration to any underground power or control cable associated with a lighting system or any navigational aid
- ensure reports are immediately made to the aerodrome reporting officer of any incident, or damage to facilities, likely to affect:
 - ATC services, or
 - the safety of aircraft, or
 - published information in the AIP.
- ensure works are continually supervised while in progress, and that the aerodrome is open to aircraft operations
- ensure that works vehicles, plant and personnel are evacuated from the movement area when necessary for the safety of aircraft operations
- ensure that the aircraft movement area is returned to a safe condition for aircraft operations following removal of vehicles, plant, equipment and personnel from the specific works area
- in the case of time-limited works, ensure that all reasonable measures are taken to return the aircraft movement area to normal safety standards not less than five (5) minutes before the time scheduled or notified for an aircraft movement
- ensure that floodlighting, and any other lighting required for carrying out aerodrome works, is managed so as not to represent a hazard to aircraft operations.

Works safety officers are not permitted to transmit on an aeronautical radio frequency unless they hold an Aeronautical Radio Operator Certificate (AROC).

To satisfy subparagraph 11.07(2) of the Part 139 MOS, aerodrome operators are required to record the individuals or positions responsible for the following aerodrome works activities in their aerodrome manual:

- planning
- conducting
- arrangement and notifications.

To satisfy section 13.01 of the Part 139 MOS, aerodrome operators are also required to record the name, position and function of each works safety officer appointed for routine aerodrome works in their aerodrome manual.

For non-routine works under a MOWP, aerodrome operators are NOT required to record the name, position and functions of those works safety officer(s) in their aerodrome manual, provided they are referenced in the MOWP.

Sample text and tables provided in the Word template should be edited to reflect the actual situation at the aerodrome.

For aerodromes that have multiple works safety officers, additional lines need to be added to the table provided in the Word template so that each name, position and function can be appropriately recorded.

3.10.2 Preparation of a method of working plan (MOWP)

(Part 139 MOS - 11.07(1)(a); Chapter 15; Chapter 16)

Aerodrome operators are required to record the procedures for the preparation of a method of working plan in their aerodrome manual.

The MOWP provides formal notification to the aviation industry of the planned arrangements for the conduct of works, and the restrictions placed on aircraft operations as a result of those works. The plan should also document the outcome of the planning process and provide direction for internal staff. A MOWP is required for scheduled works at aerodromes that have scheduled international air transport operations or fixed based emergency services, unless the:

- works are time-limited works
- aerodrome is closed to aircraft operations during the works and a 14-day written notice period of the impending closure was made
- works are of an emergency nature (to repair unforeseen failure or damage to a part of the manoeuvring area, or to remove an obstacle)
- works do not require any restrictions to aircraft operations.

When preparing a MOWP, aerodrome operators must consult with:

- air transport operators using the aerodrome
- operators of emergency services aircraft that are likely to operate at the aerodrome during the works period
- ATC (if applicable)
- ARFFS (if applicable)
- providers of any communications, navigation, surveillance or meteorological infrastructure or equipment that might be affected by the works (if applicable).

It is recommended aerodrome operators consider developing and maintaining a contact list for consultative purposes.

Aerodromes that do not have scheduled air transport operations or fixed based emergency services may elect to prepare a MOWP.

MOWPs must be prepared in accordance with the content and sequencing requirements stated in Chapter 16 of the Part 139 MOS.

To satisfy section 16.08 of the Part 139 MOS, MOWPs must be authorised and signed by the accountable manager, or the project manager if the aerodrome operator has authorised the project manager, in writing, to do so.

3.10.3 MOWP Notifications

(Part 139 MOS - 11.07(1)(b); 15.02(3)(5); 16.10)

Aerodrome operators are required to include procedures for notifying operators and other aerodrome users of a MOWP in their aerodrome manual.

To satisfy subparagraph 15.02(3) and section 16.10 of the Part 139 MOS, aerodrome operators are required to supply, no less than 14 days prior to the works commencing, an authorised copy of the MOWP to:

- air transport operators using the aerodrome
- operators of emergency services aircraft that are likely to operate at the aerodrome
- fixed based operators using the aerodrome
- ATC (if applicable)
- ARFFS (if applicable)
- CNS and MET facility providers (if applicable)
- the project manager
- the works safety officer
- aerodrome security manager (if applicable)
- the works organiser
- CASA.

When notifying CASA, it is acceptable to e-mail <u>aerodormes@casa.gov.au</u>. The MOWP will be allocated to the appropriate aerodrome inspector.

It is recommended aerodrome operators consider developing and maintaining a distribution list of recipients who are to receive MOWPs.

Where an amendment to a MOWP is required, to satisfy subparagraph 15.02(3) of the Part 139 MOS, the amended MOWP must:

- be supplied to the original recipients of the MOWP as soon as possible, but no later than 48 hours before the works commence
- clearly show the amendment that has been made.

In addition to disseminating the MOWP, a NOTAM giving the time and date of the planned commencement of the works, or a planned change in works stage, must be requested as early as possible, but not less than 48 hours before commencement of the works, or works stage.

In the event of an unforeseen event affecting planned works, and if a 48-hour notification period is not possible, to satisfy subparagraph 15.02(5) of the Part 139 MOS, as soon as the change becomes known, aerodrome operators are required to request the immediate issue of a NOTAM, and either:

- provide notification on the AFRU
- request notification on the ATIS.

3.10.4 Communications with ATC during aerodrome works

(Part 139 MOS - 11.07(1)(c))

In their aerodrome manual, aerodrome operators are required to record procedures for communicating with ATC (if applicable) and aircraft while works are being carried out.

It is recommended the aerodrome manual also include details on:

- procedures for operating on manoeuvring areas
- relevant contact numbers.

In the absence of runway unserviceability markings, a vehicle used by a works safety officer at a non-controlled aerodrome must be equipped with a radio which allows for emergency 2-way communication with aircraft.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.10.5 Time-limited works (TLW) or emergency works

(Part 139 MOS - 11.07(1)(d))

Aerodrome operators are required to record procedures for carrying out time-limited works (TLW) or emergency works in their aerodrome manual.

Time-limited works include:

- maintenance of markings / lighting
- grass mowing
- sweeping of pavements
- rolling of surfaces
- minor pavement repairs
- surveys.

Works are of an emergency nature if they are to repair unforeseen damage to part of the manoeuvring area, or to remove an obstacle.

Works may be carried out as time-limited works, provided:

- normal aircraft operations are not disrupted
- the movement area can be restored to normal safety standards within 10 minutes (unless a NOTAM has been issued not less than 24 hours before the works)
- any hazard created can be removed within 30 minutes of the affected area being required for aircraft operations.

All reasonable measures must be taken to restore normal safety standards not less than five (5) minutes before the scheduled, or notified time, of the aircraft operation.

3.10.6 Notifications of TLW or emergency works

(Part 139 MOS - 11.07(1)(e))

In their aerodrome manual, aerodrome operators are required to record procedures for notifying aircraft operators and other aerodrome users of time-limited works (TLW) or emergency works.

TLW that require more than 10 minutes to restore normal safety standards to the movement area are not permitted unless a NOTAM has been issued not less than 24 hours before commencement of the works.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.10.7 Works at closed aerodrome

(Part 139 MOS - 11.07(1)(f))

In their aerodrome manual, aerodrome operators are required to record procedures for carrying out works when the aerodrome is closed to aircraft operations.

A MOWP is not required if an aerodrome operator temporarily closes the aerodrome, provided written notice is given at least 14 days before the temporary closure to the following:

- air transport operators using the aerodrome
- any or all other known organisation using the aerodrome which is likely to be affected by the closure
- CASA.

An aerodrome cannot be temporarily closed for works that are not of an emergency nature unless a NOTAM giving notice of the closure is issued not less than 14 days before the closure.

A NOTAM issued 14 days prior to the effective time of commencement for aerodrome works may not be visible on national aeronautical information processing system (NAIPS) for the full notification period of 14 days, and air transport operators may not review a NOTAM for 14 days prior to planned operations.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.11 Wildlife hazard management

Wildlife have the potential to cause significant damage to aircraft; therefore, their presence on and in the immediate flight paths of an aerodrome should be deterred.

All reasonable measures should be taken to address areas on the aerodrome that may attract wildlife, and areas in the vicinity of the aerodrome and its airspace to prevent wildlife from transiting across the aerodrome.

3.11.1 Wildlife hazard personnel

(Part 139 MOS - 11.08(2))

In their aerodrome manual, aerodrome operators are required to record the individuals or positions responsible for monitoring and mitigating wildlife hazards to aircraft operating at their aerodrome.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that all individuals responsible for wildlife hazard management are appropriately recorded.

3.11.2 Training of personnel

3.11.2.1 Training for wildlife hazard monitoring and reporting

(Part 139 MOS - 17.07(1)(3))

To satisfy subparagraph 17.07(1) of the Part 139 MOS, wildlife hazard monitoring and reporting personnel must be trained to competently:

- conduct wildlife observations and identify high-risk species
- assess wildlife populations and describe their behaviour
- record information
- collect any remains of a wildlife strike on the aerodrome
- attempt to facilitate the identification of:
 - any wildlife involved in a strike event
 - any resulting damage to an aircraft.
- report the outcomes of observation, monitoring and strike collection activities.

Aerodrome operators are required to establish and maintain training records for monitoring and reporting personnel. To satisfy subparagraph 17.07(3) of the Part 139 MOS, each record must be kept for a period of at least three (3) years.

It is recommended the aerodrome manual include details on:

- re-currency training
- training records.

3.11.2.2 Training for wildlife hazard mitigation

(Part 139 MOS - 17.07(2)(a)(b)(3))

To satisfy subparagraph 17.07(2) of the Part 139 MOS, personnel engaged in wildlife hazard mitigation must be trained to competently:

- engage in active wildlife management without causing a hazard to aviation safety
- assess the effectiveness of any mitigation measures that are taken.

Aerodrome operators are required to establish and maintain training records for monitoring and reporting personnel. To satisfy subparagraph 17.07(3) of the Part 139 MOS, each record must be kept for a period of at least three (3) years.

It is recommended the aerodrome manual include details on:

- re-currency training
- training records.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.11.3 Wildlife hazard management plan

(Part 139 MOS - 17.03; 17.04)

A wildlife hazard management plan must be prepared at an aerodrome that has, in a financial year:

- 50,000 or more air transport passenger movements
- 100,000 or more aircraft movements.

Additionally, in the interests of aviation safety, CASA may direct an aerodrome operator to prepare and implement a wildlife hazard management plan.

Alternatively, aerodrome operators that do not have scheduled international operations may be able to demonstrate to CASA that the wildlife hazard risk at their aerodrome is low and that a wildlife hazard management plan is not required.

When developing a wildlife hazard management plan, the plan must:

- address the requirements set out in section 17.04 of the Part 139 MOS
- be prepared in consultation with a suitably qualified or experienced person such as:
 - an ornithologist, zoologist, biologist, ecologist
 - a person with demonstrated expertise in the management of wildlife hazards to aviation.

It is recommended the aerodrome manual include details on:

- the person(s) and position(s) responsible for maintaining the plan
- the location where it is stored.

3.11.4 Wildlife hazard monitoring

(Part 139 MOS - 11.08(1)(a); 17.01(3))

Aerodrome operators are required to record, the arrangements for monitoring wildlife hazards at their aerodrome in their aerodrome manual.

During aerodrome serviceability inspections, reporting officers must monitor and record the following:

- the presence and behaviour of wildlife on the aerodrome
- wildlife activity that is visible in the vicinity of or from the aerodrome.

To satisfy subparagraph 17.01(3) of the Part 139 MOS, aerodrome operators must also attempt to monitor any reported wildlife strike events at, or in the vicinity of, the aerodrome.

It is recommended the aerodrome manual include:

- numbers, species and location of birds / wildlife seen
- actions taken to disperse birds / wildlife, and the results of these actions.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.11.5 Wildlife hazard assessment

(Part 139 MOS - 11.08(1)(b); 17.02(1))

Aerodrome operators are required to record the arrangements for assessing wildlife hazards in their aerodrome manual.

Aerodrome operators should conduct a hazard assessment using strike data, as well as the presence of species and their numbers recorded from observations.

It is recommended the aerodrome manual include details on:

- the person(s) and position(s) responsible for maintaining wildlife hazard risk assessments
- the location where wildlife hazard risk assessments are stored.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.11.6 Wildlife hazard mitigation

(Part 139 MOS - 11.08(1)(c))

Aerodrome operators are required to record the arrangements for mitigating any wildlife hazard in their aerodrome manual.

Aerodrome operators are required to implement controls to mitigate wildlife hazard risks within the boundary of their aerodrome.

It is recommended the aerodrome manual include habitat and land management strategies both on and in the aerodrome's surrounding areas to reduce the attractiveness of the area to birds / wildlife.

3.11.7 Wildlife hazard reporting (AIP, NOTAM, ATC, UNICOM)

(Part 139 MOS - 11.08(1)(d); 17.05(1))

In their aerodrome manual, aerodrome operators are required to include the arrangements for reporting wildlife hazards to aircraft using AIP, NOTAM, ATC or UNICOM.

If a wildlife hazard is assessed as a serious and imminent threat, aerodrome operators must directly advise all pilots using the aerodrome on CTAF or UNICOM.

If the presence of wildlife is assessed as an ongoing hazard to aircraft, to satisfy subparagraph 17.05(1) of the Part 139 MOS, aerodrome operators must advise the AIS provider in writing to include an appropriate warning notice in the AIP-ERSA. If the hazard is assessed as a higher risk than usual, or is of a short term or seasonal nature, a NOTAM warning of the hazard is to be requested.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

3.11.8 Liaison with local authorities for wildlife hazard mitigation

(Part 139 MOS - 11.08(1)(e); 17.01(2))

Aerodrome operators are required to include details on liaisons with local authorities or stakeholders in their aerodrome manual to facilitate wildlife hazard mitigation.

To satisfy subparagraph 17.01(2) of the Part 139 MOS, aerodrome operators, in consultation with the local planning authority, must attempt to monitor sites that attract wildlife within a 13-km radius of the aerodrome.

It is recommended the aerodrome manual consider and include:

- a list of local authorities that have land within a 13-km radius of the aerodrome
- a record of sites that may attract wildlife
- records of site visits to places with potential risk.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that all local authorities and their contacts are appropriately recorded.

3.12 Low-visibility operations (LVO)

When low-visibility operations (LVO) are conducted, aerodrome operators are required to include the procedures for the management of ground activities in their aerodrome manual.

Aircraft operations at aerodromes during reduced visibility or low cloud conditions present additional hazards to aircraft and other aerodrome users. As visibility reduces, the ability of ATC, pilots, vehicle drivers and other personnel to identify hazards and to take remedial action in a timely manner becomes limited.

The point at which LVO are implemented must be such that there is sufficient time to prepare and safeguard the aerodrome, in readiness for low-visibility procedures (LVP).

3.12.1 Low-visibility personnel

(Part 139 MOS - 11.17(1)(e)(i)(ii))

Where low-visibility operations are conducted, aerodrome operators are required to record in their aerodrome manual:

- the names and roles responsible for managing low-visibility operations
- their phone number(s) during work hours and after hours.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table so that all persons responsible for managing low-visibility operations are appropriately recorded.

3.12.1.1 Runway visibility (RV) assessment personnel

(Part 139 MOS - 23.08)

Where a runway visibility (RV) assessment is not conducted by approved runway visual range equipment (transmissometers), aerodrome operators are required to appoint personnel to conduct RV assessments.

To satisfy section 23.08 of the Part 139 MOS, aerodrome operators, both before appointment and at all times after appointment, must ensure an appointed RV assessor has the following attributes and qualifications:

- a distant visual acuity of 6/12 or better in each eye separately, and 6/9 or better binocular (with or without correcting lenses)
- a certificate of proficiency in aeronautical radio telephony
- the competence and familiarity to operate on the manoeuvring area of the aerodrome during low-visibility conditions
- demonstrated competence in:
 - identifying the location of each point of observation
 - identifying the visibility markers for each point of observation
 - identifying the relevant runway edge lights for making an RV assessment
 - using the conversion table
 - using the visibility markers chart
 - reporting an RV assessment.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table so that all RV assessors are appropriately recorded.

3.12.2 Vehicular traffic in low-visibility operations

(Part 139 MOS - 11.17(1)(b))

Where low-visibility operations are conducted, aerodrome operators are required to include procedures for minimising vehicular traffic during low-visibility operations in their aerodrome manual.

It is recommended the aerodrome manual consider and include:

- vehicle lighting requirements
- procedures for restricting access
- procedures for notifying all aerodrome personnel of low-visibility operations.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.3 CNS facilities in low-visibility operations

(Part 139 MOS - 11.17(1)(c))

Where low-visibility operations are conducted, in their aerodrome manual, aerodrome operators are required to record procedures to ensure vehicles do not compromise communication, navigation and surveillance (CNS) facilities during low-visibility operations.

It is recommended the aerodrome manual include:

- permissions for vehicles to remain in instrument landing system (ILS) areas
- ATC communication for surface movement guidance control system
- instructions for deploying additional barriers / signage.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.4 Manoeuvring area inspections in low-visibility operations

(Part 139 MOS - 11.17(1)(d))

Where low-visibility operations are conducted, aerodrome operators are required to record procedures for manoeuvring area inspections during low-visibility operations in their aerodrome manual.

It is recommended the aerodrome manual include:

- airside vehicle requirements
- inspections of the manoeuvring area
- inspections of aerodrome's lighting systems
- frequency of additional inspections.

3.12.5 Measuring runway visibility

(Part 139 MOS - 11.17(1)(a); 23.09(c)(iii)(iv))

Where low-visibility operations are conducted, aerodrome operators are required to record procedures for measuring visibility along the runway in their aerodrome manual.

There are two methods for measuring visibility along the runway:

- 1. Runway Visibility (RV) the distance along a runway over which a person can see and recognise a visibility marker or can see and count runway lights.
- Runway Visual Range (RVR) a measurement determined by an electronic instrument system operated in accordance with the Bureau of Meteorology and ICAO standards.

RVR is required on a runway intended to support:

- Precision approach CAT I operations with visibility < 800 m
- Special Authorisation CAT I operations
- Precision approach CAT II operations
- Special Authorisation CAT II operations
- Precision approach CAT III operations
- Take-off operations with visibility < 350 m.

Runway visibility assessments must:

- be conducted without using any optical devices to enhance normal distance vision
- not be conducted through a window unless it is otherwise impossible to make the observations
- be made from a nominated observation point
- use either runway edge lights or visibility markers
- be determined in metres to the nearest 50 m increment
- be reported in accordance with subparagraphs 23.09(c)(iii)(iv) of the Part 139 MOS.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.6 Communicating visibility measurements to ATC or pilots

(Part 139 MOS - 11.17(1)(a))

Where low-visibility operations are conducted, in their aerodrome manual, aerodrome operators are required to record the procedures for passing visibility assessments to ATC, or at non towered aerodromes, to pilots.

The RV assessor(s) is not to report on any weather phenomena that are reducing the runway visibility (other than a runway visibility assessment) unless the RV assessor(s) is:

- authorised as a meteorological observer by, or on behalf of, the person who occupies or, for the time being, holds the position of Director of Meteorology under the *Meteorology Act 1995*, or
- has written approval from CASA.

Aerodrome-specific information for pilots, regarding low-visibility operations must be maintained in AIP-ERSA, specifically the level of operations that the aerodrome facilities can support.

It is recommended the aerodrome manual include details on:

- the text for reporting to ATC and / or pilots, including measurement details and time references
- instructions for varying visibility during the assessment
- timeframes for relaying RV assessments to pilots, (if applicable)
- instructions for automatic relay to ATC, (if applicable).

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.7 Transmissometers

(Part 139 MOS – 11.17(2))

To satisfy subparagraph 11.17(2) of the Part 139 MOS, aerodrome operators are required to record locations of transmissometers in their aerodrome manual.

In addition to the location of transmissometers (e.g. using a plan or map), it is recommended the aerodrome manual also include details on:

- calibration of the transmissometers
- maintenance of the transmissometers.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table so that transmissometers installed for all runways at the aerodrome are appropriately recorded.

3.12.8 Low-visibility procedures (LVP)

(Part 139 MOS – Chapter 23)

For the safety of aircraft operations in conditions of reduced visibility or low cloud, operators of controlled aerodromes must establish low-visibility procedures (LVP). Low-visibility procedures are specific to each aerodrome and may apply to a segment or the entire manoeuvring area as agreed to by the air traffic management service provider.

Low-visibility procedures must be established in consultation with any party likely to be affected by them, including aircraft operators, ATC and aerodrome service providers.

3.12.8.1 Specific circumstances for LVP

(Part 139 MOS - 23.02(c)(i))

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CASA may permit low-visibility take-off operations with different minima to airline operators who have been granted individual CASA exemptions against the standard minima published in AIP.

As a minimum, LVPs are to describe the specific circumstances in which LVP measures are to be initiated, fully implemented and terminated.

Sample text provided in the Word template should be edited to reflect the specific procedures at the aerodrome.

3.12.8.2 Nominated rate of aerodrome movements

(Part 139 MOS - 23.02(c)(ii))

As a minimum, LVPs are to contain protocols that support the nominated rate of aerodrome movements.

Sample text provided in the Word template should be edited to reflect the specific procedures at the aerodrome.

3.12.8.3 LVP-related training and authorisation for airside drivers

(Part 139 MOS - 23.02(c)(iii))

As a minimum, LVPs are to document the training and authorisation for airside drivers and other personnel who operate airside when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.4 Control of airside operations

(Part 139 MOS - 23.02(c)(iv))

As per minimum, LVPs are to record the method for controlling airside operations including vehicles, drivers and other personnel when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.5 Withdrawal of non-essential vehicles and personnel

(Part 139 MOS - 23.02(c)(v))

As a minimum, LVPs are to describe the process for withdrawing non-essential vehicles and personnel when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.6 Suspension of visual and non-visual aid maintenance

(Part 139 MOS - 23.02(c)(vi))

As a minimum, LVPs are to contain the process for suspending routine maintenance on visual and non-visual aids when LVPs are in effect.

3.12.8.7 Securing airside access and preventing entry

(Part 139 MOS - 23.02(c)(vii))

As a minimum, LVPs are to contain the measures to secure airside access and prevent inappropriate or inadvertent entry when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.8 Alerting of LVP

(Part 139 MOS - 23.02(c)(viii))

As a minimum, LVPs are to describe the process alerting scheduled air transport operators, emergency services aircraft and other affected organisations when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.9 Coordinating LVP activities with ATC

(Part 139 MOS - 23.02(c)(ix))

As a minimum, LVPs are to describe the coordination of LVP activities with ATC.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.10 Physical checks of lighting and warning devices

(Part 139 MOS - 23.02(c)(x))

As a minimum, LVPs are to describe the process for physically checking lighting installations and warning devices when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.11 Protection of areas for instrument landing system (ILS)

(Part 139 MOS - 23.02(c)(xi))

As a minimum, LVPs are to describe the protocols for protecting ILS critical and sensitive areas, and other precision approach aids when LVPs are in effect.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.12 Emergency responses during LVP

(Part 139 MOS - 23.02(c)(xii))

As a minimum, LVPs are to include procedures for response to an emergency when LVPs are in effect.

3.12.8.13 LVP status

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(Part 139 MOS - 23.02(c)(xiii))

As a minimum, LVPs are to identify a single point from which definitive information about the current status of LVP will be promulgated and may be confirmed.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.12.8.14 Review of low-visibility procedures

(Part 139 MOS - 23.04)

Aerodrome operators must regularly review the aerodrome's LVP to ensure their continuing relevance and effectiveness. ATC and other persons or organisations involved in LVP must participate in the review.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.13 Disabled aircraft removal

Aerodrome operators should establish a plan for the removal of an aircraft disabled on, or adjacent to, the movement area. A disabled aircraft removal plan should be based on the characteristics of the aircraft that are normally expected to operate at the aerodrome.

3.13.1 Aircraft removal personnel

(Part 139 MOS - 11.13(e)(i)(ii))

In their aerodrome manual, aerodrome operators are required to record the names and roles of the person(s) responsible for arranging the removal of an aircraft and the phone numbers for contacting them during and after normal working hours.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table so that all individuals responsible for aircraft removal are appropriately recorded.

3.13.2 Aircraft removal - aerodrome operator & aircraft certificate holder

(Part 139 MOS - 11.13(a))

Aerodrome operators are required to record the roles of the aerodrome operator and the holder of the aircraft certificate of registration in their aerodrome manual.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.13.3 Notifying aircraft certificate holder

(Part 139 MOS – 11.13(b))

Aerodrome operators are required to include the procedures for notifying the holder of the certificate of registration in their aerodrome manual.

3.13.4 Liaising with the ATSB, Defence and ATC

(Part 139 MOS - 11.13(c))

In their aerodrome manual, aerodrome operators are required to record the procedures for liaising with the Australian Transport Safety Bureau, the Defence Aviation Safety Authority, and ATC (if applicable).

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.13.5 Equipment and person(s) to remove aircraft

(Part 139 MOS - 11.13(d))

Aerodrome operators are required to include the procedures for obtaining equipment and person(s) to remove aircraft in their aerodrome manual.

It is recommended the aerodrome manual include details on:

- indemnification procedures and responsibilities, (if applicable)
- procuring equipment and person(s) to remove aircraft.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

3.14 Aerodrome safety management

3.14.1 Aerodrome safety management system (SMS)

(Part 139 MOS - 11.09(1); 25.02; 25.03; 25.04)

If required, aerodrome operators must include the details of their safety management system (SMS) in their aerodrome manual.

An SMS is required to be implemented at an aerodrome that, in the course of a financial year, has:

- 50,000 or more air transport passengers
- 100,000 or more aircraft movements.

While most aerodromes will be required to implement an SMS that meets the requirements in section 25.03 of the Part 139 MOS, aerodromes with scheduled international air transport operations are required to prepare and implement an SMS that meets the requirements in section 25.04 of the Part 139 MOS.

An effective SMS is an organised approach to managing safety at an aerodrome. The SMS must include the organisational structures, accountabilities, policies, procedures and documentation required to manage safety in a continuous and systematic way.

It also provides an identifiable and audited systematic control of the management of safety at an aerodrome. By applying lessons learned, an SMS should aim to make measurable improvements to the overall level of safety. Irrespective of the minimum trigger criteria, all aerodrome operators are encouraged to establish and implement an SMS commensurate with the size and scale of the operating environment.

Sample text provided in the Word template should be edited to reflect the SMS at the aerodrome.

3.14.2 Risk management plan

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(Part 139 MOS - 11.09(2); Chapter 26)

If required, aerodrome operators must include the details of their risk management plan in their aerodrome manual.

Where an SMS has not been implemented, a risk management plan must be prepared and implemented at an aerodrome that, in a financial year, has:

- 25,000 or more, and less than 50,000 air transport passenger movements
- 20,000 or more, and less than 100,000 aircraft movements.

Irrespective of the minimum trigger requirements, all aerodrome operators that do not have an SMS should develop and maintain an effective process that ensures not only the analysis and assessment of the safety risks in the operation of their aerodrome, but also the identification and mitigation of any remedial actions to maintain risks at a level as low as reasonably practicable.

The risk management plan must address:

- hazards identification
- risk assessment and control
- creation and management of risk management plan documents (risk register, risk assessments).

Aerodrome operators are required to ensure that their risk management plan is:

- maintained as a functioning plan
- commensurate with the size of the aerodrome and the complexity of activities
- used to ensure aviation safety risks associated with the aerodrome's activities are reduced to a level that is as low as reasonably practicable.

Sample text provided in the Word template should be edited to reflect the risk management plan at the aerodrome.

4 Aerodrome emergency response

All aerodromes are required to have emergency response arrangements, the extent of which are subject to the type of aircraft operations and movement rates. The emergency response arrangements are an agreed set of arrangements that include state bodies, local response organisations and the community, and should be developed in consultation with a broad range of agencies that will likely be involved in providing a response.

4.1 Emergency response personnel

(Part 139 MOS - 11.12(2)(a)-(e))

In their manual, aerodrome operators must record the individuals or positions responsible for:

- maintaining the aerodrome emergency response procedures, including emergency preparedness
- notifying procedures to initiate an emergency response
- initiating emergency response actions by aerodrome personnel
- returning the aerodrome to operation status after an emergency
- reviewing the aerodrome emergency plan (if applicable), or monitoring the function of the aerodrome in local emergency planning arrangements.

Aerodrome operators are required to establish an aerodrome emergency plan (AEP) if the aerodrome, in a financial year, has:

- scheduled international air transport operations
- 50,000 or more air transport passenger movements
- 100,000 or more aircraft movements.

All other aerodromes are required to have emergency response arrangements identified within the applicable local or state emergency response plan and emergency response arrangements.

Sample text and table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that aerodrome emergency response personnel are appropriately recorded.

4.2 Aerodrome emergency response

(Part 139 MOS – 11.12; Chapter 24)

Aerodrome operators are required to establish an aerodrome emergency plan (AEP) if the aerodrome, in a financial year, has:

- scheduled international air transport operations
- 50,000 or more air transport passenger movements
- 100,000 or more aircraft movements.

All other aerodromes are required to have emergency response arrangements within the applicable local or state emergency response plan and emergency response arrangements.

4.2.1 Aerodrome emergency plan (AEP)

(Part 139 MOS – Chapter 24)

The aerodrome emergency plan must address all elements in subparagraph 24.02(3) of the Part 139 MOS.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.2.2 Local / state emergency response plan

(Part 139 MOS – Chapter 24)

Aerodromes identified in the local / state emergency response plan must have emergency response arrangements that address all elements in subparagraph 24.03(2) of the Part 139 MOS.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.3 Aerodrome emergency procedures

4.3.1 Aerodrome emergency committee

(Part 139 MOS - 11.12(1)(a)(i))

Aerodrome operators must record the positions of those who constitute the membership of the aerodrome emergency committee in their aerodrome manual.

An aerodrome emergency committee is only required to be established at an aerodrome that, in a financial year, has:

- scheduled international air transport operations
- more than 350,000 air transport passenger movements.

An aerodrome emergency committee is responsible for:

- preparing, maintaining, and reviewing the AEP
- planning and testing emergency response arrangements, including exercises
- ensuring an appropriate and commensurate response in the event of a real emergency.

Sample text and the table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that all members of the AEP committee (positions and organisations) are appropriately recorded.

4.3.2 Emergency service organisations

(Part 139 MOS - Chapter 11.12(1)(a)(ii))

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In their aerodrome manual, aerodrome operators must record a description of the role of each emergency service organisation involved in the emergency response arrangements or aerodrome emergency plan as appropriate.

Sample text and the table provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Additional lines need to be added to the bottom of the table provided in the Word template so that all emergency service organisations and their respective roles are appropriately recorded.

4.3.3 Local emergency planning arrangements

(Part 139 MOS – Chapter 11.12(1)(a)(iii))

In their aerodrome manual, aerodrome operators are required to record procedures for liaising with the authorised person responsible for local emergency planning arrangements.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.3.4 Notification and initiation of emergency response

(Part 139 MOS - Chapter 11.12(1)(a)(iv); 24.04)

Aerodrome operators are required to record procedures for notifying and initiating an emergency response in their aerodrome manual.

To satisfy section 24.04 of the Part 139 MOS, aerodrome operators must make available to emergency responders location details or maps of the aerodrome and its immediate vicinity that show:

- primary and secondary access points
- emergency assembly areas, (if applicable)
- details of any aerodrome hazards should vehicle escorts for external responders not be provided.

Sample text provided in the Word template should be edited to reflect the procedures at the aerodrome.

4.3.5 Activation, control and coordination of emergency responders

(Part 139 MOS – 11.12(1)(a)(v))

In their aerodrome manual, aerodrome operators are required to record procedures for activation, control and coordination of aerodrome-based emergency responders (if any) during the initial stages of an emergency.

4.3.6 Aerodrome emergency facilities

(Part 139 MOS - Chapter 11.12(1)(a)(vi))

Aerodrome operators are required to record the procedures for use of the aerodrome's emergency facilities in their aerodrome manual.

It is recommended the aerodrome manual include details on availability and location of specialist emergency equipment.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.3.7 Access and management of assembly areas

(Part 139 MOS - 11.12(1)(a)(vii))

In their aerodrome manual, aerodrome operators are required to record procedures for facilitating aerodrome access and the management of assembly areas (if any).

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.3.8 Response to a local stand-by event

(Part 139 MOS - 11.12(1)(a)(viii))

Aerodrome operators are required to record procedures for responding to a local stand-by event in their aerodrome manual.

A local stand-by event is declared when an aircraft approaching the aerodrome is known, or suspected to have developed some defect, but the trouble is not such as would normally prevent a safe landing. A local stand-by event requires the alerting of aerodrome-based emergency services to a state of readiness.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.3.9 Initial response to full emergency

(Part 139 MOS - 11.12(1)(a)(ix))

Aerodrome operators are required to include procedures for initial response to a full emergency event in their aerodrome manual.

A full emergency is declared when an aircraft approaching the aerodrome is, or is suspected to be, in such trouble that there is a danger of an accident. Declaration of a full emergency must trigger emergency response organisations on and off the aerodrome.

4.4 Readiness of emergency facilities, access points & assembly areas

(Part 139 MOS - 11.12(1)(b))

In their aerodrome manual, aerodrome operators must record arrangements for keeping aerodrome emergency facilities, access points and assembly areas in a state of readiness.

Emergency equipment should be clearly identified, accessible, available, serviced and ready for use.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.5 Emergency responder preparedness

(Part 139 MOS - 11.12(1)(c))

In their aerodrome manual, aerodrome operators are required to record arrangements to ensure emergency preparedness by both on and off-aerodrome responders through:

- site inductions (if provided)
- emergency response training (if provided)
- emergency exercises (if required).

4.5.1 Site inductions for emergency responders

(Part 139 MOS - 11.12(1)(c)(i))

Aerodrome operators are required to record site induction arrangements for emergency responders (if applicable) in their aerodrome manual.

There is a need for on and off-aerodrome personnel to be familiar with the aerodrome's equipment and facilities, as well as the hazards associated with the aerodrome's operating environment.

Aerodromes that are required to have emergency response arrangements in their local / state emergency response plan must have procedures for emergency preparedness that ensure that local emergency responders are shown the following where provided:

- aerodrome access points
- aerodrome assembly areas
- aerodrome emergency facilities and equipment.

4.5.2 Emergency response training

(Part 139 MOS - 11.12(1)(c)(ii))

Aerodrome operators are required to record requirements for emergency response training (if applicable) in their aerodrome manual.

It is recommended the aerodrome manual include details on:

- the training programme
- ongoing (refresher) training
- the person(s) and position(s) responsible for maintaining training records / register
- the locations of the training records / register.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.5.3 Emergency exercises

(Part 139 MOS -11.12(1)(c)(iii))

Aerodrome operators are required to record requirements for conducting emergency exercises (if applicable) in their aerodrome manual.

Exercises aim to evaluate the effectiveness of the aerodrome emergency plan.

A full-scale exercise is a simulated scenario that requires the actual mobilisation and deployment of all organisations and resources that would likely be required to respond in an actual emergency.

Modular exercises provide for a comprehensive cycle of testing of all key elements of the emergency plan by conducting a number of smaller, more detailed exercises with a shorter timescale between each module. Modular testing does not involve the full activation of on and off-aerodrome emergency personnel and facilities.

Aerodromes that have an AEP are required to test the plan to ensure an appropriate and commensurate response will occur in the event of a real emergency.

To satisfy this requirement, aerodrome operators can elect to either:

- conduct a full-scale emergency exercise at intervals not exceeding two (2) years. Each intervening year requires the completion of a partial exercise (e.g. a tabletop exercise), or
- conduct a series of modular tests culminating in a full-scale exercise completed at intervals not exceeding three (3) years.
4.6 Post-emergency return to operational status

(Part 139 MOS - 11.12(1)(d))

Aerodrome operators are required to record the arrangements to return the aerodrome to operational status after an emergency in the aerodrome manual.

It is recommended the aerodrome manual include details on:

- circumstances for returning to operational status
- inspections and confirmations required before returning to operations
- updated NOTAM information
- resuming operations with confined emergencies
- integrity of CNS and MET equipment
- the person(s) and position(s) responsible for consulting with CNS systems specialists (if applicable)
- consultation with ATSB (if applicable).

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.7 Reviews of aerodrome emergency plan (AEP)

(Part 139 MOS - 11.12(1)(e); 24.05(2))

Aerodrome operators are required to record arrangements for periodically reviewing the aerodrome emergency plan (AEP) in their aerodrome manual.

To satisfy subparagraph 24.05(2) of the Part 139 MOS, for the purpose of correcting any deficiency found, aerodrome operators must complete a review of the AEP no later than 30 days after:

- the conclusion of an emergency
- the completion of an exercise.

Procedures in the AEP must be reviewed with local emergency responders at least annually.

It is recommended the aerodrome manual include details on:

- the person(s) and position(s) responsible for maintaining review records
- the locations of the review records.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

4.8 Monitoring local emergency planning arrangements

(Part 139 MOS - 11.12(1)(e))

In their aerodrome manual, aerodrome operators are required to record the arrangements for monitoring the function of the aerodrome in local emergency planning arrangements.

It is recommended the aerodrome manual include details on:

- review cycle schedule
- the person(s) and position(s) responsible for maintaining review records
- the locations of the review records.

Sample text provided in the Word template should be edited to reflect the actual situation at the aerodrome.

Appendix A. Heading

The appendix section has been provided for operators who wish to include appendices in the manual.

It is not mandatory that the aerodrome manual have appendices; however, operators can add several appendices, as well as subsections within an appendix.

The Table of Contents should be updated to include all appendices.

Include or remove headings and subheadings as required.

A1 Appendix subsection