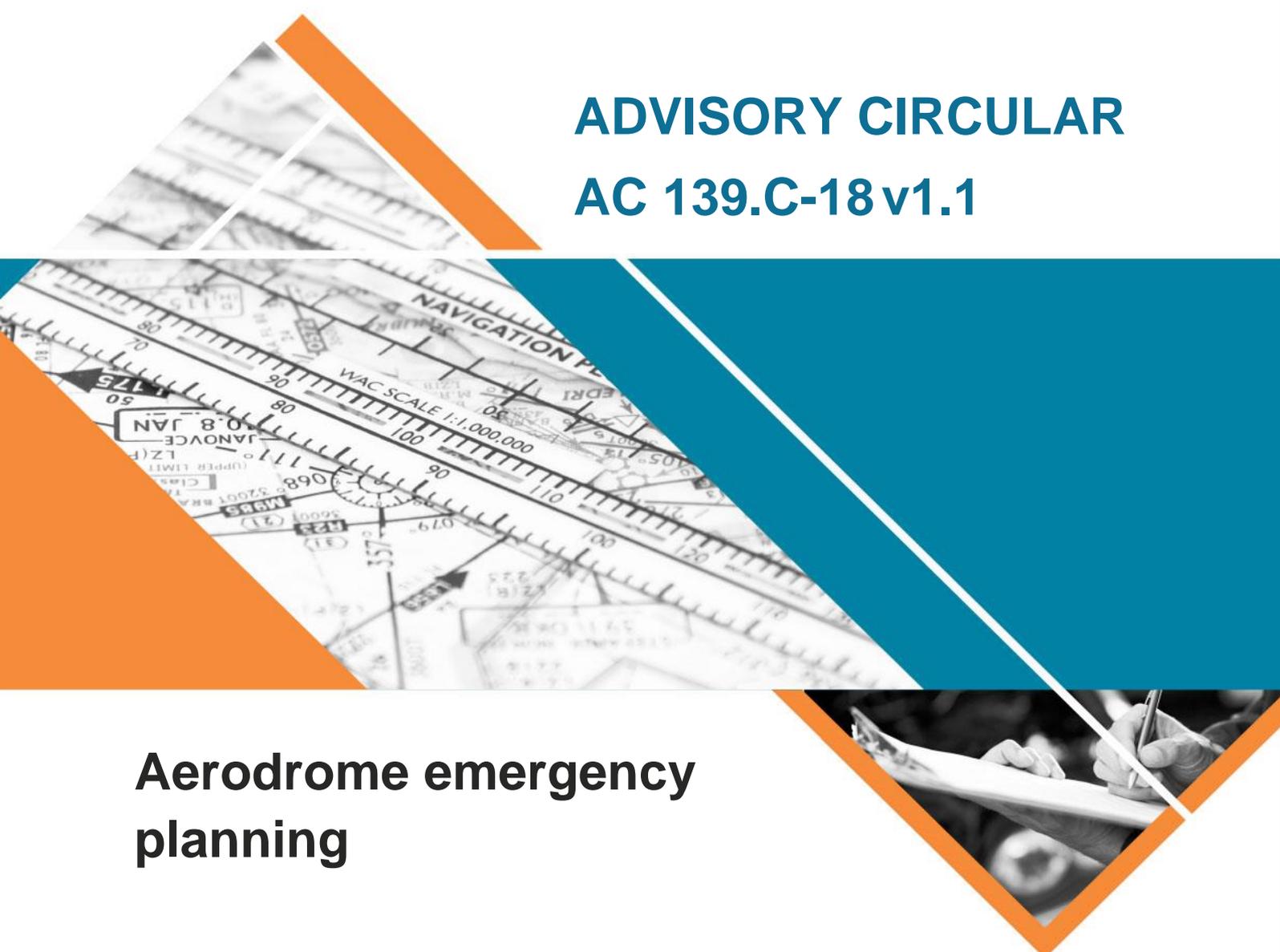




# ADVISORY CIRCULAR

## AC 139.C-18 v1.1



# Aerodrome emergency planning

**Date** June 2023  
**File ref** D22/265786

Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

**Advisory Circulars should always be read in conjunction with the relevant regulations.**

## Audience

This advisory circular (AC) applies to:

- aerodrome owners/operators
- aerodrome rescue and firefighting service providers
- air traffic control
- the Civil Aviation Safety Authority (CASA).

## Purpose

This AC provides guidance to operators of certified aerodromes on their emergency planning obligations in accordance with Chapter 24 of the Part 139 (Aerodromes) Manual of Standards (MOS). Irrespective of the type of response plan required, emergency response arrangements should always:

- provide for the coordination of responding organisations
- be commensurate with the aircraft operations and other activities conducted at the aerodrome.

Operators of non-regulated aerodromes are encouraged to observe these guidelines.

## For further information

For further information, contact CASA's Personnel Licensing, Aerodromes and Air Navigation Standards (telephone 131 757).

Unless specified otherwise, all subregulations, regulations, divisions, subparts and parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

## Status

This version of the AC is approved by the Branch Manager, Flight Standards.

**Note:** Changes made in the current version are annotated with change bars.

Version	Date	Details
v1.1	June 2023	Add guidance on including aerodrome public health plans in the aerodrome emergency plan for international airports.
v1.0	August 2020	This AC replaces AC 139-7(0) - Aerodrome emergency planning.

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# 1 Reference material

## 1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

Acronym	Description
AC	advisory circular
AEC	aerodrome emergency committee
AEP	aerodrome emergency plan
ARFFS	aerodrome rescue and firefighting service
ATC	air traffic control
ATSB	Australian Transport Safety Bureau
AUSAVPLAN	Australian Government Aviation Disaster Response Plan
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
ICAO	International Civil Aviation Organization
MOS	Part 139 (Aerodromes) Manual of Standards
NEMA	National Emergency Management Agency (Australia)
TSIA	Transport Safety Investigation Act 2003

## 1.2 Definitions

Terms that have specific meaning within this AC are defined in the table below.

Term	Definition
Air transport operation	A passenger transport operation, or a cargo transport operation, or a medical transport operation that: (a) is conducted for hire or reward; or (b) is prescribed by an instrument issued under regulation 201.025 of CASR.  However, an operation conducted for a purpose mentioned in paragraph 206(1)(a) of CAR is not an air transport operation.
air transport passenger	A passenger in an air transport operation.
air transport passenger movements	For an aerodrome, for a financial year, means the numbers, published by the Department, of air transport passenger movements at the aerodrome during the financial year, and any reference to air transport passenger movements is a reference to the movements compiled in these numbers.
aircraft movement	Is one of the following: (a) the landing of an aircraft at an aerodrome; (b) the take-off of an aircraft from an aerodrome; (c) a touch-and-go manoeuvre at an aerodrome.

<b>Term</b>	<b>Definition</b>
aircraft movements	When referred to numerically for an aerodrome, for a financial year, means the numbers of aircraft movements at the aerodrome during the financial year, as compiled by the aerodrome operator or the ATS provider.
assembly area	An area where response agencies, and support vehicles and equipment can be held in readiness for responding to an emergency
aviation accident	An occurrence associated with the operation of an aircraft, which takes place between the time any person boards the aircraft with the intention of flight until all such person have disembarked, where a person is fatally or seriously injured, the aircraft sustains damage or structural failure or the aircraft is missing or is completely inaccessible. If the aircraft is destroyed or severely damaged to that it must be written off, it is further defined as a hull loss accident (ICAO Annex 13).
aviation incident	An occurrence, other than an accident, associated with the operation of an aircraft which effects or could affect the safety of operation (ICAO Annex 13).
Department	The Department of State of the Commonwealth that is administered by the Minister who, from time to time, administers CASR. At the date of review, this is the Department of Infrastructure, Transport, Regional Development, Communications and the Arts but may change from time to time in accordance with Administrative Arrangements Orders made by the Governor-General.
full emergency	Implemented when it is known that an aircraft approaching the airport is, or is suspected to be, in such trouble that there is danger of an accident (Airport Services Manual 9137, fourth edition - 2015).
international air transport operation	An international air transport operation whether or not it is conducted in accordance with a published schedule.
international aerodrome	An aerodrome: (a) designated by the Department as an international airport in Australia (a designated international airport in Australia); and (b) identified as a designated international airport in Australia on the Department's website.
local standby	Implemented when an aircraft approaching the airport is known or is suspected to have developed some defect, but the problem is not such as would normally involve any serious difficulty in effecting a safe landing. This includes bomb threats and other incidents (Airport Services Manual 9137, fourth edition - 2015).
scheduled international air transport operation	An international air transport operation conducted in accordance with a published schedule.
tabletop exercise	A theoretical discussion in which an emergency event is simulated, and relevant persons verbally describe how they respond to the emergency but without any physical demonstration of the actual response.

## 1.3 References

### Legislation

Legislation is available on the Federal Register of Legislation website <https://www.legislation.gov.au/>

Document	Title
Part 139 of CASR	Aerodromes
Transport Safety Investigations Act 2013	Reportable occurrences

### International Civil Aviation Organisation documents

International Civil Aviation Organization (ICAO) documents are available for purchase from <http://store1.icao.int/>

Many ICAO documents are also available for reading, but not purchase or downloading, from the ICAO eLibrary (<https://elibrary.icao.int/home>).

Document	Title
International Civil Aviation Organization (ICAO) Annex 9	Facilitation
ICAO Annex 13	Aircraft accident and incident investigation
ICAO Annex 14, Volume I	Aerodromes - Aerodrome Design and Operations
ICAO Doc 9137, Part 1	ICAO Airport services manual – 1 Rescue and Firefighting

### Advisory material

CASA's advisory materials are available at <https://www.casa.gov.au/publications-and-resources/guidance-materials>

Document	Title
AC 139.C-01	Aerodrome manual
AC 139.A-03	Application of aerodrome standards

## 2 Aerodrome emergency planning

### 2.1 Introduction

2.1.1 Section 9.1 of Annex 14 to the Chicago Convention (Aerodromes), states:

"Aerodrome emergency planning is the process of preparing an aerodrome to cope with an emergency occurring at the aerodrome or in its vicinity. The objective of aerodrome emergency planning is to minimise the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations."

2.1.2 The *Civil Aviation Safety Regulations 1998* (CASR) and the Part 139 Manual of Standards (MOS) requires all certified aerodromes to have emergency response arrangements, the extent of which are determined by:

- air transport passenger numbers
- aircraft movement numbers
- scheduled international air transport operations.

2.1.3 Notwithstanding the type of response planning required by the trigger criterion, when preparing for an emergency response, consideration should always be given to the:

- complexity of the aerodrome operating environment
- geographical location of the aerodrome
- type of aircraft that operate at, or are likely to operate at the aerodrome
- types of emergencies that could occur
- identification of hazards which could reasonably be expected to initiate or contribute to an emergency
- equipment, resources and training that may be required.

2.1.4 As an aerodrome will not have enough resources to independently support the response to every emergency, the aerodrome operator should engage with those agencies required to assist when preparing a response plan. The agencies may include:

- Air Traffic Control (ATC)
- Aerodrome Rescue and Firefighting Service (ARFFS) or other fire department
- ambulance and other medical/health services (i.e. hospitals)
- aircraft operators
- ground handling agencies
- police
- Australian Border Force
- Australian Defence Force
- State Emergency Service
- Royal Flying Doctor Service
- local emergency management groups/committees.

2.1.5 It is important that all persons who are likely to assist in an emergency have a general awareness of potential emergencies that could occur and how they may respond.

2.1.6 Human factor principles should be considered when developing response procedures. Considerations may include:

- developing checklists to guide a described path or behaviour
  - clear signage to reduce thinking and opportunities for incorrect decisions.
- 2.1.7 For those aerodromes with a Safety Management System (SMS), emergency response should be integrated into the SMS.
- 2.1.8 Aerodrome operators should align their emergency management process to their own Local, State or Territory emergency management legislation to ensure a consistent and coordinated response.

## **2.2 Australian federal, state, territory and local government emergency arrangements**

### **2.2.1 Emergency plans**

- 2.2.1.1 The National Emergency Management Agency (NEMA) has published the Australian Government Aviation Disaster Response Plan (AUSAVPLAN). It explains how national, state/territory, and local governments collectively approach the management of an actual, or imminent, aviation disaster.
- 2.2.1.2 Australian states and territories supported by NEMA, have a responsibility to develop and manage their own emergency plans.
- 2.2.1.3 Relative to their districts, local governments produce emergency response plans that complement the state, territory and national plans.

### **2.2.2 Emergency committees**

- 2.2.3 State, territory and local government emergency committees are collaborative forums where, in an emergency, agencies with a diverse range of responsibilities ensure response and recovery arrangements are coordinated in their approach.
- 2.2.4 Aerodromes that do not have an Aerodrome Emergency Committee (AEC) are expected to be a member of their local emergency management committee. This will provide the aerodrome operator with direct access to established community networks and an increase in knowledge of available resources. It will also ensure the procedures required to effect and manage an aviation emergency, at or in the vicinity of their aerodrome, are incorporated and understood.
- 2.2.5 Participation at local emergency management meetings will also provide an opportunity to review hazards associated with the operation of the aerodrome, and to identify opportunities to increase community resilience.

## **2.3 Australian Transport Safety Bureau**

- 2.3.1 ICAO Annex 13 prescribes the principles for aircraft accident and incident investigation.
- 2.3.2 As a signatory to the Chicago Convention and within Australia's jurisdiction, the Australian Transport Safety Bureau (ATSB) assumes responsibility for aircraft accident and incident investigation.

- 2.3.3 The *Transport Safety and Investigation Act 2003* (TSIA) establishes the mandatory reporting of occurrences that are classified as:
- immediately reportable matters (accidents and serious incidents)
  - routine reportable matters (incidents).
- 2.3.4 Aerodrome operators should ensure they are familiar with and comply with the TSIA reporting requirements.

## 3 Legislative obligations

### 3.1 Requirements that apply at all certified aerodromes

- 3.1.1 The operator of a certified aerodrome is required to:
- record (or reference), in their aerodrome manual, the aerodrome emergency response procedures outlined in section 11.12 of the Part 139 MOS<sup>1</sup>.
  - make available to emergency agencies the location details, or maps, of the aerodrome, and its immediately vicinity<sup>2</sup>.
- 3.1.2 Additional requirements (as outlined below) are dependent on the type and frequency of aircraft operations occurring at the aerodrome.
- 3.1.3 To meet their compliance obligations, it is expected each aerodrome operator would have an awareness of the movement rates at their aerodrome. For guidance on monitoring and calculating air transport passenger/aircraft movement numbers, refer to AC 139.A-03 'Application of aerodrome standards'.
- 3.1.4 Aerodromes that are an 'alternate' for international operations are not considered to have scheduled international air transport operations, therefore the scheduled international air transport operations trigger will not apply at these aerodromes.

### 3.2 Does my aerodrome require an Aerodrome Emergency Plan?

- 3.2.1 In addition to the requirements in para 3.1.1, an AEP that meets the requirements of section 24.02 of the Part 139 MOS, is required for an aerodrome that has:
- scheduled international air transport operations
  - 50 000 or more air transport passenger movements in a financial year
  - 100 000 or more aircraft movements in a financial year.
- 3.2.2 Aerodromes that have an AEP are to adhere to the testing and review requirements stated in section 24.05 of the Part 139 MOS.
- 3.2.3 Guidance on developing, testing, and review of the AEP are further described in section 6 of this AC.

### 3.3 Aerodromes that do not require an Aerodrome Emergency Plan

- 3.3.1 Operators of an aerodrome that does not meet the trigger criterion to have an aerodrome emergency plan (AEP) are, in addition to the requirements in para 3.1.1, required to:
- have emergency response arrangements that address section 24.03 of the Part 139 MOS

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<sup>1</sup> For further guidance refer AC 139.C-01 'Aerodrome manual'

<sup>2</sup> Guidance on the provision and availability of location details and maps is contained in section 4 of this AC.

- ensure that those emergency response arrangements are represented in the applicable local or state/territory emergency response plans.

3.3.2 Local emergency responders should be familiar with the emergency preparedness and response arrangements<sup>3</sup>.

### **3.4 Requirement to establish an Aerodrome Emergency Committee**

3.4.1 Not all aerodromes that require an AEP are required to establish an aerodrome emergency committee (AEC). An AEC is only required at an aerodrome that has:

- scheduled international air transport operations
- 350 000 or more air transport passenger movements in a financial year.

3.4.2 For an aerodrome that has scheduled international operations, the AEC must be established prior to the first scheduled international service.

3.4.3 For an aerodrome that requires the establishment of an AEC due to the number of air transport passengers, the committee must be established<sup>4</sup> within three months of the passenger movement numbers being published by the Department.

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<sup>3</sup> Guidance on developing emergency response arrangements and local emergency responder preparedness is contained in section 7 of this AC.

<sup>4</sup> Guidance on establishing an AEC and the committee's obligations is contained in section 5 of this AC.

## 4 Aerodrome location details and maps

### 4.1 Information required to be provided to emergency agencies

- 4.1.1 The Part 139 MOS requires the operator of a certified aerodrome to prepare and make available to emergency response agencies location details, or maps, of the aerodrome site and surrounding area.
- 4.1.2 Maps provide a quick reference tool for incident orientation, and for guiding emergency responders to a specific point or location. As maps are often used by first responders who may not be familiar with the aerodrome site, they should be of a size and a level of detail that is easy to read and clearly identify:
- access routes to and from the aerodrome site
  - the location of emergency access points for entry into the aerodrome
  - assembly areas / staging locations
  - fire hydrants suitable for replenishing fire tenders
  - hazards
  - available support facilities
  - the location of hospitals and medical centres near to the airport.
- 4.1.3 To help define the response area, aerodrome operators should consider producing a grid map, which gives a view of the airport and surrounds using a system of squares (numbered and lettered) superimposed over a drawing of the airport therefore providing an unambiguous field reference.
- 4.1.4 Geographic Information Systems (GIS) allow a common view of the aerodrome and its surrounds using longitude and latitude coordinates. Whilst data sharing with key emergency response agencies through GIS could be made available to satisfy this requirement, CASA recommends that this information should be supported by the physical publication of maps as appropriate.
- 4.1.5 The aerodrome operator may be required by CASA to demonstrate their method of communicating the location details/maps of the aerodrome and surrounding site to emergency agencies that may be required to respond, regardless of the format. The aerodrome operator should also check that response agencies have current and accurate information.
- 4.1.6 The aerodrome operator should also ensure that the emergency response agencies can readily access the location details or maps that they provide.
- 4.1.7 Maps should also be made available at locations where it is likely incident responders may gather to coordinate the response to an emergency, such as:
- an emergency operations centre
  - mobile command post
  - defined staging area(s).

## 5 Aerodrome Emergency Committee

### 5.1 Establishing an aerodrome emergency committee

- 5.1.1 The aerodrome emergency committee (AEC) should be administered by the aerodrome operator.
- 5.1.2 At aerodromes with scheduled international air transport operations, the AEC must be in place prior to the first scheduled international air transport service.
- 5.1.3 For aerodromes that meet or exceed the trigger criteria of 350 000 air transport passengers, the AEC must be in place within three months of the Department publishing evidence that the criteria have been met.
- 5.1.4 As the aerodrome operator is accountable for complying with the CASRs and the Part 139 MOS, the aerodrome operator should:
- maintain regular oversight of the air transport passenger numbers published by the Department
  - be able to provide evidence (i.e. committee meeting minutes) to demonstrate the timely formation of the AEC, if this information be requested by CASA.
- 5.1.5 Depending on the complexity of the aerodrome and availability of emergency services, aerodrome operators may consider forming sub-committees to support the AEC. These sub-committees may include, but are not limited to:
- an exercise committee
  - a welfare committee.

### 5.2 Responsibilities of the AEC

- 5.2.1 The AEC is primarily responsible for assisting the aerodrome operator in:
- preparing, accepting, and maintaining the AEP for the aerodrome
  - developing emergency response arrangements based on the identification and availability of emergency resources at, and in the vicinity of the aerodrome
  - establishing an exercise program to periodically test the AEP
  - revising and updating the AEP.

### 5.3 Representation on the AEC

- 5.3.1 The AEC should include representation from:
- police
  - fire
  - ambulance
  - air traffic control
  - other agencies that may be required to assist in an emergency, as appropriate.
- 5.3.2 Airlines and other support agencies should also be considered for inclusion on the AEC.

## 5.4 Frequency of AEC meetings

- 5.4.1 At least once a year the AEC are to meet to review the adequacy of the AEP, and following each occasion of:
- the plan being activated
  - a test or exercise being held
  - where the currency and procedural validity of the AEP needs to be addressed.
- 5.4.2 The aerodrome operator should chair the AEC meetings, and a Terms of Reference should be established to ensure all committee members have a common understanding of their role and responsibilities.
- 5.4.3 A meeting agenda and a record of committee meeting minutes for each meeting should be documented and retained by the aerodrome operator for a minimum period of three (3) years.

## 6 Aerodrome Emergency Plan

### 6.1 Introduction

- 6.1.1 This section provides guidance to those aerodrome operators who are implementing and maintaining an AEP.
- 6.1.2 At aerodromes with scheduled international air transport operations, the AEP is required to be in place prior to the first scheduled international air transport service.
- 6.1.3 At aerodromes that meet or exceed 50 000 air transport passengers in a financial year, the AEP is required to be in place within six (6) months of the Department publishing evidence that the criteria have been met.
- 6.1.4 At aerodromes that meet or exceed 100 000 aircraft movements in a financial year, the AEP is required to be in place within six (6) months of the aerodrome operator becoming aware of the movement numbers.
- 6.1.5 As the aerodrome operator is accountable for complying with the CASRs and the Part 139 MOS, it is expected that the aerodrome operator will maintain regular oversight of the:
- air transport passenger numbers published by the Department
  - aircraft arriving at and departing from their aerodrome.

### 6.2 Administering the AEP

- 6.2.1 The requirement to develop an AEP is the responsibility of the aerodrome operator.
- 6.2.2 Provided the emergency procedures are clearly referenced in the aerodrome manual, the AEP may be considered a 'subsidiary document' to the manual.
- 6.2.3 Whilst there is no standard format, document control procedures should be in place to ensure:
- a current copy of the AEP is available to all organisations and personnel with duties and responsibilities within the plan
  - the current version is identifiable to prevent the use of outdated material
  - all obsolete versions of the AEP are promptly withdrawn.
- 6.2.4 It is important the AEP provides appropriate guidance for contacting and alerting responders. As contact personnel and telephone numbers often change, these should be checked and confirmed on a regular basis.
- 6.2.5 Where an AEC is not required to be established, active communication and support for the participation of emergency agencies is important in the development and maintenance of the AEP.
- 6.2.6 For an aerodrome that has a shoreline as a boundary or directly accesses an open body of water, the AEP is required to contain arrangements for water rescue.

## 6.3 AEP content

### 6.3.1 Composition of the AEC (if established)

- 6.3.1.1 For those operators required to establish an AEC, a list of committee members is to be maintained.
- 6.3.1.2 The AEP should either:
- record the position and contact details of each committee representative
  - reference the location in which the position and contact details of each committee member is retained.
- 6.3.1.3 Committee representatives may change frequently so it is important that checks are regularly conducted to confirm that the member and their contact details are accurate.

### 6.3.2 Public health plans

- 6.3.2.1 Due to the COVID-19 pandemic, ICAO has introduced requirements for all countries to manage risks associated with a national or global pandemic or a public health emergency. At a minimum, the AEP must include aerodrome public health plans for international airports as they provide entry and exit points to and from a country. The public health plan should ensure an airport is prepared for a communicable disease outbreak and a response is provided at the airport level<sup>5</sup>
- 6.3.2.2 Guidance on developing aerodrome public health emergency plans can be found on the ICAO website at <https://www.icao.int/safety/CAPSCA/Pages/default.aspx>.

### 6.3.3 Procedures for liaison with emergency response agencies

- 6.3.3.1 The procedures for liaison with emergency response authorities established under the applicable Local, State or Territory emergency management legislation is required to be recorded in the AEP.
- 6.3.3.2 As communication and coordination are critical in an emergency, a complete and current list of interagency telephone numbers should be available to assist with rapid notification (000 is the national/Australia wide emergency number).
- 6.3.3.3 For each type of emergency, the AEP should clearly define a sequence and process for alerting, updating, and standing down of all personnel involved. Flowcharts can be useful to provide a quick reference for the call out and stand down processes.
- 6.3.3.4 The aerodrome operator should have a communication system that provides a prompt link between aerodrome personnel and emergency response agencies.
- 6.3.3.5 Telephone communications networks may become saturated (overloaded) during an emergency event. Contingency or fall-back systems should be considered where appropriate and may include:
- two-way radios
  - a satellite phone system
  - microwave link allowing direct data messaging.

<sup>5</sup> For further information, refer ICAO Annex 9 Chapter 8.

- 6.3.3.6 An automated emergency alerting system could be considered as it allows an emergency message to be sent to several agencies simultaneously. This system may not be immune from network overloading during a major emergency.
- 6.3.3.7 Upon the arrival of emergency services, a single control agency should be appointed based on the incident type. Where the incident controller is not familiar with the aerodrome site, the aerodrome operator should consider assigning an aerodrome representative to assist the incident controller so that the incident controller has direct access to local knowledge.
- 6.3.3.8 Briefings should be provided when:
- new information becomes available
  - there is a change to known information
  - new hazards and risks are identified.

#### **6.3.4 Notification procedures to initiate an emergency response**

- 6.3.4.1 The notification procedures to initiate an emergency response are required to be recorded in the AEP.
- 6.3.4.2 The activation sequence for alerting agencies and other individuals required to respond in an emergency should clearly identify:
- the circumstances under which the plan is to be activated
  - who is responsible for initiating the notification process (at a controlled aerodrome this may be ATC or ARFFS)
  - how the notifications are to be made (i.e. crash alarm, radio, telephone etc.)
  - a back-up system should the primary system of communication fail
  - the means of alerting all relevant stakeholders.
- 6.3.4.3 Notifications must be made without delay and in almost all cases there is a state or territory requirement for notification to be made via the national emergency number (000).
- 6.3.4.4 The emergency notification system should be tested often to ensure it is working and that telephone numbers are correct. Testing at irregular intervals should be considered as it allows the system to be tested at different times of the day.
- 6.3.4.5 To ensure agencies respond appropriately, it is important that all known information about the emergency is relayed as accurately as possible.
- 6.3.4.6 Pertinent information to be provided should include:
- exact location of the incident (including location details and map references etc)
  - nature of the incident (i.e. full emergency, aircraft crash, fire etc.)
  - type of aircraft
  - estimated time of arrival of the aircraft involved and runway to be used (if applicable)
  - number of persons on board
  - presence of hazardous materials including dangerous goods
  - any other relevant information.

### 6.3.5 Role and function of aerodrome personnel during an emergency

6.3.5.1 The AEP must record the role and function of aerodrome personnel during an emergency.

6.3.5.2 The aerodrome operator's responsibilities are likely to include, but may not be limited to:

- emergency notifications
- securing and ensuring the safety of the movement area which may require:
  - o Stopping aircraft movements and other unrelated non-response activities in affected area(s) of the aerodrome, if necessary.
  - o Initiating and disseminating relevant safety related information, including NOTAMs.
  - o Placing, modifying or extinguishing aircraft visual aids.
- setting up the initial forward command post
- operating emergency access gates
- providing initial briefings and updates to emergency responders
- establishment and operation of staging areas
- providing escorts
- setting up and operating aerodromes-based communications and emergency response equipment
- setting up and operating of aerodromes-based emergency facilities (i.e. coordination of reception centres etc.)
- monitoring air band radio frequencies to maintain situational awareness
- providing public information via announcements, flight information displays, website information and social media
- obtaining assistance from local service providers to support the emergency.

6.3.5.3 The aerodrome operator should maintain a chronological log of all events and observations. This information will be valuable when conducting a debrief and may be pertinent in an investigation.

### 6.3.6 Emergency facilities / equipment and keeping them in readiness

6.3.6.1 The availability and location of emergency facilities and equipment are to be recorded in the AEP. Procedures to ensure the identified facilities and equipment are maintained in a serviceable condition should they be required are also to be recorded.

6.3.6.2 Emergency equipment may consist of the following:

- emergency vehicles
- protective clothing
- tents / portable shade structures
- portable lighting towers
- fire extinguishers
- first aid equipment
- drench showers
- spill kits
- radios / mobile phones
- boats / inflatable rafts.

- 6.3.6.3 All facilities and equipment should easily be identifiable, accessible, available, serviceable, and ready for use. The aerodrome operator should consider such matters as their:
- safe and accessible location
  - ability to be moved to areas as intended
  - readiness for use and ease of use
  - training requirements to effect safe use.
- 6.3.6.4 For ease of identification, equipment locations may be sign-posted, including directions from areas where they cannot be seen.
- 6.3.6.5 To ensure that all emergency facilities and equipment is in proper working order and is in a state of readiness in the event of an emergency, regular inspections and maintenance should be carried out.
- 6.3.6.6 The outcome of each inspection should be recorded using an inspection check sheet.
- 6.3.6.7 In addition, equipment and facilities available for responding to an aerodrome emergency are to be subject of review as part of the annual Aerodrome Technical Inspection (ATI) program.
- 6.3.6.8 All records of inspections should be retained for a minimum period of three (3) years.

### **6.3.7 Aerodrome operator's procedures in response to an emergency**

- 6.3.7.1 The aerodrome operator is always responsible for ensuring the safe operation of the aerodrome and its facilities. In the event of an accident or a significant incident that is or is likely to impact safe aircraft operations or public safety, the aerodrome operator should consider closing the airport immediately restricting aircraft operations.
- 6.3.7.2 Although the closure and opening of the aerodrome, or a part of the aerodrome, is the responsibility of the aerodrome operator, due to the nature and speed with which an accident or incident can occur, it may be that the aerodrome operator is not in the best position to assess the situation and make a decision on continuing operations. It may be beneficial to establish procedures with ATC which gives the authority for closing the airfield under defined circumstances. This can be accomplished through the preparation of a Letter of Agreement.
- 6.3.7.3 The aerodrome or affected parts of the movement area should not be reopened until the aerodrome operator has ensured that:
- the movement area is safe and secure
  - activities associated with the emergency event will not be impacted negatively by the resumption of airfield operations
  - the event does not pose a hazard to the resumption of airfield operations
  - the movement areas that have been reopened have been inspected and no additional risk to aviation safety has been identified
  - public safety is assured
  - the Police, Coroner or ATSB have no further requirements.
- 6.3.7.4 Safe and orderly movement of vehicles and pedestrians is an essential consideration in emergency planning. Wherever possible, access to the aerodrome should be controlled and supervised to prevent inappropriate entry by onlookers, media etc. The provision of

an assembly area will allow for the registration of, and a staged and coordinated procession of emergency service responder's airside.

- 6.3.7.5 Where available a forward command post that is clearly identifiable and preferably sheltered from the weather should be established outside the present and any potential hazard zone. Ideally it should be positioned away from public access, general noise and confusion associated with the incident.
- 6.3.7.6 When developing procedures, consideration should also be given to:
- the provision of emergency response outside of the core operating hours for the aerodrome
  - local weather conditions and night operations
  - maintaining continuity should the incident be protracted.

### **6.3.8 Procedures for a local standby (controlled aerodrome)**

- 6.3.8.1 At a controlled aerodrome the procedures for a local stand-by are to be recorded in the AEP.
- 6.3.8.2 A local standby is declared when an aircraft approaching the aerodrome is known, or suspected to have developed some defect, but the issue is not such as would normally prevent a safe landing.
- 6.3.8.3 ATC are responsible for communicating with the pilot of an aircraft who declares a local standby.
- 6.3.8.4 A local standby requires the alerting of aerodrome-based emergency services to a state of readiness. ARFFS may be required to attend a pre-determined ready position, whilst local emergency services will be notified but may remain on standby at their respective bases.
- 6.3.8.5 When the aircraft has landed safely, the procedure is to include the process to stand down all persons notified when no further action is required.

### **6.3.9 Return aerodrome to normal operational status after an emergency**

- 6.3.9.1 The AEP is to include procedures to return the aerodrome to normal operations after an emergency.
- 6.3.9.2 Aircraft operations should be resumed only when:
- circumstances permit aircraft to operate safely
  - the airport movement area is inspected and secured
  - adequate aerodrome personnel are available to support the resumption of operations
  - there is no interference to, or caused by, emergency response activities
  - authorised by the lead agency, Coroner or ATSB.
- 6.3.9.3 After any action, including a local standby, the serviceability of the movement area should be assured. If an aerodrome has been closed due to the occurrence of an emergency, normal aircraft operations should not resume until competent aerodrome personnel have:

- conducted an inspection of the movement area making sure that runway and taxiway surfaces are free of hazards that may cause damage to other aircraft
  - provided confirmation that the movement area is serviceable and safe to resume normal aircraft operations
  - ensured that areas which remain closed are suitably marked and lit to distinguish their unserviceability
  - completed an assessment that any equipment on or near the aerodrome as part of the emergency response does not infringe the prescribed airspace (Obstacle Limitation Surfaces (OLS) or Procedures for Air Navigation Services- Aircraft Operations (PANS-OPS)
  - ensured the accuracy of information published in NOTAMs.
- 6.3.9.4 Depending on the circumstances the aerodrome operator, in consultation with the emergency/incident management team, may be able to re-open parts of the manoeuvring area that were not impacted by the emergency, or have since been cleared. A staged re-opening may be required.
- 6.3.9.5 Where the emergency is confined, and operations may be able to resume under restricted conditions, the aerodrome operator must ensure all hazards are identified and appropriately assessed prior to the commencement of restricted operations.
- 6.3.9.6 In completing this assessment, the aerodrome operator should consult with relevant specialists to ascertain that communication, navigation, surveillance and meteorological equipment is functioning correctly.
- 6.3.9.7 Depending on the circumstances, the ATSB may, need to conduct a formal investigation. The ATSB must be consulted as they may require the preservation of evidence which may affect the return to service of part, or all, the movement area.

### **6.3.10 Arrangements for periodic review of the AEP**

- 6.3.10.1 The arrangements for periodic review of the AEP are required to be recorded in the AEP.
- 6.3.10.2 The AEP is required to be reviewed at least annually, or within thirty (30) days on every occasion following:
- a test or exercise
  - the occurrence of a real emergency that required activation of the AEP.
- 6.3.10.3 Where an AEC has not been established the review should be completed with input from local emergency responders.
- 6.3.10.4 As the AEP is a subsidiary document to the aerodrome manual, the AEP is also required to be reviewed annually as part of the ATI.
- 6.3.10.5 The aerodrome operator is to maintain evidence to demonstrate the occurrence of each review. These records are to be retained for at least three (3) years.
- 6.3.10.6 Upon written request, records of reviews are to be provided to CASA.

## 6.4 Emergency scenarios to be considered in the AEP

### 6.4.1 Introduction

- 6.4.1.1 The AEP is to provide for the coordination of agencies in responding to any emergency that can be anticipated as happening at the aerodrome or in the aerodrome vicinity.
- 6.4.1.2 Each of the emergency scenarios listed below are required to be considered in the AEP. For each type of emergency there should be procedures for:
- contacting the responding agencies and alerting them to the situation, including what information is required
  - clear guidance on the role of each person/agency in terms of their involvement and actions.
- 6.4.1.3 Each agency should have detailed procedures and processes they control regarding their actions.

### 6.4.2 Aircraft crash

- 6.4.2.1 An aircraft crash can occur on or in the vicinity of the aerodrome. The actual response to the crash will differ depending upon the location of the crash site.
- 6.4.2.2 The primary role of the aerodrome operator is to provide access to the incident site and to coordinate the planning, response and recovery efforts with the local emergency response agencies.
- 6.4.2.3 Each aircraft crash should be treated as a potential hazardous materials site until it can be determined that the accident site does not pose a fire or hazardous materials threat to the health and safety of all personnel.
- 6.4.2.4 In the event of an aircraft crash, consideration will need to be given to the following:
- activation of the notification system to ensure appropriate emergency response agencies have been advised
  - provision of emergency support services as requested
  - control of aircraft and ground vehicle operations on the airport in support of the emergency response
  - traffic control, access and escort arrangements
  - designating hangars or other key buildings on the airport to accommodate uninjured, injured and deceased persons
  - support the movement of casualties to appropriate treatment facilities as expediently as possible.

### 6.4.3 A full emergency

- 6.4.3.1 A full emergency is declared when an aircraft approaching the aerodrome is, or is suspected to be, in such trouble that there is danger of an accident.
- 6.4.3.2 Declaration of a full emergency must trigger emergency response agencies on and off the aerodrome, to congregate at a nominated assembly/staging area.
- 6.4.3.3 It will also alert hospitals to prepare for the arrival of injured people and for considerations on traffic management to clear the way for emergency vehicles.

#### 6.4.4 A disabled aircraft

6.4.4.1 Aircraft can become immobilised on the manoeuvring area for many reasons including:

- an accident
- an excursion from a runway or taxiway
- a mechanical failure.

6.4.4.2 A disabled aircraft recovery plan is designed to ensure removal of the disabled aircraft in a timely manner without further damage to it, and to enable the area concerned to be returned to normal operations as soon as possible.

6.4.4.3 Ultimately it is the aircraft operator's responsibility to remove the aircraft.

6.4.4.4 The roles and responsibilities of the main agencies in charge of coordinating the aircraft's removal, and the communications system for activation of the plan, must be clearly articulated.

6.4.4.5 Agencies likely to be involved include:

- aerodrome operator
- aircraft operator
- aviation fuel companies
- ARFFS
- ground handlers (maintenance personnel).

6.4.4.6 Additionally, a list of resources available locally, or the location of specialist removal equipment for an aircraft, should be documented in the plan together with up-to-date telephone numbers of contact personnel.

6.4.4.7 Considerations should include:

- specialist equipment designed moving or towing aircraft
- facilities for de-fuelling the aircraft
- cranes for lifting
- lighting for removal during hours of darkness.

6.4.4.8 The plan should give an indicative timeframe in which the equipment can be made available on site to assist with management planning of the recovery process.

6.4.4.9 Where a separate plan is established, a reference to the self-contained document should be stated.

#### 6.4.5 Health or medical emergency response - multiple casualties in an aircraft

6.4.5.1 The AEP is not normally activated for medical emergencies such as heart attacks, collapse, respiratory difficulties, air sickness etc. However, consideration needs to be given to medical emergencies where there are multiple persons involved and are unable to be attended to by airport personnel.

6.4.5.2 A medical emergency where passengers are showing symptoms of a communicable disease may require special precautions such as quarantine measures.

6.4.5.3 Normally the pilot will advise prior to landing if they suspect passengers are suffering from a communicable disease. Local health authorities should be notified for advice and

activation of the AEP maybe be necessary if passengers are required to be quarantined.

#### **6.4.6 Hazardous material incidents**

- 6.4.6.1 Hazardous materials are defined as any substance or material that, when released in sufficient quantities, poses a risk to people's health and safety.
- 6.4.6.2 All defence force aircraft should be considered to be carrying hazardous goods or explosives which may be very hazardous to first responders.
- 6.4.6.3 Hazardous material incidents generally occur without warning, and the rate and spread of the effects will vary from incident to incident.
- 6.4.6.4 An incident can result in the evacuation of a few people, part of a terminal or the whole of airport precinct.
- 6.4.6.5 Hazardous substances may include:
- explosives
  - compressed or liquefied gases
  - flammable liquids or solids
  - poisonous substances
  - infectious substances
  - radioactive material
  - corrosive materials.
- 6.4.6.6 Packages containing dangerous goods may be found in airport buildings, in aircraft cargo compartments, or on aircraft stands.
- 6.4.6.7 When developing emergency procedures, the properties of the hazardous materials and impact on people, property and the environment are of paramount factors. The following actions should be considered:
- raise the alarm
  - isolate/evacuate the immediate area
  - use of appropriate protective equipment
  - isolate the source of release
  - contain the spill
  - waste control and disposal.
- 6.4.6.8 It is important that people understand the potential impacts of hazardous materials. Their understanding will provide the basis for informed decisions in the early stages of an emergency and when relaying information to emergency services. The AEP should identify the agency responsible for hazardous materials response.
- 6.4.6.9 First responders likely to witness or discover a hazardous substance must be trained to initiate an emergence response, which must include the protection of nearby persons, property, or the environment against the effects of the release.
- 6.4.6.10 Accidents involving aircraft carrying dangerous goods present further problems as the existence of cargo may not be immediately known. For the purpose of emergency response, each aircraft accident should be considered a potential hazardous materials incident.

- 6.4.6.11 Aircraft operators should report without delay the presence, or the possible presence, of dangerous goods on board an aircraft.
- 6.4.6.12 Emergency planning procedures should include provisions for decontaminating responding personnel and equipment.
- 6.4.6.13 The aerodrome operator should have a register of the hazardous materials (i.e. fuel storage areas, cargo etc.) stored at their aerodrome.

#### **6.4.7 Aircraft fire in a location likely to affect safety of other aircraft**

- 6.4.7.1 The extent of an aircraft fire on an apron is likely to be influenced by the quantity and type of fuel carried by the aircraft or refuelling equipment and the location of other aircraft and structures nearby.
- 6.4.7.2 Responding personnel should be aware of safe evacuation and assembly areas.
- 6.4.7.3 Procedures should be established in conjunction with airline operators and ground handlers, and should ensure:
- declaration of an emergency is understood
  - identification and establishment of an adequate exclusion zone
  - emergency fuel shut-off systems are activated immediately, where fitted or available
  - equipment and aircraft power supply in the vicinity are switched off
  - all vehicle movements in the exclusion area (with the exception of emergency responders) to be prohibited
  - arriving aircraft that may introduce danger to the apron and passenger terminal are directed to a remote parking location
  - means of communicating with crew on board the aircraft are quickly established.
- 6.4.7.4 Multiple aircraft may need to be evacuated. The decision and method of evacuation will be dependent on the circumstances. Personnel working airside should also be moved clear of the incident.

#### **6.4.8 Aircraft fire on the movement area**

- 6.4.8.1 Fire can occur in an aircraft on the movement area for a variety of reasons, such as overheated brakes, engine malfunctions or collisions.
- 6.4.8.2 Procedures should be established with airline operators and the appropriate fire response agency, and may require:
- declaration of an emergency
  - immediate shut down of the aircraft
  - identification and establishment of an adequate exclusion zone
  - all vehicle movements in the exclusion area (except for emergency responders) to be prohibited
  - evacuation of passengers and crew.
- 6.4.8.3 Once the emergency has been effectively managed and there is no further risk, the disabled aircraft recovery plan may be activated to remove the immobilised aircraft so that the movement area can be returned to service as soon as possible.

### 6.4.9 Other emergencies likely to present a hazard to aircraft

- 6.4.9.1 As each aerodrome operating environment and the geographical features surrounding the aerodrome is unique, the aerodrome operator should anticipate the potential for other types of emergencies that could happen at, or in, the vicinity of the aerodrome. For example, natural disasters such as storms and earthquakes.
- 6.4.9.2 Storms can jeopardise the safety of workers and passengers in open areas, as well as damage aircraft and other equipment on the ground. An escalation of mitigating responses is likely as the storm approaches with the emergency phase declared when wind speeds reach an agreed threshold and safe operations cannot be assured. This may only require notification to on airport agencies, unless injury to persons(s) or significant damage to property occurs.

### 6.4.10 Water rescue

- 6.4.10.1 Open bodies of water cannot be traversed by land rescue vehicles. As such, aerodromes with direct access to, or bordering on a shoreline, must include provisions in the AEP for the rescue of aircraft passengers and their crew. If water rescue is exclusively provided by the ARFFS that is stationed at the aerodrome, a reference to their procedures is sufficient.
- 6.4.10.2 An aerodrome operator should also consider access to marshlands and mud flats located in an area beneath the approach and departure paths. These areas may also provide unique challenges in emergency response.
- 6.4.10.3 The primary objective of water rescue is to quickly locate and rescue survivors and transport them to the shoreline so that they can receive assistance.
- 6.4.10.4 It should be anticipated that an aircraft making an emergency landing on water may leak fuel, potentially posing a fire and contamination risk.
- 6.4.10.5 In developing procedures for water rescue, consideration should be given to:
- the number of persons that the largest aircraft can carry
  - local hazards (water temperatures, wildlife)
  - availability of rescue boats (shallow water/surface considerations)
  - availability of flotation equipment, rafts
  - availability of thermal blankets
  - providing adequate two-way radio equipment in all rescue boats in order to maintain communication
  - availability of flood lighting for night operations
  - establishing a command post and casualty areas at a safe location on adjacent land.
- 6.4.10.6 The AEP should provide an inventory of all available equipment and identify:
- storage location
  - quantities
  - maintenance and inspection requirements.
- 6.4.10.7 The aerodrome operator should ensure:

- the water rescue component of the AEP is periodically evaluated as part of the testing requirements
- equipment is regularly inspected and tested to ensure it remains serviceable
- personnel are appropriately trained.

## 6.5 Support plans

6.5.1 Depending on the complexity of the aerodrome, the following optional support plans may be considered:

- welfare plan (care of the uninjured and care of relatives)
- media
- terminal evacuation.

## 6.6 Emergency preparedness

### 6.6.1 AEP testing and exercise requirements

6.6.1.1 The Part 139 MOS includes three exercise methods:

- full-scale exercise
- tabletop exercise
- modular testing

6.6.1.2 Conducting exercises and tests will allow an aerodrome operator to evaluate the effectiveness of their AEP. When conducted at regular intervals, it will also provide an opportunity to:

- train and evaluate the knowledge and skill of personnel
- clarify roles and responsibilities
- enhance and reinforce knowledge of procedures, facilities, systems and equipment
- improve coordination and communication between internal and external personnel
- identify weaknesses and recommendations for improvement.

6.6.1.3 Where one is established, the AEC for an aerodrome should assist in determining the exercise schedule. Aerodromes that do not have an AEC should consult with all agencies that will be required to participate.

6.6.1.4 An exercise schedule should be developed well in advance to ensure the minimum testing/exercise requirements are suitably accommodated, and the availability of all agencies to participate.

6.6.1.5 While the conduct of a full-scale exercise is mandatory, an aerodrome operator may either choose to conduct modular testing or a tabletop exercise. The method chosen will influence the frequency in which a full-scale exercise must be held.

6.6.1.6 In the event a full activation of the AEP occurs, an aerodrome operator may apply to defer completion of a full scale-exercise for a maximum period of 24 months. Formal approval from CASA will be dependent on the presentation of supporting information and evidence necessary to satisfy subsection 24.05(4)(b) of the Part 139 MOS.

## 6.6.2 Full-scale exercise

- 6.6.2.1 The purpose of a full-scale exercise is to test and evaluate the adequacy of the AEP to cope with different types of emergencies. It requires the actual mobilisation and deployment of all agencies and resources that would be required to respond in an actual emergency.
- 6.6.2.2 A full-scale exercise is required to be conducted at intervals not exceeding:
- two (2) years provided a tabletop exercise is carried out in the alternate year
  - three (3) years provided a series of modular tests are carried at regular intervals in the intermediary period.
- 6.6.2.3 The full-scale exercise must be carefully planned and managed to avoid the potential for accidents or injuries.
- 6.6.2.4 Measurable objectives should be clearly defined.
- 6.6.2.5 The location of the exercise should replicate the environment in which an accident or incident would likely occur. This requires careful consideration to avoid the potential for operational disruption at the aerodrome. For those aerodromes that have regular scheduled night operations, consideration should be given to rotating the exercise between day and night and at different times of the year when seasonal changes may present additional challenges.
- 6.6.2.6 Full-scale emergency exercises are highly visible events that are likely to be of great interest to the public. To prevent alarm or undue concern, airport operators should consider:
- notifying the community in advance of the impending exercise
  - issuing a NOTAM and requesting ATC to include information on the ATIS to ensure that arriving/departing pilots are aware of the exercise
  - make periodic announcements in the terminal during the exercise, particularly where the exercise is visible to people inside the terminal
  - use variable message boards on external roads, particularly where drivers are likely to observe elements of the exercise
  - avoid using the names of real aircraft operators, and current aircraft registrations.
- 6.6.2.7 A team of observers familiar with the response procedures should be positioned to allow the entire exercise to be viewed.
- 6.6.2.8 A post exercise debrief is required<sup>6</sup>.

## 6.6.3 Tabletop exercise

- 6.6.3.1 The aim of a tabletop exercise is to test the integration and capability of emergency response without the disruption of services incurred by a full-scale exercise.
- 6.6.3.2 A tabletop exercise is usually conducted in a room using either a plan showing the layout of the airport or a white board to help participants to talk through the response procedures to a given scenario.

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<sup>6</sup> Refer section 6.6.5 of this AC.

- 6.6.3.3 Prior to the commencement of the exercise it is important to identify those elements of the AEP that are to be tested.
- 6.6.3.4 Measurable objectives should be clearly defined.
- 6.6.3.5 A debrief to examine feedback from participants and an evaluation of the response procedures is to occur in accordance with section 6.6.5 of this AC.

#### **6.6.4 Modular exercises**

- 6.6.4.1 Modular exercises provide for a comprehensive cycle of testing of all key elements of the AEP by conducting a number of smaller, more detailed exercises with a shorter time scale between each module.
- 6.6.4.2 Modular testing does not involve the full activation of on and off-airport emergency personnel and facilities.
- 6.6.4.3 Careful consideration should be given to programming modular exercises as all elements of AEP are required to be completed within a three-year cycle that concludes with a full-scale exercise.
- 6.6.4.4 Before the exercise it is important to identify those elements of the AEP that are to be tested.
- 6.6.4.5 Measurable objectives should be clearly defined.
- 6.6.4.6 A debrief to examine feedback from participants and an evaluation of the response procedures is to occur in accordance with section 6.6.5 of this AC.

#### **6.6.5 Post exercise debrief**

- 6.6.5.1 Where engaged, volunteers often provide valuable insight into how they perceived either their rescue, or how well they were managed.
- 6.6.5.2 Observers may assist in identifying:
  - whether the objectives of the exercise were met
  - what worked well
  - what could be improved.
- 6.6.5.3 Responding agencies should be encouraged to prepare and submit a report of their agencies involvement and any observations made during an exercise.
- 6.6.5.4 A formal debrief is required to be held within 30 days and should include representation of all lead agency personnel who participated in the exercise. The debrief will allow all agencies to discuss the exercise to determine:
  - whether the AEP is effective
  - recommendations for improvement.
- 6.6.5.5 If areas for improvement are identified, the group should discuss and determine required actions. A corrective actions plan for the aerodrome operator should be developed and agreed tasks and target dates for their implementation assigned.
- 6.6.5.6 Additional meetings should be held until all recommended actions are closed.

6.6.5.7 The aerodrome operator is to maintain evidence to demonstrate a review of each exercises was held. These records are to be retained for at least three (3) years.

6.6.5.8 Upon written request, records of reviews are to be provided to CASA.

## 7 Emergency response arrangements for aerodromes that do not have an AEP

### 7.1 Introduction

7.1.1 This section provides guidance to those aerodrome operators who in the absence of an AEP are required to have emergency response arrangements that are part of the applicable local or state emergency response plan.

### 7.2 Administration of emergency response arrangements

7.2.1 While the requirement to develop emergency response arrangements is the responsibility of the aerodrome operator, the actual establishment of coordinated response procedures is best achieved through committee.

7.2.2 The aerodrome operator is to ensure that the emergency procedures are part of the local emergency plan administered under the applicable emergency arrangements of the state/territory.

7.2.3 While there is no standard format, document control procedures should be in place to ensure:

- a current copy of the emergency response arrangements is available to all organisations and personnel with duties and responsibilities within
- the current version is identifiable to prevent the use of outdated material
- all obsolete versions are promptly withdrawn.

7.2.4 It is important the emergency response arrangements provide clear guidance for contacting and alerting responders. As contact personnel and telephone numbers can change with regularity, these should be checked and confirmed on a regular basis.

7.2.5 Active participation of emergency service personnel is important when developing response arrangements so that agreement is reached for the roles of each party.

### 7.3 Emergency response arrangements content

#### 7.3.1 Procedures for liaison with emergency response authorities

7.3.1.1 The procedures for liaison with emergency response authorities established under the applicable Local, State or Territory emergency management legislation is required to be documented in the AEP.

7.3.1.2 Communication and coordination are critical in an emergency. A complete and current list of interagency telephone numbers should be available to ensure rapid notification. The contact list should always be accessible to all participants who have a role of responsibility in the emergency response arrangements.

7.3.1.3 The emergency response arrangements should clearly define a sequence and process for alerting, updating, and standing down of all personnel involved.

- 7.3.1.4 Telephone communications networks may become overloaded (saturated) during an emergency event. Contingency or fall-back systems should be considered where appropriate and may include:
- two-way radios
  - a satellite phone system
  - microwave link allowing direct data messaging.
- 7.3.1.5 An automated emergency alerting system could be considered as it allows an emergency message to be sent to several agencies simultaneously. This system may not be immune from network overloading during a major emergency.
- 7.3.1.6 On the arrival of emergency services, a single control agency should be appointed based on the incident type. Where the incident controller is not familiar with the aerodrome site, the aerodrome operator should consider assigning an aerodrome representative to assist the incident controller so that the incident controller has direct access to local knowledge.
- 7.3.1.7 Briefings should be provided when:
- new information becomes available
  - there is a change to known information
  - new hazards and risks are identified.

### **7.3.2 Notification procedures for emergency responders**

- 7.3.2.1 The notification procedures to initiate an emergency response are required to be recorded in the aerodrome's emergency response arrangements.
- 7.3.2.2 The activation sequence for alerting agencies and other individuals required to respond in an emergency should clearly identify:
- who is responsible for initiating the notification process
  - how the notifications are to be made (i.e. radio, telephone etc.)
  - a back-up system should the primary system of communication fail
  - the means of alerting all relevant stakeholders.
- 7.3.2.3 Notifications must be made without delay and in almost all cases there is a state or territory requirement for notification to be made via the national emergency number (000).
- 7.3.2.4 The emergency notification system should be tested often to ensure it is working and that telephone numbers are correct. Testing at irregular intervals should be considered as it allows the system to be tested at different times of the day.
- 7.3.2.5 To ensure agencies respond appropriately, it is important that all known information about the emergency is relayed as accurately as possible.
- 7.3.2.6 Pertinent information to be provided should include:
- exact location of the incident (including location details and map references etc)
  - nature of the incident (i.e. full emergency, aircraft crash, fire etc.)
  - type of aircraft

- estimated time of arrival of the aircraft involved and runway to be used (if applicable)
- number of persons on board (including passengers and crew)
- presence of hazardous materials including dangerous goods
- any other relevant information.

### **7.3.3 Aerodrome access locations and access procedures**

- 7.3.3.1 The aerodrome operator is required to record in their emergency response arrangements access locations and access procedures.
- 7.3.3.2 In accordance with section 4 of the AC, location details/maps are to be made available to all emergency agencies required to assist in an emergency
- 7.3.3.3 Access to the aerodrome should where possible occur in a supervised manner, this will prevent inadvertent entry by onlookers and media personnel etc.

### **7.3.4 Escorting of external vehicles and personnel**

- 7.3.4.1 If applicable, the aerodrome operator is required to record in their emergency response arrangements the procedures for escorting of external vehicles and personnel.
- 7.3.4.2 The safe and orderly movement of vehicles and pedestrians is an essential consideration in emergency planning. A lack of sufficient training for personnel operating vehicles airside has the potential to lead to life threatening consequences.
- 7.3.4.3 The provision of an assembly area will allow for the registration of and a staged, coordinated procession of emergency service responder's airside.
- 7.3.4.4 In a simple aerodrome layout cones may assist in marking a path for unescorted emergency responders to the incident site.

### **7.3.5 Setting up emergency facilities and communications systems**

- 7.3.5.1 The procedures for setting up aerodrome emergency facilities and communications systems (if available) are required to be recorded in the emergency responses arrangements.
- 7.3.5.2 All facilities should easily be identifiable, accessible, available, serviceable, and ready for use. The aerodrome operator should consider such matters as their:
- safe and accessible location
  - ability to be moved to areas as intended
  - readiness for use and ease of use
  - training requirements to effect safe use.
- 7.3.5.3 For ease of identification, equipment locations may be sign-posted, including directions from areas where they cannot be seen.
- 7.3.5.4 In the event of an emergency and to ensure that all emergency facilities and equipment are in proper working order and are in a state of readiness, regular inspections and maintenance should be carried out.
- 7.3.5.5 The outcome of each inspection should be recorded using an inspection check sheet.

7.3.5.6 In addition, facilities and equipment available for responding to an aerodrome emergency are to be subject of review as part of the annual ATI program.

7.3.5.7 All records of inspections should be retained for a minimum period of three (3) years.

### **7.3.6 Emergency response procedures for aerodrome personnel**

7.3.6.1 The role or function of aerodrome personnel during an emergency is to be recorded in the emergency response arrangements.

7.3.6.2 The development and ongoing availability of response cards for each role provides timely prompts for the correct action to take during a response.

7.3.6.3 Possible functions that the aerodrome operator is likely to undertake during an emergency can include, but may not be limited to:

- emergency notifications
- securing and ensuring the safety of the movement area which may require:
  - o closing the affected area(s) of the aerodrome if necessary
  - o initiating and disseminating relevant safety related information, including NOTAMs
  - o placing, modifying or extinguishing aircraft visual aids.
- setting up initial forward command post
- operating of emergency access gates
- providing initial briefings and updates to emergency responders
- establishing and operating of staging areas
- providing escorts
- setting up and operating aerodromes-based communications and emergency response equipment
- setting up and operating aerodromes-based emergency facilities (i.e. coordination of reception centres etc.)
- monitoring air band radio frequencies to maintain situational awareness
- providing public information via announcements, flight information displays, website information and social media
- engaging local service providers to support the emergency.

7.3.6.4 The aerodrome operator should also maintain a chronological log of all events and observations. This information will be valuable when conducting a debrief and may be pertinent in an investigation.

### **7.3.7 Maintaining movement area integrity**

7.3.7.1 The aerodrome operator is required to record in the emergency response arrangements the procedures for preservation of movement area integrity during an emergency.

7.3.7.2 The aerodrome operator is always responsible for ensuring the safety of the aerodrome and its facilities. In the event of an accident or significant incident that is or is likely to impact safe aircraft operations or public safety, the aerodrome operator should consider closing the airport immediately.

7.3.7.3 The aerodrome or parts of the movement area should not be reopened until the aerodrome operator has ensured that:

- the movement area is safe and secure
- activities associated with the event will not be impacted negatively by the resumption of airfield operations
- the event does not pose a hazard to the resumption of airfield operations
- the movement areas that have been reopened have been inspected and no risk to aircraft safety has been identified
- public safety is assured.

### **7.3.8 Return aerodrome to operational status post emergency**

7.3.8.1 The emergency response arrangements are to include procedures to return the aerodrome to operational status after an emergency.

7.3.8.2 Aircraft operations should be resumed only when:

- circumstances permit aircraft to operate safely
- the airport movement area is secured
- adequate aerodrome personnel are available to support the resumption of operations
- there is no interference to, or cause by, emergency response activities.

7.3.8.3 If an aerodrome has been closed due to the occurrence of an emergency, normal aircraft operations should not resume until competent aerodrome personnel have:

- conducted an inspection of the movement area making sure that runway and taxiway surfaces are free of hazards that may cause damage to other aircraft
- provided confirmation that the movement area is serviceable and safe to resume normal aircraft operations
- ensured that areas which remain closed are suitably marked and lit to distinguish their unserviceability
- completed an assessment that any equipment on or near the aerodrome as part of the emergency response does not infringe the prescribed airspace (OLS or PANS-OPS)
- ensured the accuracy of information published in NOTAMs.

7.3.8.4 Depending on the circumstances of the emergency, the aerodrome operator in consultation with the emergency/incident management team, may be able to re-open, in a staged manner, parts of the manoeuvring area that were not impacted by the emergency, or has since been cleared.

7.3.8.5 Where the emergency is confined, and operations may be able to resume under restricted conditions, the aerodrome operator must ensure all hazards are identified and appropriately assessed prior to the commencement of restricted operations.

7.3.8.6 In completing this assessment, the aerodrome operator should consult with communication, navigation and surveillance systems specialists to ensure the ongoing integrity of CNS and MET equipment.

7.3.8.7 The ATSB may, pending the type of emergency, conduct a formal investigation. The ATSB must be consulted as they may require the preservation of evidence which may affect the return of part, or all the movement area, to service.

## 7.4 Emergency preparedness

### 7.4.1 Familiarisation

7.4.1.1 Airport personnel should:

- be familiar with the location, and protocols for use of equipment to communicate with on airport and responding agencies
- know where specialised emergency equipment is stored
- conduct regular inspections to confirm the serviceability of emergency equipment.

7.4.1.2 Operators of aerodromes required to have emergency response arrangements in accordance with this section are obligated to ensure that local emergency responders are familiar with the aerodrome layout, the presence of hazardous storage facilities, and emergency response procedures.

7.4.1.3 Tours should be conducted with local emergency responders at least once every two years. During the tour local emergency responders are to be shown the location and operation of:

- access points
- assembly areas
- facilities and equipment available for use in an emergency.

7.4.1.4 A record of familiarisation activities, including a register of emergency responders who participate, should be maintained for a minimum period of three (3) years.

### 7.4.2 Periodic review of procedures

7.4.2.1 Procedures are required to be reviewed with local emergency responders at least once every two (2) years.

7.4.2.2 The aerodrome operator is to maintain evidence to demonstrate the occurrence of each review. These records are to be retained for at least three (3) years.

7.4.3 Upon written request, records of reviews are to be provided to CASA.