



**EMV**  
EMERGENCY  
MANAGEMENT  
VICTORIA

# State Emergency Response Plan Biosecurity Sub-Plan

Edition 1.1

May 2018



Working in conjunction  
with communities,  
government, agencies  
and business

This plan has been endorsed by the State Crisis and Resilience Council (SCRC) as a subplan to the State Emergency Response Plan.



Authorised by the Victorian Government  
1 Treasury Place, Melbourne, 3002

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# Glossary

TERM	DESCRIPTION
AQUAVETPLAN	Australian Aquatic Veterinary Emergency Plan – the national contingency planning framework for the management of aquatic pest and disease emergencies in Australia.
AUSVETPLAN	Australian Veterinary Emergency Plan – the national contingency planning framework for the management of animal pest and disease emergencies in Australia.
Biodiversity	The variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.
Biosecurity	The protection of the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests (including weeds) and diseases.
Chief Technical Officer	The Chief Veterinary Officer (CVO), the Chief Plant Health Officer (CPHO) or their equivalent.
Control Area	A legally declared area around the Restricted Area in which the conditions applying are of lesser intensity than those in the Restricted Area (the limits of a Control Area and the conditions applying to it can be varied according to need).
Control Measures	The collective term used to describe the eradication, containment or suppression of a pest or disease.
Containment	Application of quarantine measures in and around an infested / infected area to prevent the further spread of a pest or disease.
Cost Sharing	The process of government and industry jointly funding the costs arising from the implementation of a Response Plan. Described in the emergency response deeds.
Consultative Committee	A national committee of government and industry technical representatives which strategically directs (and monitors progress of) the response. These are often referred to by their acronyms which include: CCEAD, CCEPP, TACC, CCEPI, CCVPI and AqCCEAD.

TERM	DESCRIPTION
Delimiting surveillance	Surveillance conducted to establish the boundaries of an area considered to be infested/infected by or free from a pest or disease.
Emergency Pests and Diseases	Pests and diseases that are (a) exotic to Australia and it is considered to be in the national interest to be free of the pest/disease (b) a variant of an established pest or disease (that can be distinguished by investigative and diagnostic methods) which if established in Australia, would have a regional or national impact or (c) a serious pest or disease of unknown or uncertain origin or (d) a severe outbreak of a known established pest or disease, and is considered to be of regional or national significance with serious social or trade implications.
Emergency Response Deeds	Pre-agreed cost sharing and response framework for dealing with an incursion of an emergency animal or plant pest or disease.
Established Pests and Diseases	Pests and diseases affecting plants or animals, including humans, that are known to occur in a particular country or region.
Eradication	The elimination of a pest or disease from a geographic area (or production system) that is sufficiently isolated to prevent re-establishment.
Exotic Pests and Diseases	Pests and diseases affecting plants or animals (and possibly humans) that do not normally occur in a particular country or region.
IGAB	Intergovernmental Agreement on Biosecurity – an agreement between the Australian and state and territory governments. It aims to strengthen the working partnership between governments to improve the national biosecurity system.
Infected Premises (IP)	Premises (or locality) at which an emergency pest or disease is confirmed or believed to exist; or in the case of animals an infective agent of that emergency disease. Infected premises are subject to quarantine served by notice and to control measures.
Host	A plant or animal species that, under certain conditions, is capable of sustaining a pest, disease or infectious agent.
Incursion	An isolated occurrence of a pest or disease recently detected in an area, not known to be established, but expected to survive for the immediate future.
Monitoring and Surveillance	Activities to investigate the presence or prevalence of a pest or disease in a given plant or animal population and its environment.
National Management Group (NMG)	A group chaired by the Secretary of the Commonwealth Department of Agriculture and Water Resources (DAWR). Membership comprises senior officials from the Australian, state and territory governments and industry. The group is responsible in biosecurity emergencies for endorsing the response plan and budget (up to 1% of Australia's GDP).

TERM	DESCRIPTION
Outbreak	A recently detected pest or disease, including an incursion or a sudden significant increase of an established pest population in an area (for example, Australian plague locusts).
Pest Free Area	An area in which a specific pest or disease does not occur as demonstrated by scientific evidence, and in which, where appropriate, this condition is being officially maintained.
PLANTPLAN	Australian Emergency Plant Pest Response Plan – the national contingency planning framework for the management of plant pest emergencies in Australia.
Quarantine	<ol style="list-style-type: none"> <li>1) The system of measures which are used to manage risks of the entry and establishment of pests and diseases which threaten animal, plant or human health.</li> <li>2) The act of issuing a legally enforceable quarantine notice to restrict the exit or removal of things that could spread pests or diseases from premises specified in the notice.</li> </ol>
Response Plan	An integrated plan, developed by the Chief Technical Officer of one or more states or territories that: outlines the strategic response to a specific emergency pest or disease outbreak; is endorsed by the consultative committee and approved by the NMG; and which is subject to cost sharing in accordance with the relevant emergency response deed.
Restricted Area	A relatively small declared area (compared to a Control Area) around infected premises that is subject to intense surveillance and movement controls.
Restricted Area Movement	A functional unit defined in the Biosecurity Incident Management System. It is responsible for establishing control over the movement of animals, animal products, plants, plant products, vehicles, other things and people into, within and out of the restricted area/s, in order to limit the spread of the pest or disease.
Suppression	The application of movement restrictions and other disease control measures in an infected area to reduce pest populations or disease spread.
Tracing	The process of locating animals, animal products, plants, plant products, vehicles, people or things which may be implicated in the spread of an emergency pest or disease.
Zoonosis (or Zoonotic Disease)	Any disease or infection which is naturally transmissible between animals and humans.



# 1 Introduction

The State Emergency Response Plan (SERP) Biosecurity Sub-plan (the Sub-plan) provides an overview of the arrangements for the management of biosecurity emergencies in Victoria. The Sub-plan describes the integrated approach and shared responsibility for biosecurity management between state and commonwealth governments, agencies, business and the community.

Biosecurity is the collective term used to describe the protection of the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests (including weeds) and diseases.

Within the *Emergency Management Act (2013)*, major biosecurity emergencies are classified as 'Class 2' emergencies. These can include:

- o Exotic and other emergency animal disease outbreaks
- o Exotic plant pest and disease outbreaks, including plague locusts
- o New invasive plant and animal incursions and
- o Rapid and significant increases in established pest populations.

It has been developed by the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) in conjunction with the Victorian government agencies that may assist DEDJTR, as the nominated control agency, during a biosecurity emergency.

This Sub-plan is a Sub-plan of the Victorian SERP, published as Part 3 of the Emergency Management Manual Victoria (EMMV), the principal document for guiding the State's emergency management arrangements.

This Sub-plan refers to a range of existing national agreements, plans and documents, including the national biosecurity emergency response deeds, but does not duplicate the information contained within these unless required to justify a variation from the arrangements described in the SERP.

## 1.1 Purpose, objective and scope

The purpose of this Sub-plan is to describe the integrated approach and shared responsibility for biosecurity management between state and commonwealth governments, agencies, business and the community and how these differ to the arrangements in the SERP.

The objective of this Sub-plan is to describe the manner in which government agencies, business and the community will work together in an integrated and coordinated way to minimise the impact of biosecurity emergencies on the social, built, economic, and natural environments and the agriculture industry.

The State Emergency Management Priorities provide clear direction on the factors that must be considered and actioned during the response to any emergency. The intent is to minimise the impacts and consequences of emergencies and enable affected communities to focus on their recovery as early as practicable.

The State Emergency Management Priorities shall apply to biosecurity emergency responses.

This Sub-plan includes:

- o The potential risks and consequences of biosecurity emergencies to the social, built, economic and natural environments
- o The policy and programs and strategies in place to mitigate these risks before, during and after an emergency
- o The positions with accountability and the agencies responsible for managing specific strategies
- o The multi-agency management arrangements at the national, state, regional and local levels
- o Links to sources of further information where the reader can obtain further detail.

This Sub-plan provides strategic information about the Victorian arrangements for managing biosecurity emergencies. Details about the response activities of individual agencies is covered in operational plans.

It does not cover response activities DEDJTR Biosecurity delivers as a support agency, such as emergency animal welfare relief or agricultural loss and damage assessment. These activities are described in the Victorian Emergency Animal Welfare Plan and the Victorian Agricultural Relief Plan.

## 1.2 Audience

The audience for this Sub-plan comprises the Victorian Government and agencies within the emergency management sector, including business and community groups with a significant role in the management of the emergency.

Although the wider community is not the primary audience, community members may find the contents of the plan informative.

## 1.3 Authorising environment

*The Emergency Management Act* (1986 and 2013) is the empowering legislation for the management of emergencies in Victoria.

The EMMV contains policy and planning documents for emergency management in Victoria, and provides details about the roles different organisations play in the emergency management arrangements.

The SERP (Part 3, EMMV) identifies Victoria's organisational arrangements for managing the response to emergencies.

This Sub-plan is a subordinate plan of the *State Emergency Response Plan* and has been approved by the State Crisis and Resilience Council.

In addition to the *Emergency Management Act* (1986 and 2013) the following Acts and Regulations relate to the management of biosecurity emergencies:

### **Animal Health**

- *Livestock Disease Control Act 1994*
- Livestock Disease Control Regulations 2006
- *Prevention of Cruelty to Animals Act 1986*
- *Agricultural and Veterinary Chemicals (Control of Use) Act 1992*
- Agricultural and Veterinary Chemicals (Control of Use) Regulations 2007
- Agricultural and Veterinary Chemicals (Control of Use) (Ruminant Feed) Regulations 2015
- *Wildlife Act 1975*
- *Flora and Fauna Guarantee Act 1988*

### **Plant Health (including plagues)**

- *Plant Biosecurity Act 2010*
- Plant Biosecurity Regulations 2012

### **Invasive Species**

- *Conservation, Forests and Lands Act 1987*
- *Catchment and Land Protection Act 1994*
- Catchment and Land Protection Regulations 2012

## 1.4 Linkages

This plan reflects legislation, the arrangements in the SERP, the strategic

direction for emergency management in Victoria and the accepted State practice for managing emergencies. The arrangements in the SERP have not been repeated unless necessary to ensure context and readability. Any variations from these arrangements have been identified and justified.

Table 1: Related national plans and arrangements

DOCUMENT	DESCRIPTION
Emergency Animal Disease Response Agreement (EADRA)	A legal agreement between Animal Health Australia, the Commonwealth, all state and territory governments and national animal industry body signatories (22 in total). It covers the management and funding of responses to 66 separate emergency animal diseases (EAD), including the potential for owner reimbursement costs. It also formalises the role of animal industries' participation in decision making, as well as their contribution towards the costs related to approved responses. <a href="http://www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/EAD-response-agreement/">http://www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/EAD-response-agreement/</a>
Emergency Plant Pest Response Deed (EPPRD)	A legal agreement between Plant Health Australia, the Commonwealth, all state and territory governments and national plant industry body (including bees) signatories (43 in total). It covers the management and funding of responses to emergency plant pest (EPP) incidents, including the potential for owner reimbursement costs for growers. It also formalises the role of plant industries' participation in decision making, as well as their contribution towards the costs related to approved responses. <a href="http://www.planthealthaustralia.com.au/biosecurity/emergency-plant-pest-response-deed/">http://www.planthealthaustralia.com.au/biosecurity/emergency-plant-pest-response-deed/</a>
National Environmental Biosecurity Response Agreement (NEBRA)	A legal agreement between the Commonwealth and all state and territory governments (9 in total). It covers emergency response arrangements, including cost-sharing arrangements, for responding to biosecurity incidents that primarily impact the environment and/or social amenity and where the response is for the public good. <a href="https://www.coag.gov.au/node/74">https://www.coag.gov.au/node/74</a>
Inter-Governmental Agreement on Biosecurity (IGAB)	An agreement between the Commonwealth and all state and territory governments (except Tasmania) that aims to strengthen the working partnership between governments, improve the national biosecurity system, and minimise the impact of pests and disease on Australia's economy, environment and the community. <a href="https://www.coag.gov.au/node/47">https://www.coag.gov.au/node/47</a>
AQUAVETPLAN	Australian Aquatic Veterinary Emergency Plan – the national contingency planning framework for the management of aquatic pest and disease emergencies in Australia. <a href="http://www.agriculture.gov.au/animal/aquatic/aquavetplan">http://www.agriculture.gov.au/animal/aquatic/aquavetplan</a>
AUSVETPLAN	Australian Veterinary Emergency Plan – the national contingency planning framework for the management of animal disease emergencies in Australia. <a href="http://www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/ausvetplan/">http://www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/ausvetplan/</a>

DOCUMENT	DESCRIPTION
PLANTPLAN	Australian Emergency Plant Pest Emergency Plan – the national contingency planning framework for the management of plant pest emergencies in Australia. <a href="http://www.planthealthaustralia.com.au/biosecurity/incursion-management/plantplan/">http://www.planthealthaustralia.com.au/biosecurity/incursion-management/plantplan/</a>
Biosecurity Incident Management System (BIMS)	The agreed national incident management system for biosecurity incidents. It is based on established incident management systems such as the Australasian Inter Agency Incident Management System (AIIMS). <a href="http://www.agriculture.gov.au/biosecurity/partnerships/nbc/nbepeg/documents/bims">http://www.agriculture.gov.au/biosecurity/partnerships/nbc/nbepeg/documents/bims</a>

## 1.5 Activation of the plan

The arrangements in this State level Sub-plan apply on a continuing basis and do not require activation.

However, because of the potential for pests and diseases to spread across borders, consequently impacting on nationally significant export markets, biosecurity matters are typically considered national issues. As such, Victoria is a signatory to the Inter-Governmental Agreement on Biosecurity (IGAB) and the national emergency response deeds (explained in section 1.4).

DEDJTRs Chief Technical Officer (i.e. the Chief Veterinary Officer (CVO), Chief Plant Health Officer (CPHO) or their equivalent) is obliged to report any reasonably suspected or confirmed outbreak within 24 hours to the Commonwealth DAWR, which activates the national arrangements.

The activation of these national arrangements then involves the Chief Technical Officer briefing a National Consultative Committee of government and industry technical representatives, which strategically directs (and periodically monitors progress of) the response. The National Management Group (NMG) is ultimately responsible for endorsing a response plan and budget; thereby activating the national emergency response deeds that fund the response. Further information regarding the relationship between the state and national response arrangements (including a structure diagram) is included in section four.

## 1.6 Exercising and evaluation

This Sub-plan will be exercised within one year from the date of approval. The exercise will be evaluated and, where improvements to the emergency management arrangements in this Sub-plan are required, it will be amended and a revised version issued. Exercises will be conducted in accordance with the State Exercising Framework.

DEDJTR as the control agency will organise an operational debrief with participating agencies as soon as practicable after cessation of any response activities that apply this Sub-Plan. All agencies, including recovery agencies, shall be represented with a view to evaluating the adequacy of the response and to recommend any changes to agency plans and future operational response activities.

## 1.7 Review

This Sub-plan was current at the time of publication and remains in effect until modified, superseded or withdrawn.

This Sub-plan will be reviewed and updated every three years. More frequent reviews may be undertaken if required, for example following the activation or exercising of the Sub-Plan, or following substantial change to the relevant legislation or machinery of government arrangements.



## 2 The Emergency Context

Effective biosecurity is essential to the health of Victoria's community, economy and environment, and to protect Victorians' way of life. Victoria's competitive, export-oriented agriculture sector is a key component of the state's economy, particularly in regional areas. In 2014-15, Victoria produced 27% of Australia's food and fibre (despite being only 3% of Australia's landmass) and exported food and fibre worth \$11.6 billion.

Australia has an advantage in global markets because it is currently free from many of the world's major pests and diseases. Foot and Mouth Disease (FMD) (an infectious disease of livestock), Bovine Spongiform Encephalopathy (BSE) (a fatal neuro-degenerative disease in cattle, referred to as 'Mad Cow' Disease) and Karnal bunt (a fungal disease of wheat) are examples of diseases not present in Australia that would dramatically impact both domestic and international market access.

Biosecurity incidents can also have severe impacts on the environment, property, community activity and human health. Victoria is a beautiful and bountiful region of Australia. One-third of the state is designated as public land, which includes desert and alpine national parks. The four million hectares of wilderness, state and regional parks contain plants and animals found nowhere else in the world. Invasive species are widely regarded as the second greatest cause of biodiversity decline after habitat destruction and have contributed to the extinction of several species in Victoria.

A more detailed description of the impacts of biosecurity emergencies is included in the appendices.

While Victoria enjoys the significant benefits afforded by effective biosecurity, the risks are increasing and threaten Victorians' prosperity and way of life.

Key drivers of risk include:

- increased movement of people, goods and vessels into Victoria (legal and illegal)
- greater agricultural intensification to meet the growing demand for food
- increasing land use change (e.g. abandoned orchards and peri-urban lifestyle farming)
- more densely populated cities, including the expectations of an increasingly urban society (e.g. desire for diverse garden plants, and small-scale livestock production, such as pigs)
- climate change favouring the establishment of new pests and diseases, and changing the ranges of established pests and diseases
- changing consumer preferences around provenance and production processes (e.g. free range or organic farming systems)
- criminal and politically motivated biosecurity threats and
- reduced effectiveness of pest/disease control (e.g. chemical resistance, reduced availability of some chemicals).

# 3 Community resilience

## 3.1 Shared responsibility for action

The National Strategy for Disaster Resilience, developed by the Council of Australian Governments, provides high-level guidance on disaster management to agencies with a role in emergency management. The Strategy can be found at: [www.coag.gov.au/node/81](http://www.coag.gov.au/node/81)

Foremost in the Strategy is the principle that all of society has a responsibility for preparing for disasters. Examples within the biosecurity context include:

- individuals taking responsibility for the biosecurity of their own property, and actively planning and preparing for pest and disease outbreaks
- local government and communities conducting emergency preparedness programs
- industry, including critical infrastructure providers, tourism and agriculture, recognising the potential risk of biosecurity emergencies to their businesses, customers and planning for continued service provision
- non-government agencies, to which the community may turn to for support or advice, preparing for increased service demand during biosecurity emergencies
- government agencies through:
  - o applying risk-based regulation
  - o creating partnerships with industry to build community capacity and capability
  - o undertaking surveillance and monitoring activities to detect outbreaks early
  - o ensuring an effective, well-coordinated response to emergencies
  - o providing information to the community during biosecurity emergencies
  - o helping communities to recover from biosecurity emergencies and build their resilience for future events

Maintaining and improving Australia's biosecurity status is the responsibility of all Australians. Each member of the community has a role to play in the biosecurity continuum – before the border, at the border and within Australia – to prevent, prepare for, detect and mitigate biosecurity risks, and respond to, manage and recover from biosecurity incidents should they occur.

### 3.1.1 Community – on-farm biosecurity planning

Farmers, growers, processors, and related industry sectors such as agents, transporters, saleyards, and knackeries, that might be negatively impacted as a consequence of a biosecurity emergency are advised by Animal Health Australia and Plant Health Australia to develop a biosecurity plan. The biosecurity plan addresses their individual risks (such as loss of markets, loss of income, inability to move livestock or produce, animal welfare, etc.) and actions they will take to reduce those risks.

Having a biosecurity plan for an agriculture enterprise is the best defence against pests and diseases. Information regarding the essential elements of a biosecurity plan, including an example template can be found at: <http://www.farmbiosecurity.com.au/planner/>

### 3.1.2 Industry – strengthening capacity and capability

Industry Biosecurity Plans (IBPs) are developed and owned by industry associations (for example Almond Board of Australia or Australian Pork Limited) on behalf of their members and outline how growers, the industry associations and government will collectively minimise the impact of emergency pests and diseases on their particular industry.

### 3.1.3 Government – assisting the community prepare

There is a large amount of information available to the community to assist them prepare for biosecurity emergencies. In addition to the programs above, government provides warnings and alerts ahead of periods of increased risk to assist the community to better understand their risks.

General information regarding biosecurity including the latest updates/alerts, diagnostic services and pest or disease information can be found on the DEDJTR Agriculture website: <http://www.agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds>

## 3.2 Emergency information and warnings

Following the detection of a biosecurity outbreak, DEDJTR will activate an information page available from the DEDJTR agriculture website: <http://www.agriculture.vic.gov.au>

This information will also be available at <http://www.emergency.vic.gov.au>

The website will typically contain the following information:

- a description of the pest or disease
- symptoms of the disease and how to report suspected detections
- details about the outbreak
- what government is doing
- what the government requires the community to do
- what can be done to reduce the risk (biosecurity measures)
- what are the rules / legal obligations (e.g. movement controls)

DEDJTR will also utilise its social media and industry networks to disseminate information. Information may be replicated on the Australian government website: <http://www.outbreak.gov.au>

The DEDJTR Customer Service Centre (**136 186**) will be used to manage incoming enquiries.

The relevant Chief Technical Officer is responsible for speaking to the media and/or the community regarding biosecurity emergencies. DEDTJR, in collaboration with Emergency Management Public Information Committee (EMJPIC), will coordinate the whole of government state-level messaging. The Biosecurity Incident National Communication Network (NCN) will coordinate national-level messaging.

In extreme threat circumstances (such as a FMD outbreak), the Incident Controller may determine that public warnings are required. These warnings will be issued following the Victorian Warnings Protocol 2013. The warning protocol can be found at: <http://www.emv.vic.gov.au/our-work/victorias-warning-system/victorian-warning-protocol/>

Where warnings are required, the State Control Centre will issue them on behalf of DEDJTR. These will be available at: <http://www.emergency.vic.gov.au>



# 4 Collaboration

## 4.1 Emergency Management Commissioner (EMC)

Under the *Emergency Management Act* (2013), the EMC has legislated management responsibilities across major emergencies, with the exception of terrorism-related emergencies. These include response coordination, ensuring effective control arrangements are established, consequence management and recovery coordination.

Major biosecurity emergencies are 'Class 2' emergencies under state legislation.

## 4.2 Agency roles and responsibilities

DEDJTR is the nominated control agency for biosecurity emergencies in Victoria.

The relevant Chief Technical Officer (Table 2) is the delegated State Controller – Biosecurity; and the Victorian delegate on the relevant national Consultative Committee. In the event of an especially large or complex emergency, the Secretary of DEDJTR may appoint another officer(s) to have the responsibility for these functions.

The relevant Chief Technical Officer is responsible for the following initial decisions and actions, in consultation with the appropriate internal and external stakeholders:

- Verify the relevant risk assessment (if applicable)
- Determine the strategic objectives for the response
- Determine the management model or activate pre-agreed plans for the initial response
- Notify the relevant national principal specialist (e.g. Australian Chief Veterinary Officer)
- Appoint an Incident Controller in consultation with the State Agency Commander
- Notify the DEDJTR Senior Executive Group and the EMC

In addition to notifications to the EMC, DEDJTR will ensure the State Control Centre (SCC), which provides a range of services to assist the coordination and control of emergencies and which has well-established protocols for working across all government agencies and for providing information to the community, is kept informed about the emergency. (Refer to Figure 1. Governance Framework)

DEDJTR’s State Operations will typically operate from the State Biosecurity Operations Centre (Attwood).

Figure 1: Governance Framework

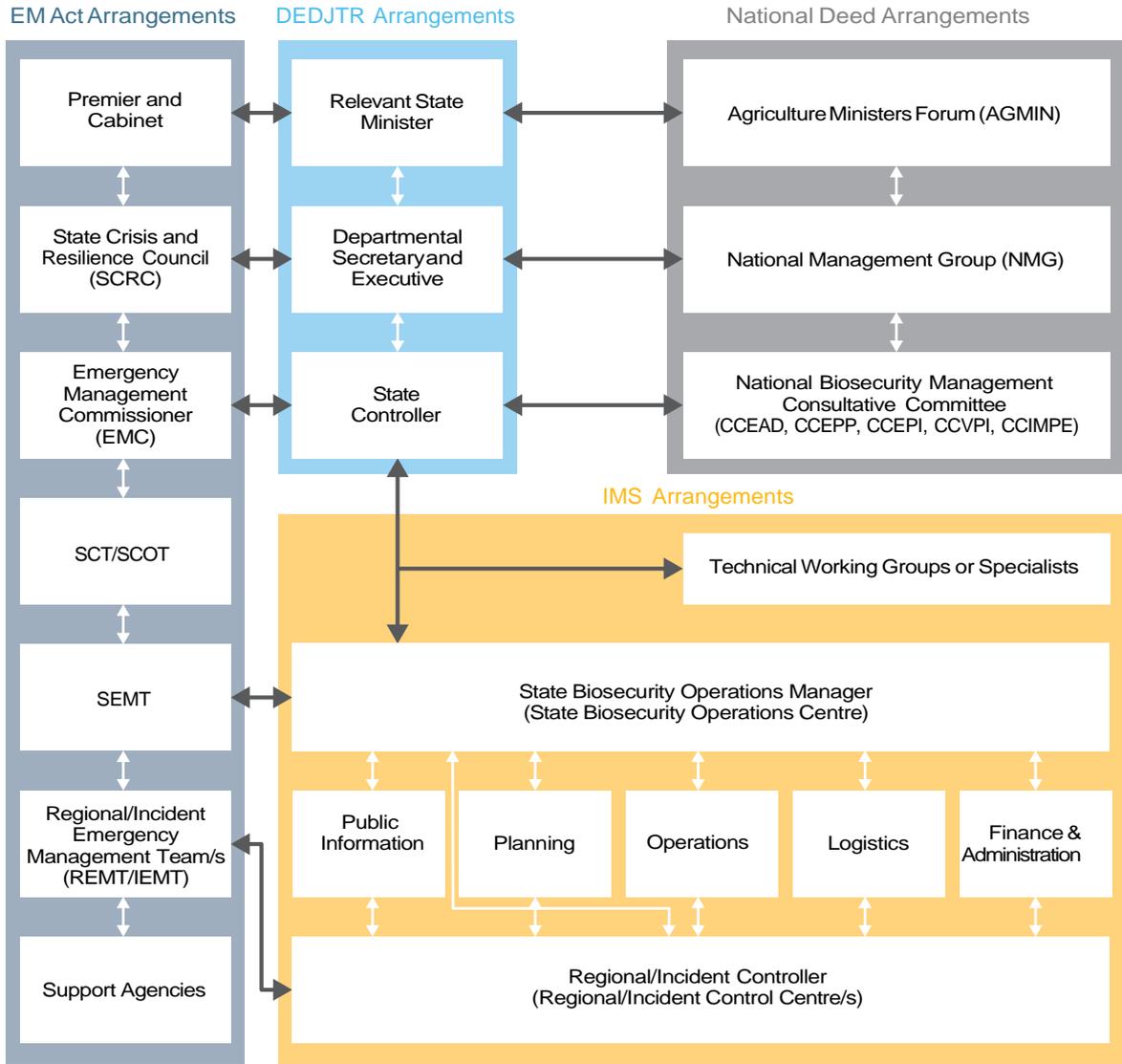


Table 2: Nominated Chief Technical Officer for biosecurity hazards.

CHIEF TECHNICAL OFFICER	HAZARD
Chief Plant Health Officer	Exotic plant pests or diseases (including those affecting bees) Australian Plague Locusts Invasive plants or animals (excluding exotic marine pests)
Chief Veterinary Officer	Exotic and other emergency diseases of animals (including aquaculture)

#### 4.2.1 Key support agencies

In addition to DEDJTR's nominated role as control agency for biosecurity emergencies in Victoria, the department is also responsible for delivering services during biosecurity emergencies for activities related to tourism, business, telecommunications and transport.

The EMMV Part 7 lists the key support agencies for biosecurity emergencies and their responsibilities. They are:

- Department of Environment, Land, Water and Planning (DELWP)
- Department of Health and Human Services (DHHS)
- Environment Protection Authority (EPA)
- Municipal Councils
- VicRoads
- Victoria Police

Several of these agencies coordinate their response activities across a range of other agencies within their functional sector.

The State Controller leads the coordination of these functional sectors through the SEMT.

The following table identifies the key supporting functions these agencies provide during biosecurity emergencies. This table is not intended to be exhaustive and should be read in conjunction with the relevant legislation and the EMMV.

**Table 3: Functions of key support agencies.**

AGENCY	RESPONSIBILITIES
Department of Environment, Land, Water and Planning	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>· Provision of human resources as per the Emergency Management Mutual Aid Memorandum of Understanding</li> <li>· Provision of mapping services</li> <li>· Provision of information regarding wildlife populations</li> </ul>
Department of Health and Human Services	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>· Provide advice to the public regarding food safety and public health</li> <li>· Manage any associated human communicable disease outbreaks</li> </ul> <p><b>Relief and Recovery</b></p> <ul style="list-style-type: none"> <li>· Coordinate relief and recovery planning at regional level</li> <li>· Co-ordinate provision of personal support (including psychological first aid) at incident sites and across the community</li> <li>· Support councils, Municipal Emergency Management Planning Committees and community recovery committees in relief and recovery planning and managing relief and recovery activities</li> <li>· Provide advice, information and assistance to affected individuals, communities, funded agencies and municipal councils</li> <li>· Co-ordinate provision of interim accommodation following emergencies with major housing impacts</li> </ul>
Environment Protection Authority	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>· Assess the environmental impact of the emergency</li> <li>· Determine practical measures to protect the environment</li> <li>· Facilitate appropriate disposal methods for wastes resulting from response activities</li> </ul> <p><b>Relief and Recovery</b></p> <ul style="list-style-type: none"> <li>· Assess environmental impacts of emergencies</li> <li>· Facilitate appropriate disposal methods</li> <li>· Advise affected persons on the properties and environmental impacts of hazardous materials</li> </ul>

AGENCY	RESPONSIBILITIES
Municipal Councils	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>· Coordination of municipal resources needed by the community and response agencies, including access to saleyards, heavy machinery (where available), facilities/equipment for disinfection, carcass and plant disposal, and surveillance of parks and gardens</li> <li>· Coordination at local level of the provision and operation of emergency relief (includes emergency relief centres, emergency shelters and material needs)</li> <li>· Collaborate with VicRoads for partial/full road closures and determination of alternative routes</li> </ul> <p><b>Relief and Recovery</b></p> <ul style="list-style-type: none"> <li>· Provision of information services to affected communities</li> <li>· Provision and staffing of Recovery/Information Centre(s)</li> <li>· Formation and leadership of Municipal/Community Recovery Committees</li> <li>· Environmental health management — including food and sanitation safety, vector control, such as removing dead animals (domestic, native or feral) from waterways</li> <li>· Provision and management of community development services</li> <li>· Provision and/or coordination of spontaneous volunteers</li> <li>· Support provision/coordination of temporary accommodation</li> </ul>
VicRoads	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>· Assist with the implementation of traffic management points</li> <li>· Undertake traffic management planning</li> <li>· Provide road closure and condition information to the public</li> </ul>
Victoria Police	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>· Provision of assistance with implementation, monitoring and enforcement of a standstill</li> <li>· Provision of assistance with management of public access</li> </ul>

## 4.2.2 Other support agencies

Almost all government agencies and a wide range of non-government agencies have a role in managing the impact and consequences of biosecurity emergencies on their interests. Any agency may be requested to assist in any emergency if it has skills, expertise, or resources that may contribute to the management of the emergency. Agencies additional to those already discussed in this plan include:

- Bureau of Meteorology
- Civil Aviation Safety Authority
- Country Fire Authority
- CSIRO – Australian Animal Health Laboratory
- Parks Victoria

All these agencies should have internal plans for managing their responsibilities.

Most agencies manage their resources from their respective operations centres and may deploy a liaison officer, as required, to provide advice in relation to actions undertaken by the agency.

A senior agency or functional representative may attend EMT meetings, as required.

## 4.3 Escalation and notification

### Initial notification

Any reasonably suspected or confirmed detection of an emergency pest or disease will be notified immediately to the DEDJTR Senior Executive, Executive Director, Emergency Management Division and the EMC in accordance with the Biosecurity Incident Notification Procedure.

All biosecurity outbreaks are potentially of ‘national significance’ under the national emergency response deeds (see below). Under these arrangements, the relevant Chief Technical Officer is obliged to report any reasonably suspected or confirmed detection within 24 hours to the Commonwealth, who then distributes the report to international agencies such as the World Organisation for Animal Health, other state governments and potentially affected industries.

### 4.3.1 Investigation and alert phase

The investigation and alert phase begins when the Chief Technical Officer notifies that, based on an initial investigation, an outbreak exists or has the potential to exist. The investigation and alert phase exists while accurate confirmation of the diagnosis is made and the likely extent of the pest or disease outbreak is scoped. Draft response plans are developed by affected states.

Collaboration during the investigation and alert phase:

- investigation and related activities are usually managed using ‘normal business’ arrangements, with staff and operations centre/s being placed on standby in anticipation of initiating an operational response
- a National Consultative Committee will be convened
- a NMG may be established

### National governance arrangements

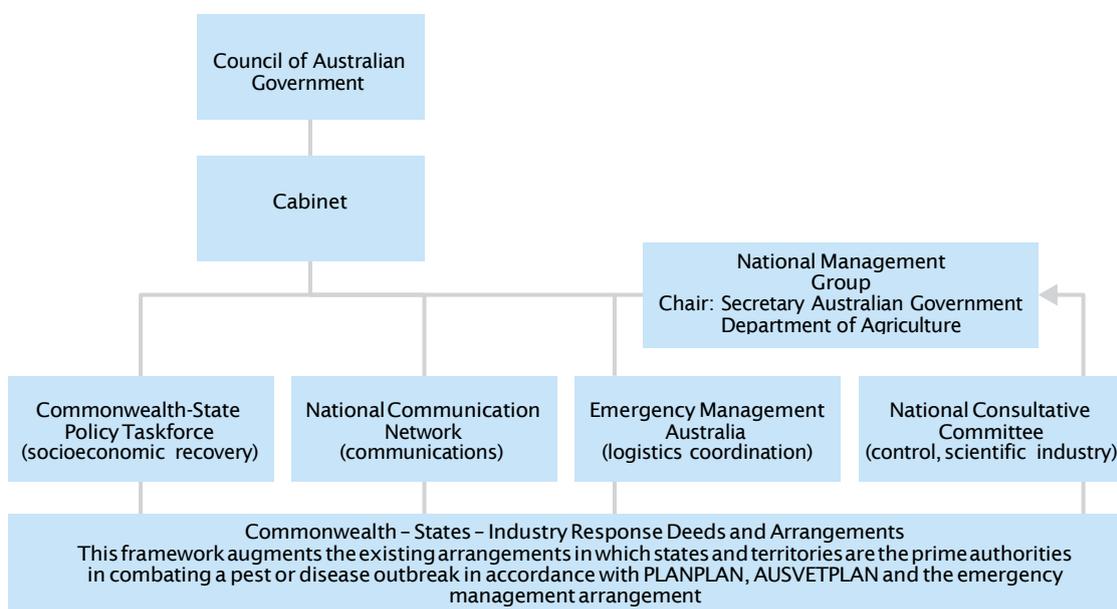
The national emergency response deeds outline the pre-agreed approach to the management and funding of responses, including the potential for owner reimbursement costs. They also formalise the role of industries’ participation in decision making, as well as their contribution towards the costs related to approved responses (see section 1.4 Linkages).

Under the deed arrangements, the Chief Technical Officer will brief a national Consultative Committee of government and industry technical representatives, which strategically directs the response. During the investigation and alert phase, the national Consultative Committee is responsible for recommending whether (or not) a response should proceed based on an assessment of the available intelligence and, subsequently, the development of a proposed response plan.

The NMG is then ultimately responsible for endorsing a response plan and budget; thereby activating the cost sharing arrangements that fund the response.

The specific actions taken by national Consultative Committees and NMG during the investigation and alert phase are described in national response agreement/s and supporting documentation. (See Figure 2 National response governance arrangements for a biosecurity emergency)

**Figure 2: National response governance arrangements for a biosecurity emergency.**



### 4.3.2 Operational phase

The operational phase commences when the presence of the pest or disease is confirmed and activities under an operational response plan are implemented. The operational phase occurs during the emergency outlined in section 5.2. Typically, the aim of the operational phase is to contain and/or eradicate the pest or disease in order to minimise its impact on the community.

Collaboration during the operational phase:

- control centres will be established at the appropriate levels (i.e. national, state, regional and/or local), to manage strategic and operational aspects of the response
- Industry Liaison Officers (ILO) will be deployed to control centres
- a State Emergency Management Team (SEMT) may be convened
- a National Consultative Committee will be convened
- a National Management Group will be convened

#### Major emergency

Under the *Emergency Management Act 2013*, agencies have legislated responsibilities for ensuring the response to emergencies is systematic and coordinated. Any biosecurity emergency being managed under the national emergency deeds should be considered a 'major emergency' under section 3 of the *Emergency Management Act 2013* as it is a requirement of the deeds that an outbreak has the potential to have or is having 'nationally significant impacts'. At this time, following consultation with the EMC, a SEMT meeting may be convened to discuss the whole-of-government response to the outbreak.

#### Proof of freedom

Upon initial containment or eradication of the pest or disease, further work may be required to prove freedom. Proof of freedom may include a period of research and/or surveillance activities and will end when the national management group determines (on advice from the national Consultative Committee) that the response has been effective.

If it is determined that the pest or disease cannot be eradicated, a transition to managing the pest or disease outbreak may take place. This would occur outside the current national cost sharing agreements.

The specific actions taken by a national Consultative Committee and NMG during the operational phase are described in national response agreement/s and supporting documentation.

### 4.3.3 Stand-down phase

The stand-down phase commences when:

- the investigation and alert phase fails to confirm the presence of a pest or disease, or
- the response strategy has been effective, or
- eradication of a pest or disease is not considered feasible, cost effective or beneficial, or
- the relevant National Management Group formally declares that the pest or disease outbreak is over.

Collaboration during the stand-down phase

- the national Consultative Committee, if established for the response, will conclude its activities and stand down
- the National Management Group, if established for the response, will conclude its activities and stand down.

## 4.4 Victorian government management arrangements

The SERP outlines the arrangements for the management of all emergencies in Victoria.

The SERP uses a three-tiered approach to emergency management, with the key functions of control, command, and coordination performed at the incident, regional and state tiers of emergency response management. Because biosecurity emergencies involve a national response, these emergencies vary from the arrangements in the SERP and include a national tier.

Because of the scale and nature of biosecurity emergencies, multiple biosecurity incidents (or control centres) rarely exist concurrently within a region. In most cases, a single control centre with a large geographic footprint (often multiple municipalities) in each region is used. This means that a Regional and Incident Controller are not both required as the span of control is not exceeded.

However, as with the delegation of any function in a scalable response structure, this does not remove the control agencies' responsibilities at either the incident or regional tiers. The Regional Controller is, therefore, responsible for both the incident and regional tiers across their area of operation. This may require the Regional Controller to appoint a deputy controller specifically focussed on consequence management and liaison with the Regional Emergency Management Team (which may include municipal representatives).

In the event of a particularly large or complex emergency (e.g. a FMD outbreak), it is expected that all three tiers will be fully operational in a manner consistent with the SERP.

	<i>Primary function supported by the team</i>			
	Control	Response coordination		Relief and recovery coordination
		Communications	Consequence management	
National tier	<b>National Management Group</b>			
	National Consultative Committee	National Communication Network	National Consultative Committee (extended)	Commonwealth – State Policy Taskforce
State tier	<b>State Coordination Team</b>			
	State Control Team	Emergency Management Joint Public Information Committee	State Emergency Management Team	State Relief and Recovery Team
Regional tier	Regional Control Team	Regional Emergency Management Team		Regional Recovery Coordination Committee*
Incident tier	Incident Management Team (major emergencies)	Incident Emergency Management Team (major emergencies)		Municipal Recovery Coordination Committee*
	Incident Emergency Management Team (non-major emergencies)			

**Figure 3:** Victoria’s emergency team arrangements aligned with the national biosecurity structures

#### 4.4.1 State tier governance

The EMC coordinates the State response to major emergencies including biosecurity emergencies, through the following five key teams:

- State Coordination Team (SCOT)
- State Control Team (SCT)
- State Emergency Management Team (SEMT)
- Emergency Management Joint Public Information Committee (EMJPIC) Executive
- EMJPIC

During a large-scale emergency, the Victorian Government’s Security and Emergency Management Committee of Cabinet (SEMC) provides whole of government ministerial oversight. The SCRC provides SEMC with assurance that the broad social, economic, built and natural environmental consequences of the emergency are being addressed at a whole of government level. SCRC also has responsibility for the oversight of the development of a whole of government communications strategy for the approval of SEMC.

Table 4: Functions and membership of each team.

TEAM	ROLE/FUNCTION	MEMBERSHIP FOR A BIOSECURITY EVENT
State Coordination Team (SCOT)	<ul style="list-style-type: none"> <li>· Oversees the coordination functions and responsibilities on behalf of the EMC.</li> <li>· Sets the strategic context of the readiness, response, relief and recovery phases.</li> </ul>	<p>Emergency Management Commissioner (EMC) (C) and/or Chief Commissioner for Police (CCP)            State Controller – Biosecurity            Senior Police Liaison Officer (SPLO)            State Relief and Recovery Manager (SRRM)            DHHS State Liaison Officer (DHHS SLO)            Chief Health Officer (CHO)            State Health Coordinator            State Consequence Manager (SCM)</p> <p>Others as determined by EMC/CCP</p>
State Control Team (SCT)	<ul style="list-style-type: none"> <li>· Oversees the control functions and responsibilities on behalf of the EMC</li> <li>· Implements the strategic context of the readiness, response, and where appropriate relief and recovery phases.</li> </ul>	<p>State Controller – Biosecurity (C)            EMC            Chief Officer CFA or State Agency Commander (SAC)            Chief Fire Officer DELWP or SAC            Chief Officer MFB or SAC            Chief Officer Operations SES or SAC            SPLO            SCM            SRRM and/or DHHS SLO            State Health Commander, AV</p> <p>Others as determined by EMC/SC</p>
State Emergency Management Team (SEMT)	<ul style="list-style-type: none"> <li>· Oversees the management of strategic risks and consequences from the emergency situation.</li> </ul>	<p>EMC (C)            Chief Commissioner of Police            State Controller - Biosecurity            SPLO            CHO            State Health Coordinator            State Health Commander            SRRM            SACs</p> <ul style="list-style-type: none"> <li>· CFA</li> <li>· DELWP</li> <li>· MFB</li> <li>· SES</li> <li>· VicPol</li> <li>· AV</li> </ul> <p>Other emergency management functional roles across Government and Agencies</p>

TEAM	ROLE/FUNCTION	MEMBERSHIP FOR A BIOSECURITY EVENT
EMJPIC Executive	<ul style="list-style-type: none"> <li>Oversees the media and communications functions and responsibilities on behalf of the EMC.</li> <li>Sets priorities for EMJPIC in communications and engagement.</li> </ul>	EMC (C) Assistant Commissioner VicPol General Manager, Media and Communication EMV Executive Director Communications DPC Executive Director Communications VicPol Executive Director Communications and Media DHHS Executive Director Communications DELWP State Consequence Manager EMJPIC Chair (Director Relief & Recovery EMV) Executive Director, Strategic Communications DEDJTR Executive Director, Strategic Communication DJR Executive Director, Communications, DET Executive Director, Communications, DTF Others as determined by EMC / EMJPIC Executive.
EMJPIC	<ul style="list-style-type: none"> <li>For operational readiness, response and recovery.</li> </ul>	Director Relief and Recovery EMV (C) General Manager Media and Communication, EMV (Deputy Chair) Executive Director Communications, DELWP (Deputy Chair) Communication Officers from all agencies and departments

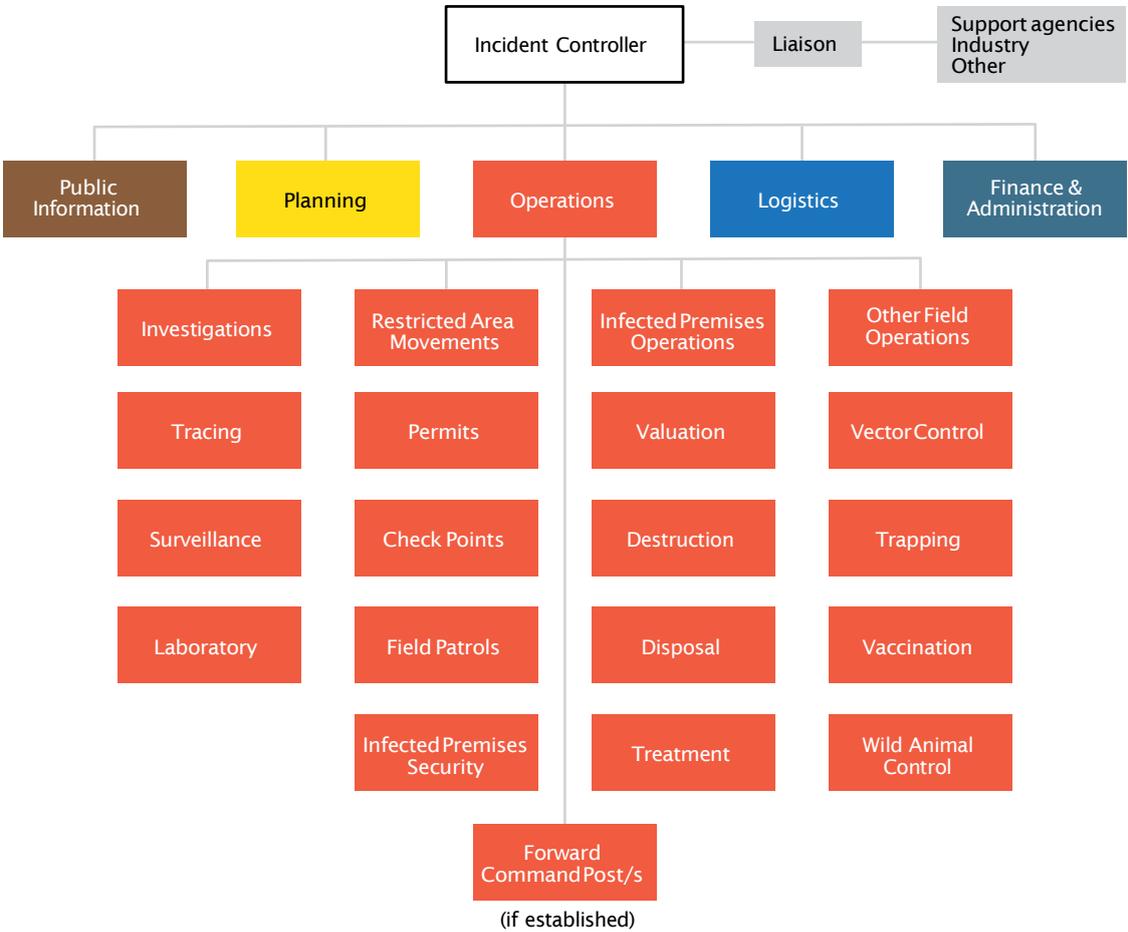
#### 4.4.2 Biosecurity Incident Management System (BIMS)

Biosecurity uses the operational procedures and structures outlined in the BIMS. BIMS is a biosecurity-specific implementation of established incident management systems, such as AIIMS, with identical underpinning principles. In particular, BIMS is designed to complement state and legislative obligations and sector-specific arrangements described in AUSVETPLAN, AQUAVETPLAN and PLANTPLAN.

Additional detail regarding BIMS can be found at:

<http://www.agriculture.gov.au/biosecurity/partnerships/nbc/nbepeg/documents/bims>

**Figure 4:** Example BIMS Incident Management Team structure with the operations function in detail.





# 5 Control strategies and programs

## 5.1 Before the emergency

Management of the consequences of biosecurity emergencies starts long before an outbreak is detected. Effective biosecurity systems begin with a clear understanding of potential threats, likely pathways of introduction and factors influencing change. Management interventions such as education, surveillance and regulation are then focussed on the areas of highest risk and return. Where correctly delivered, these interventions reduce both the likelihood and consequence of biosecurity emergencies.

Programs to prevent biosecurity emergencies include risk based regulation, which apply to activities such as the import, keeping, movement and sale of plants, animals and their products, preparedness programs including the requirement of all livestock owners to have a property identification code (PIC), and early detection and surveillance through the operation of 24 hour reporting hotlines, that allow farmers to report suspect cases of pests and diseases.

Detailed strategies that may be implemented before the emergency are provided in the appendices.

## 5.2 During the emergency

Upon notification of a biosecurity emergency either interstate or within Victoria, DEDJTR may implement the following strategies and programs:

- movement control – standstill prohibiting the movement of all susceptible species for a period of at least 72 hours
- restricted areas and quarantine
- control orders and import orders which place restrictions on the movement of plants, animals and their products as well as fodder and machinery
- tracing and surveillance of animals, animal products, plants, plant produces, vehicles, people or things which may be implicated in the spread of an emergency pest or disease
- infected premises operations including valuation, destruction, disposal, decontamination and monitoring
- vaccination to protect areas of high animal concentration and/or to limit infection and minimise virus excretion

Detailed strategies that may be implemented during the emergency are provided in the appendices.

## 5.3 After the emergency

There are a range of activities that occur after a biosecurity emergency including proving freedom from the pest and disease in order to restore market access and trade, and providing compensation and/or owner reimbursement costs paid to those property owners who are directly impacted by the pest or disease (i.e. those whose loss was incurred for the purpose of eradicating the emergency plant pest or animal disease).

Detailed strategies that may be implemented after the emergency are provided in the appendices.

# 6 Consequence management

The consequences of a biosecurity emergency vary greatly depending on factors such as: the particular pest or disease involved, the type of industry, natural or human environment affected; and the extent to which the pest or disease have consequences for producers and access to markets.

Biosecurity emergencies may have consequences for the social, economic, agriculture and natural environments and may include human disease. Examples include: economic impacts associated with eradicating a pest or disease, loss of access to markets and trade, impacts on agriculture productivity, jobs and employment, communities and natural environments. Case studies for these examples are outlined in the appendices.

Many small biosecurity incidents that meet the definition of 'emergency' are managed by community members or through the normal or business continuity arrangements of industry, agencies or government. These are defined in the SERP as non-major emergencies.

For non-major emergencies, coordinators, controllers and commanders are responsible for identifying likely consequences and initiating management actions. Agencies and critical infrastructure providers are responsible for maintaining the continuity of services to the community and for minimising the adverse consequences of service interruption on the community.

For Class 2 major emergencies, DEDJTR as the control agency will work with the EMC, Emergency Management Victoria, other government agencies, industry, and the community to reduce the consequences of a biosecurity emergency on the community. The EMC may appoint a Consequence Manager to lead consequence management across Victoria. The Consequence Manager may provide affected regions with detailed risk and consequence information to support the Regional Controller and EMT in developing and implementing a regional consequence management plan. The plan may include engagement with affected industries with the aim of minimising the disruption to the community, government and business during the emergency.

Incident Controllers will identify the broader risks and consequences of the emergency and put in place processes to manage these risks. Incident Controllers will identify the need for and implement immediate relief and recovery arrangements. The Municipal Emergency Response Coordinator, the Municipal Emergency Resource Officer and/or the Municipal Recovery Manager will activate relief services based on the Incident Controller's determination, and will commence planning for the transition to recovery as soon as possible following the initial impact of the emergency.

The EMT (incident, region and/or state) will be activated as appropriate and will be the forum for all involved agencies to discuss relief and recovery related issues and for sharing information and intelligence about the incident to enable forward planning for relief. They will also ensure there is integration between response and relief and recovery and ensure the community receives seamless information and services throughout.

The EMT may appoint a Recovery Commander at the discretion of the Regional Recovery Coordinator (Department of Health and Human Services). They will represent all emergency relief and recovery agencies at the incident control level.

The EMC will be supported by the State Relief and Recovery Manager and the State Relief and Recovery Team to coordinate activities at the state level. The Department of Health and Human Services as the coordinating agency for emergency relief and recovery at the regional level will work in collaboration with municipal councils who have that responsibility at a local level.

## 6.1 Recovery measures

The list of recovery measures that may be made available depends on the scale of the emergency. The emergency relief and recovery website provides information on the range of services including financial assistance, insurance, business and agricultural support, people and community support and tourist and visitor advice. The website is available at:

<http://www.recovery.vic.gov.au/home>

Details about the delivery of relief and recovery are contained in the State Emergency Relief and Recovery Plan (Part 4 of the EMMV).

### 6.1.1 Proof of freedom

The re-establishment of trade for affected industries is one of the highest priorities of biosecurity response as the sooner trade is restored, the sooner industries can return to normal operations.

Evidence of successful eradication and confirmation of pest or disease free status must occur to reinstate trade for Victoria. Confirmation will require the collection and analysis of surveillance data and supporting technical data to demonstrate area free status over an agreed minimum period.

DEDJTR and industry partners will develop a surveillance plan for area freedom reinstatement that will be approved by the respective Consultative Committee prior to implementation. Once the surveillance activity has been successfully implemented the NMG, on advice from the Consultative Committee, will formally declare reinstatement of area freedom.

The Commonwealth DAWR will negotiate with international trading partners for re-accessing international markets.

### 6.1.2 Compensation and/or owner reimbursement costs

All industry and government parties who are a signatory to the national emergency response deeds contribute to funding the eligible costs of responding to an emergency plant pest or animal disease.

Compensation and/or owner reimbursement costs are shared under the relevant deed and paid to those property owners who are directly impacted by the pest or disease (i.e. those whose loss was incurred for the purpose of eradicating the emergency plant pest or animal disease). It is important to note that this is limited to industries who are signatories to the various deeds.



# 7 Capability

## 7.1 Human resources

DEDJTR will, in the first instance, utilise its own human resources or those directly within its control (through a pre-existing resourcing arrangement) prior to requesting assistance from elsewhere.

DEDJTR shall request resources via:

- Emergency Response Coordinator at the appropriate tier (municipal or regional) or
- Emergency Management Commissioner (if seeking state-wide resources) or
- Emergency Management Australia (if seeking generic federal, interstate or international resources).

### 7.1.1 Mutual aid arrangements

Victoria has Memoranda of Understanding in place with South Australia and New South Wales to enhance collaboration for an emergency pest or disease outbreaks that occur near the border. Collaboration activities include resource sharing, co-location and management of control centres and development of consistent policies.

These mutual aid arrangements apply only to the initial response to the emergency and do not require approval prior to activation.

### 7.1.2 Assistance from interstate

The National Biosecurity Response Team (NBRT) comprises about 50 government personnel from around Australia, with skills and expertise in the planning and practical implementation of biosecurity emergency responses .

NBRT members are equipped to fill key management positions in control centres during a response. They can be deployed as individuals, small teams, or a large team in the event of a biosecurity emergency response in one or more states.

Animal Health Australia manages the NBRT outside of any response activities. During a response, NBRT members are deployed by the Commonwealth DAWR.

DEDJTR will seek the agreement of the EMC prior to requesting the activation of NBRT resources from interstate.

### 7.1.3 Assistance from overseas

Emergency Management Australia, in conjunction with the Department of Foreign Affairs and Trade, is responsible for coordinating information on offers of physical assistance from overseas countries.

In addition to these general arrangements, there are specific international support arrangements managed by the Commonwealth DAWR to facilitate access to veterinarians and other specialist animal health personnel from New Zealand, Canada, the U.S.A. and the United Kingdom. Requests for assistance will be coordinated through the DAWR, in consultation with Emergency Management Australia.

Prior to deployment and/or receipt of interstate/international resources the State Controller will consult with the EMC, who is responsible for coordinating all interstate/international resources for emergencies in Victoria.

### 7.1.4 Assistance from private veterinary practitioners

Veterinary expertise is often one of the limiting resources during large animal health emergencies. DEDJTR works with other jurisdictions and the Australian Veterinary Association (AVA) to maintain arrangements for contracting private veterinary practitioners to assist in an outbreak response.

In 2013, the Australian Animal Health Committee (AHC) agreed to nationally consistent conditions and remuneration policy, developed by a working group involving representatives of the Australian, state and territory governments, the AVA and private veterinarians.

These arrangements allow private veterinarians to be directly engaged by state or territory governments as temporary or casual government employees, or as contractors at a nationally agreed remuneration rate. The arrangements are available online at:

<http://www.agriculture.gov.au/animal/health/engagement-of-private-veterinarians>

The Commonwealth DAWR will coordinate access to specially trained Australian private veterinarians through the Australian Veterinary Reserve.

# 8 Appendices

## 8.1 Impact of biosecurity threats

Biosecurity threats vary greatly in their impacts depending upon factors such as: the particular pest or disease involved; the type of industry, natural or human environment affected; and the extent to which that pest or disease impacts on production or restricts market access.

The sections below set out examples which illustrate the impacts of selected biosecurity scenarios on: the social, the economy, and the natural environment.

### 8.1.1 Impact on the social environment

#### Hendra virus (HeV)

Hendra virus (HeV) is a zoonotic virus carried by flying foxes that can be transmitted to horses; and from horses to humans. Between 1994, when it was first discovered, and 2014, there have been 52 separate incidents of Hendra virus across Queensland and Northern New South Wales claiming the lives of four people and 72 horses. The mortality rate among infected horses is 80%. HeV has a 70% mortality rate in humans.

In Victoria, over the last two years (2014 and 2015), there have been 51 suspected cases of HeV. Subsequent disease investigations have confirmed the absence of the virus in all of these cases.

#### Avian influenza (AI)

Avian influenza (AI) is a highly contagious viral infection of birds. AI can be either highly pathogenic or low pathogenic. Some highly pathogenic avian influenza viruses (HPAI), can cause sudden, high mortality (up to 100%) in domestic fowl (chickens) and turkeys and under certain circumstances has the capacity to infect humans.

In January 2012, a commercial duck farm was quarantined north-west of Melbourne after birds there tested positive to Low Pathogenicity Avian Influenza (LPAI). The infected properties were depopulated and decontaminated. By June 2012, subsequent surveillance demonstrated freedom from the virus. Three outbreaks of HPAI have occurred on poultry farms in Victoria in 1976, 1985 and 1992.

### Red Imported Fire Ant (RIFA)

RIFA are a highly aggressive ant species known for their painful sting. RIFA present a serious threat on farms, in backyards, playgrounds, parks and gardens, and can potentially be fatal to young children and the elderly. Since 2001, federal, state and local governments in Australia have spent \$281 million trying to eradicate RIFA from an area in Brisbane. In 2009, a Queensland government report indicated RIFA could cost \$43 billion over 30 years if not contained.

RIFA has been detected previously in Victoria in 2001 amongst pot plants shipped from Brisbane and in 2001 and 2015 in soil in shipping containers from the USA and China. Both incidents were resolved as a result of early intervention and treatment, with subsequent surveillance proving no further presence of RIFA. RIFA is widely established in parts of the United States, costing the economy up to AUD\$ 7 billion per year on medical treatment, damage and control.

### 8.1.2 Impact on the economic environment

#### Foot and Mouth Disease (FMD)

FMD is one of the most infectious diseases affecting livestock such as cattle, buffalo, camels, sheep, goats, deer and pigs. It spreads through farms rapidly if uncontrolled. A recent ABARES report stated that the cost of an outbreak of FMD in Australia could be as high as \$50 billion over 10 years. Given that vehicles, humans and their clothing can also carry the disease, it can severely restrict movement and tourism in affected areas. International market access for livestock products is lost immediately upon detection and can take years to regain, if at all.

The UK experienced a FMD outbreak in 2001 that cost approximately AUD\$19 billion to its economy. It took 11 months to contain the outbreak and involved the destruction of 6 million animals. Many of the animals that were destroyed were not sick, but were simply in the vicinity of an infected farm or were slaughtered for welfare reasons. The size of the response was the largest logistical exercise the UK has been involved in since World War 2.

In 1997, FMD struck Taiwan, decimating the country's pig industry. The price of Taiwanese pork dropped 60% in a week and the country's export market to Japan collapsed. Four million pigs were destroyed at a cost of AUD\$6 billion and 50,000 industry workers lost their jobs. The industry never recovered. Pre-FMD, Taiwan was one of the world's leading pork exporters; now it is an importer.

#### Mediterranean Fruit Fly (MedFly)

Fruit flies, including the MedFly, are the world's most economically significant horticulture pest, affecting production and disrupting trade world-wide. Vietnam blocked all fruit and vegetable imports from Australia from 1 January 2015 because of concerns about MedFly management in Australia. The ban affected some 41 commodities, including Victorian grape growing communities in Swan Hill, Robinvale and Mildura. Free trade agreements cannot enable trade when export bans are in place.

Australia exported over 13,000 tonnes of fruit to Vietnam valued at \$40.9 million in 2014. Vietnam is Australia's second biggest export market for table grapes, accounting for \$32 million out of the above. During the ban, there were no alternate markets with a clear trade path for the black table grapes, which became oversupplied on the local market lowering grower's returns. Citrus and grape exports were only allowed to resume seven months later in July 2015 after lengthy negotiations.

#### Varroa mite

Varroa mite is a parasitic mite that feeds on bees, weakening them and spreading viral and bacterial pathogens which kill them. Over 65% of Australia's agricultural and horticultural crops depend on honey bees for pollination. An incursion of Varroa mite would mean that a high percentage of crops would not be commercially viable to produce without significant intervention. Australia remains the only country in the world free of Varroa mite. It is estimated that for every year Australia remains free, industries that rely on honey bee pollination receive a collective benefit of \$50.5 million.

Varroa mite has not been detected in Australia, however the threat of an incursion is ever present. In 2000, it was detected in New Zealand and within four years had reduced the honey bee population by 10%. New Zealand estimates that the cost to the agricultural sector, with current beekeeper management in place would be between \$400-900 million over the next 35 years.

### 8.1.3 Impact on the natural environment

#### Asian black-spined toad

The Asian black-spined toad is closely related to the cane toad but able to spread across a broader climatic range including south east Australia. Analysis of the species suggests the Asian black-spined toad (like the cane toad) is poisonous and if allowed to spread could naturalise within Australia with similar environmental impacts to the infamous Cane toad. It is not known to occur in the wild in Australia. The species is frequently detected at the border.

In 2014, a single female Asian Black-spined toad was detected in north west Melbourne – the first known detection of the species in the wild in Australia. A surveillance program was undertaken that confirmed no further toads were present. A tracing investigation concluded that it most likely arrived in the luggage of a returning international traveller.

#### Water hyacinth

Originally from South America, Water hyacinth is one of the world's worst aquatic weeds. It forms dense, impenetrable mats over the water surface and infests rivers, dams, lakes and irrigation channels. It restricts the recreational use of waterways and their aesthetic value whilst reducing water quality from decomposing plants. Water hyacinth can destroy fences, roads and other infrastructure when large floating rafts become mobile during flood events. Water hyacinth also promotes the breeding of mosquitoes which may affect public health.

Water hyacinth is problematic many south-east Asian countries and elsewhere in Australia where it is now widespread. It has been introduced to Victoria as a result of the ornamental plant trade. DEDJTR has been effective in informing multiple community groups about water hyacinth to reduce trade and potential impact to Victoria.

#### Hawkweeds (orange, king devil and mouse ear)

Hawkweeds are aggressive spreading perennial herbs which can cause significant harm to ecosystems in Victoria's high country, through restricting the growth of neighbouring plants by releasing chemicals into the soil. In New Zealand, mouse-ear hawkweed has completely displaced extensive areas of alpine tussock grasslands in the South Island. Incursions of hawkweeds have been detected in areas of Victoria's high country such as Falls Creek and Mount Buller and are actively controlled by Parks Victoria in partnership with DEDJTR.

To increase the likelihood of early detection of high risk weeds such as Hawkweed, DEDJTR has an established network of community Weed Spotters (approximately 3,000) to look out for, and report sightings. Weed Spotters are recruited from industry groups and agencies that are likely to detect high risk species during their normal activities.

## 8.2 Control strategies and programs

### 8.2.1 Before the emergency

Management of the consequences of biosecurity emergencies starts long before an outbreak is detected. Effective biosecurity systems begin with a clear understanding of potential threats, likely pathways of introduction and factors influencing change. Management interventions such as education, surveillance and regulation are then focussed on the areas of highest risk and return. Where correctly delivered, these interventions reduce both the likelihood and consequence of biosecurity emergencies.

#### 8.2.1.1 Prevention – risk based regulation

Victoria's favourable pest and disease status is primarily maintained by the ongoing regulation of activities that have the potential to cause a pest or disease outbreak. These regulations are wide ranging and apply to activities such as the import, keeping, movement and sale of plants, animals and their products (e.g. milk, fruit, eggs etc.). Wherever possible, DEDJTR works with the community and industry to encourage voluntary compliance and industry co-regulation.

Where DEDJTR identifies non-compliance with biosecurity legislation, they will take enforcement action proportionate to the risk posed by the non-compliance. Penalties for failing to comply with biosecurity regulations can be severe and include imprisonment.

#### 8.2.1.2 Preparedness - property identification codes (PIC) and National livestock identification system (NLIS)

All livestock owners are required by law in Victoria to have a PIC for the properties on which they graze livestock. All livestock businesses (saleyards, cattle scales, abattoirs, knackeries and stock agents) must also have a PIC. Since 2012, the PIC system has been progressively expanded to include plant industries such as grapes and chestnuts. As at 31 December 2015, over 90,000 Victorian properties had PICs registered by DEDJTR.

The NLIS identifies and tracks livestock species including: cattle, sheep, goats, pigs, alpacas and llamas. DEDJTR works with industry to ensure that the systems for all species meet Australia's National Livestock Traceability Performance Standards, which are based on preparedness requirements for FMD.

#### 8.2.1.3 Early Detection - Surveillance and Reporting

Early detection and reporting of outbreaks is the critical step in minimising the impact of biosecurity emergencies. DEDJTR investigates any reported suspicion of emergency pests or diseases declared under the *Livestock Disease Control Act* (1994), the *Plant Biosecurity Act* (2010) and the *Catchment and Land Protection Act* (1994).

DEDJTR operates a 24-hour service to support prompt reporting. The Emergency Animal Disease Watch Hotline is a national telephone number (1800 675 888) that has been established for farmers, veterinarians and the general public to report serious outbreaks of disease and deaths in animals. Similarly, the national Exotic Plant Pest Hotline (1800 084 881) has been established for industry and the general public to report suspect plant pest outbreaks.

#### 8.2.2 During the emergency (outbreak outside Victoria)

Upon notification of an interstate outbreak, DEDJTR as the control agency for biosecurity emergencies, will immediately develop a response plan for minimising the impact of that outbreak on Victoria. That plan will have the following intent:

- Prevent the spread of the pest or disease into Victoria
- Keep the community informed
- Prove freedom from the pest or disease
- Return to normal as soon as possible.

To achieve this DEDJTR, in partnership with government, industry and the community will undertake the following strategies (where applicable).

#### 8.2.2.1 Movement control - standstill

Standstills are the highest level of movement control. They are only used in circumstances where a pest or disease has the potential to spread rapidly over large distances. During a standstill, the movement of all susceptible species is prohibited for a period of at least 72 hours.

DEDJTR will enact a standstill in Victoria once a Control Area and the associated movement restrictions under section 29 of the *Livestock Disease Control Act* (1994) are gazetted (see below).

DEDJTR will arrange for the use of relevant channels within the Victorian emergency warnings system, to disseminate messages to the community, these may include emergency broadcasters, telephone altering system, <http://www.emergency.vic.gov.au> and social media channels.

Victoria Police and VicRoads will assist DEDJTR to implement traffic management points. Victoria Police will monitor traffic movements for the illegal movement of susceptible species and will pull over and report to DEDJTR any illegal movements. Authorised Officers will conduct investigations into reports of illegal movements with a view to prosecution.

Any decision to ease, lift or extend the standstill will be made by the relevant Chief Technical Officer in consultation with the national Consultative Committee and will be based on an assessment of the available intelligence and the risk of further spread of the pest or disease.

Further detail regarding the implementation of a FMD standstill are included in the FMD Contingency Plan, and its subordinate standard operating procedures.

#### 8.2.2.2 Movement control - Control Areas and Import Orders

Movement controls are restrictions placed on the movement of plants, animals and their products (e.g. milk, fruit, eggs etc.) along with vectors such as fodder and machinery. They are the primary method used to prevent the spread of a pest or disease into Victoria. Restrictions may include conditions such as, transport in a biosecure manner, travel by approved route, vaccination, treatment or disinfection prior to movement etc.

Depending on the level of risk, DEDJTR may declare a Control Area under either section 29 of the *Livestock Disease Control Act* (1994) or section 19 of the *Plant Biosecurity Act* (2010) for the purpose of preventing an exotic pest or disease entering Victoria.

DEDJTR may also issue an Import Order under either section 32 of the *Livestock Disease Control Act* (1994) or section 36 of the *Plant Biosecurity Act* (2010) that prohibits, restricts or impose conditions on the importation of plants, animals and their products.

DEDJTR may seek the assistance of Victoria Police, VicRoads and municipal councils with the planning and implementation of road closures and/or road blocks (where required).

### 8.2.2.3 Tracing and surveillance

Tracing is the process of locating animals, animal products, plants, plant products, vehicles, people or things which may be implicated in the spread of an emergency pest or disease. Where a pest or disease outbreak has been detected outside Victoria, DEDJTR will trace movements into Victoria from infected (or suspected) premises in other states, in order to confirm (through surveillance and testing) that the pest or disease has not spread into Victoria.

DEDJTR will then implement a surveillance strategy to prove Victoria's freedom from the pest or disease. The public will be asked (and are required) under section 7 of the *Livestock Disease Control Act* (1994) and section 17 of the *Plant Biosecurity Act* (2010) to report suspicion of a pest or disease.

The sooner Victoria is confirmed to be free from a pest or disease, the sooner market access can be restored, therefore, minimising the consequences of the outbreak on the Victorian community.

### 8.2.3 During the emergency (outbreak within Victoria)

DEDJTRs Chief Technical Officer is obliged to report any highly suspected or confirmed outbreak within 24 hours to the Commonwealth, who will then distribute that report to international agencies, other states and potentially affected industries as relevant.

DEDJTR will develop for the relevant national Consultative Committee and NMG, a Response Plan setting the following strategic objectives:

- Prevent the further spread of the pest or disease into and within Victoria
- Identify areas of infection and eradicate the pest or disease
- Keep the community informed
- Coordinate relief and recovery
- Prove freedom from the pest or disease
- Return to normal as soon as possible



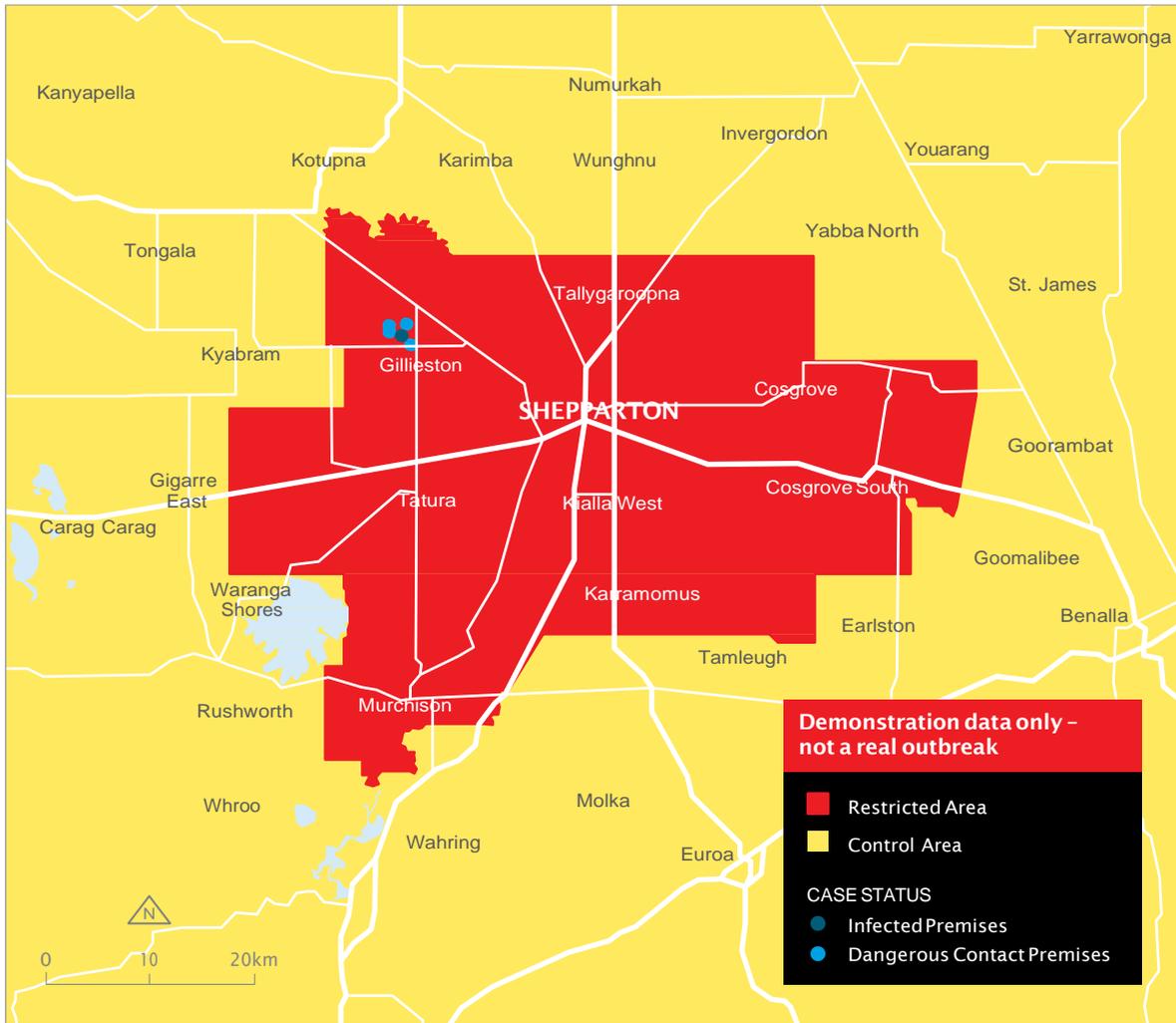
**Figure 5:** Map of Victoria showing an example Control Area and Restricted Area.

#### 8.2.3.1 Movement control – Restricted Areas and Quarantine

In addition to the movement controls outlined in 8.2.2.1 (standstill) and 8.2.2.2 (Control Areas and Import Orders), where an outbreak is detected in Victoria, a further set of movement controls may be put in place in the area around infected premises to limit the spread of the pest or disease beyond the initial outbreak location.

Restricted Areas may be declared under either section 26 of the *Livestock Disease Control Act* (1994) or section 32 of the *Plant Biosecurity Act* (2010) declaring the immediate area around infected premises to be a Restricted Area and specify any prohibitions, restrictions, and requirements which are to operate in the area.

Quarantine and movement controls will be established in accordance with the relevant AUSVETPLAN Disease Strategy or PLANTPLAN Threat Specific Contingency Plan. Properties containing susceptible hosts will be classified according to their pest or disease status.



**Figure 6:** Map of Goulburn Valley showing an example Control Area, Restricted Area, Infected Premises and Dangerous Contact Premises.

### 8.2.3.2 Tracing and surveillance

Tracing and surveillance (see 8.2.2.3) play a critical role in providing information to help determine the appropriate extent of Restricted Areas, Control Areas and unrestricted areas. Where a pest or disease has been detected in Victoria, tracing and surveillance will be carried out in accordance with the agreed national response plans. Trace-back will be applied to find the source of the outbreak and trace-forward to determine the extent and spread.

### 8.2.3.3 Infected Premises Operations (IPOPS)

IPOPS are the actions taken to directly control the pest or disease. Control activities can include: chemical, physical and or biological treatments. DEDJTR will undertake control activities when the outbreak is beyond the capacity of the community, and when a clear community benefit would result from the Department's action. However, in some cases the landholder may be issued notice to undertake the control activity themselves (e.g. spraying locusts).

IPOPS typically include the following activities:

- Quarantine (see 8.2.3.1)
- Valuation
- Destruction
- Disposal
- Decontamination
- Monitoring

The specific combination of control techniques will be determined in accordance with the relevant AUSVETPLAN/AQUAVETPLAN Disease Strategy or PLANTPLAN Threat Specific Contingency Plan and documented in the Response Plan for endorsement by the National Management Group.

Advice on disposal options may be sought from municipal councils and the EPA. Assistance with disposal, in particular access to heavy machinery (where available) and landfill sites, may be sought from municipal councils.

The EPA may monitor cleaning and disinfection activities for impacts on the environment (short-term monitoring) and will regulate the long-term monitoring of animal disposal sites.

#### 8.2.3.4 Vaccination

Australia's preferred response policy for animal disease is for containment and eradication as rapidly as possible to minimise the impact of the outbreak on the community. Vaccination may be considered if the disease spreads beyond the limit of available resources to contain it, to protect areas of high animal concentrations, and/or to limit infection and minimise virus excretion. Vaccination reduces the susceptibility of a population to infection and viral excretion however it is not a substitute for effective movement controls or other biosecurity measures.

The decisions on whether to vaccinate are complex and will depend on many factors including the nature of the outbreak, trade implications, international standards, logistical and resourcing issues including availability of sufficient stocks of vaccine, animal welfare considerations, industry and public attitudes.

### 8.2.4 After the emergency

#### 8.2.4.1 Relief and recovery arrangements

DEDJTR as the control agency will work with the EMC, government agencies, industry, and the community to reduce the consequences of a biosecurity outbreak on the community.

The list of recovery measures that may be made available depends on the scale of the emergency. The emergency relief and recovery website provides information on the range of services including financial assistance, insurance, business and agricultural support, people and community support and tourist and visitor advice. The website is available at:

<http://www.recovery.vic.gov.au/home>

Details about the delivery of relief and recovery are contained in the State Emergency Relief and Recovery Plan (Part 4 of the Emergency Management Manual of Victoria).

#### 8.2.4.2 Proof of freedom

The re-establishment of trade for affected industries is one of the highest priorities of biosecurity response as the sooner trade is restored, the sooner industries can return to normal operations.

Evidence of successful eradication and confirmation of pest or disease free status must occur to reinstate trade for Victoria. Confirmation will require the collection and analysis of surveillance data and supporting technical data to demonstrate area free status over an agreed minimum period.

DEDJTR and industry partners will develop a surveillance plan for area freedom reinstatement that will be approved by the respective Consultative Committee prior to implementation. Once the surveillance activity has been successfully implemented the NMG, on advice from the Consultative Committee, will formally declare reinstatement of area freedom.

The Commonwealth DAWR will negotiate with international trading partners for re-accessing international markets.

#### 8.2.4.3 Compensation and/or owner reimbursement costs

All industry and government parties who are a signatory to the national emergency response deeds contribute to funding the eligible costs of responding to an emergency plant pest or animal disease.

Compensation and/or owner reimbursement costs are shared under the relevant deed and paid to those property owners who are directly impacted by the pest or disease (i.e. those whose loss was incurred for the purpose of eradicating the emergency plant pest or animal disease). It is important to note that this is limited to industries who are signatories to the various deeds.

Whilst consequential losses may be considered in a relief and recovery package, individual parties in the supply chain (processors, and related industry sectors such as exporters and transporters etc.), who might be negatively impacted as a consequence of an outbreak are advised to have contingency plans that manage their individual risks. This includes loss of markets, loss of income, inability to move agriculture products, animal welfare, etc.

