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VAGO

Victorian Auditor-General's Office

The cover features a photograph of a field of green leafy plants, likely a vegetable garden. In the foreground, a yellow sticky trap is mounted on a wooden stake. The trap is rectangular and has a dark, irregular pattern on its surface, indicating it has caught insects. The background shows more rows of plants under a clear blue sky. A dark blue, semi-transparent rectangular overlay is positioned on the right side of the cover, containing the title and other text.

# Protecting the Biosecurity of Agricultural Plant Species

October 2024

Independent assurance report to Parliament  
2024–25:3

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# Protecting the Biosecurity of Agricultural Plant Species

Independent assurance report to Parliament

Published by order, or under the authority,  
of the Parliament of Victoria

October 2024

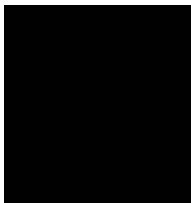
The Hon Shaun Leane MLC  
President  
Legislative Council  
Parliament House  
Melbourne

The Hon Maree Edwards MP  
Speaker  
Legislative Assembly  
Parliament House  
Melbourne

Dear Presiding Officers

Under the provisions of the *Audit Act 1994*, I transmit my report *Protecting the Biosecurity of Agricultural Plant Species*.

Yours faithfully



Andrew Greaves  
Auditor-General  
16 October 2024

The Victorian Auditor-General's Office (VAGO) acknowledges the Traditional Custodians of the lands and waters throughout Victoria. We pay our respects to Aboriginal and Torres Strait Islander communities, their continuing culture, and to Elders past and present.

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# Audit snapshot

## What we examined

We examined whether Agriculture Victoria, within the Department of Energy, Environment and Climate Action (DEECA), effectively prepares for, prevents, manages, and responds to plant pests and diseases in Victoria.

Agencies examined: Agriculture Victoria, which is a business unit within DEECA.

## Why this is important

Plant pests and diseases can damage Victoria's agriculture industry, economy, and environment.

Victoria is Australia's largest food and fibre products exporter, making up 24 per cent of the national total.

If plant pests or diseases enter Victoria, Victorian producers could lose access to domestic and international markets.

Agriculture Victoria manages plant biosecurity in Victoria. It uses a nationally integrated system to prepare for, manage and respond to outbreaks.

## What we concluded

Agriculture Victoria is mostly effective in preventing, preparing for, and managing plant pests and diseases in Victoria. But there are some gaps to address in surveillance and compliance activities, and resource planning for emergencies.

Agriculture Victoria has policies and carries out various activities to prevent plant pests and diseases from establishing and spreading within Victoria.

These prevention activities are broadly risk-based and over the audit period, no new emergency plant pests established in Victoria. Agriculture Victoria's regulatory arrangements also appear to be containing the spread of established pests and diseases.

But Agriculture Victoria is not meeting all its surveillance and compliance targets and could improve how it documents its risk-based rationale to prioritise prevention activities. Capability gaps also mean Agriculture Victoria may not have enough trained and technical staff to respond to future plant pest emergencies.

## What we recommended

We made 4 recommendations to Agriculture Victoria about:

- meeting its national plant pest and disease surveillance targets
- improving how it monitors and reports on surveillance targets against performance targets
- reviewing how it schedules, monitors and reports on compliance audits
- addressing gaps in its resource planning for plant pest incursions.

[→ Full recommendations](#)

## Key facts



Agriculture Victoria is currently containing **5 plant pests and diseases**

Victoria has **eradicated 1 emergency plant pest** since 2018



Khapra beetle



**2,789 community reports** of suspected plant pests and diseases were made between 2018–23

Victoria is Australia's largest food and fibre products exporter, making up **24%** of the national total



Source: VAGO.

# Our recommendations

We made 4 recommendations to address 3 issues. The Department of Energy, Environment and Climate Action has accepted these recommendations.

Key issues and corresponding recommendations	Agency response
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**Issue: Agriculture Victoria does not always meet its surveillance targets**

Department of Energy, Environment and Climate Action	<b>1</b> Develop a risk-based strategy to guide its surveillance activities. The strategy should cover general and targeted surveillance programs, and document the rationale for selected: <ul style="list-style-type: none"> <li>• priority plant pests and diseases</li> <li>• target locations</li> <li>• surveillance activities' frequency and timing</li> <li>• required resources</li> <li>• industry and community roles (see Section 2).</li> </ul>	Accepted
	<b>2</b> Improve how it plans, monitors and internally reports surveillance activities against its targets (see Section 2).	Accepted

**Issue: Agriculture Victoria does not always meet its regulatory targets for compliance audits**

Department of Energy, Environment and Climate Action	<b>3</b> Improve how it uses its resources to plan, schedule, monitor and internally report on arrangement audits in line with its targets (see Section 2).	Accepted
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**Issue: Agriculture Victoria has strategies in place to respond to an emergency plant pest incursion but may not have enough trained and technical staff to respond effectively**

Department of Energy, Environment and Climate Action	<b>4</b> Complete the Emergency Management Workforce and Capability Plan. Document how it will address resourcing requirements and gaps identified in its Model of Cover in the event of an emergency plant pest incursion, through: <ul style="list-style-type: none"> <li>• specific training and capability development for Agriculture Victoria staff</li> <li>• recruitment and surge resources (see Section 3).</li> </ul>	Accepted
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# What we found

This section summarises our key findings. Sections 2 and 3 detail our complete findings, including supporting evidence.

When reaching our conclusions, we consulted with the Department of Energy, Environment and Climate Action (DEECA) and considered its views. DEECA's full response is in Appendix A.

## Why we did this audit

Plant pests or diseases can impact Victoria's agriculture industry and environment. Plant biosecurity activities are crucial to stop pests and diseases entering Victoria and spreading.

Agriculture Victoria, within DEECA, manages plant biosecurity in Victoria.

Agriculture Victoria uses a wide range of activities to reduce plant pest and disease risk. These include plant research, quarantine, control orders and training.

In this audit, we focused on:

- surveillance
- industry compliance
- community and industry engagement.

We also examined Agriculture Victoria's role in the eradication and containment of selected plant pests since 2018. We looked at:

- the national khapra beetle eradication response
- containment of phylloxera.

Khapra beetle has been the only emergency plant pest eradicated in Victoria since 2018. Khapra beetle is a serious pest that infests stored produce like grain, cereals and dry foodstuffs. It could have a severe impact on Victoria's grain, dried fruit and nut industries through lost trade.

Phylloxera is one of 5 plant pests and diseases Agriculture Victoria is currently containing. Phylloxera is a small yellow insect that destroys grapevines by eating and damaging the roots. There are 83 strains established in parts of Victoria. There are no effective ways to eradicate grapevine phylloxera.

## Our key findings

Our findings fall into 3 areas:

1	Agriculture Victoria does a range of risk-based surveillance activities but does not always meet its national surveillance program targets.
2	Agriculture Victoria undertakes a range of regulatory activities to contain plant pests and diseases present in Victoria and is successfully containing phylloxera. But Agriculture Victoria is not meeting all its national and interstate regulatory targets to undertake compliance audits.
3	Agriculture Victoria has strategies to effectively respond to a plant biosecurity incursion but may not have enough trained and technical staff.



## Key finding 1: Agriculture Victoria does a range of risk-based surveillance activities but does not always meet its national surveillance program targets

### Surveillance activities

Agriculture Victoria takes part in 3 national surveillance programs that focus on early detection of plant pests and diseases of national significance. These are:

- the National Bee Pest Surveillance Program (NBPSP), which targets bee pests and diseases
- the National Plant Health Surveillance Program (NPHSP), which targets national priority pests and diseases
- the ForestWatch program, which targets forestry and timber pests and diseases.

Agriculture Victoria also does surveillance to certify that specific pests are not in certain areas, or present in Victoria. This is known as area freedom claims.

An area freedom certificate uses scientific evidence to show an area is free from a specific pest. It has significant economic benefits and trade advantages. It assures trade partners the specific pest will not be introduced to new areas through traded produce.

Agriculture Victoria engages with relevant stakeholders on plant biosecurity risks and responsibilities. It investigates community and industry reports of suspect plant pests and diseases as general surveillance. From January 2018 to December 2023, Agriculture Victoria received 2,789 reports through the MyPestGuide Reporter mobile application and DEECA's customer contact centre and website.

#### **MyPestGuide Reporter**

MyPestGuide Reporter is a free mobile phone application for the public to report suspect plant pests and diseases. This involves providing information such as photos and location of the suspect pest.

### Targets under national surveillance programs

Under the 3 national surveillance programs, Agriculture Victoria commits to annually survey:

- specific pests or diseases ('target pests')
- a specified number of locations
- a target number of trap or visual inspections
- each location at a certain frequency, such as every 14 days.

We examined 3 years of program surveillance records:

- 2020–21 to 2022–23 financial years for the NPHSP
- 2022–23 financial year for ForestWatch
- 2021 to 2023 calendar years for the NBPSP.

Agriculture Victoria surveyed:

- all NBPSP target pests
- almost all NPHSP and ForestWatch pests (94 per cent across both programs)
- all target locations for the NBPSP
- more locations than it committed to under the NPHSP and ForestWatch programs overall.

But Agriculture Victoria did not always meet targets agreed under national surveillance programs.

Agriculture Victoria did not:

- meet trapping targets for some pests
- conduct any visual surveillance in 2021–22
- meet most NPHSP and ForestWatch trap or visual inspections targets
- always carry out surveillance activities as frequently as required.

Agriculture Victoria exceeded some NBPSP bee surveillance activity targets, but not others.

**Risk-based rationale for national surveillance activities**

When national surveillance programs specify surveillance requirements, these requirements become Agriculture Victoria's risk basis for its activities.

For example, the NBPSP requires Agriculture Victoria to set up 6 sentinel bee hives at Port Melbourne.

When national surveillance programs do not specify requirements, Agriculture Victoria can decide when and how it meets program objectives.

For example, Agriculture Victoria decides the exact locations and number of traps to set for NPHSP pests. Agriculture Victoria has a rationale on how it prioritises its activities according to the highest risks. But it does not always clearly document the rationale.

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## Key finding 2: Agriculture Victoria is not meeting all its national and interstate regulatory targets for compliance audits

**Auditing agreements**

To protect market access, Agriculture Victoria uses a range of regulatory tools that help prevent plant pests and diseases entering and spreading in Victoria.

Agriculture Victoria accredits businesses to self-certify that their produce, area, or property is pest and disease free.

Agriculture Victoria also accredits businesses to verify produce and plant products imported from interstate without having to present them to an Agriculture Victoria inspector.

Agriculture Victoria schedules a set number of audits per year for each accredited business. This group of scheduled audits are known as 'arrangement audits'.

The national Interstate Certificate Assurance (ICA) Scheme requires Agriculture Victoria to audit ICA-accredited businesses.

Agriculture Victoria has also established audit schedules for businesses under compliance agreements and Plant Standards arrangements. These are state-based or bilateral protocols in place with other states and territories.

**Completing arrangement audits**

Agriculture Victoria is not completing all arrangement audits according to these requirements.

We analysed Agriculture Victoria's data on half-yearly and annual arrangement audits for 2019–20 to 2022–23:

- Agriculture Victoria did not complete 25 per cent of scheduled audits across this period.
- Uncompleted audits increased from 17 per cent of audits in 2019–20 to 31 per cent in 2022–23, as shown in Figure 1.

Figure 1: Proportion of uncompleted arrangement audits between 2019–20 and 2022–23

	2019–20	2020–21	2021–22	2022–23
Uncompleted audits	17%	30%	21%	31%

Source: VAGO based on Agriculture Victoria data.

In 2023, Agriculture Victoria's internal auditor found that staff were not consistently scheduling all required audits in its compliance management system, Vector.

This means Agriculture Victoria cannot tell the arrangement audits' actual completion rate, including high risk arrangements.

## Industry compliance

Agriculture Victoria prioritises compliance activities that address noncompliance and mitigate risks to market access. These risks include materials that could host pests or diseases moving into, around or out of Victoria. This broadly aligns with high-priority harms Agriculture Victoria identified in its 2023–26 Plant Biosecurity Compliance Strategy.

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## Compliance targets for phylloxera

Agriculture Victoria conducted over 90 per cent of regular compliance audits for phylloxera-specific arrangements over the last 3 years. These are regular audits conducted on relevant businesses to verify they are operating according to required procedures.

But because Agriculture Victoria is not consistently scheduling all required audits in its compliance management system, we do not know whether Agriculture Victoria is carrying out all compliance audits set out in arrangements.

Agriculture Victoria did not meet its internally set targets to do compliance inspections on phylloxera permits in 2021–22 and 2022–23. Agriculture Victoria issues these permits to businesses as needed to make sure they comply with movement conditions. Agriculture Victoria carried out:

- 136 per cent of required inspections in 2020–21
  - 52 per cent of required inspections in 2021–22
  - 81 per cent of required inspections in 2022–23.
- 

## Key finding 3: Agriculture Victoria has strategies to effectively respond to a plant biosecurity incursion but may not have enough trained and technical staff

### Approach to plant biosecurity preparedness

Agriculture Victoria takes a generic approach to plant biosecurity preparedness. It has targeted pest-specific preparedness plans for 2 pest threats, brown marmorated stink bug (BMSB) and Mediterranean fruit fly (medfly). Agriculture Victoria told us that because there is a vast number of plant pests and diseases that could enter Victoria, it is impractical and not an effective use of resources to undertake pest-specific preparedness for all priority pests.

To support its generic approach, Agriculture Victoria has emergency management and response strategies consistent with national guidelines in place to respond to a plant biosecurity incursion.

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### Emergency response documents

Agriculture Victoria's Response to Biosecurity Emergencies – Concept of Operations (ConOps) is a guide to manage an emergency biosecurity response and Agriculture Victoria staff roles and responsibilities. The ConOps also specifies how Agriculture Victoria's emergency arrangements link with national and state emergency management plans.

When Agriculture Victoria suspects an emergency plant pest (EPP) incursion, its priority exotic plant pest investigation (PEPPI) process guides initial investigations.

Agriculture Victoria has both general guidance and more specific resourcing models that guide resourcing in an EPP response.

Agriculture Victoria's EPP Model of Cover for Level 2 Biosecurity Emergencies sets out the roles, required capabilities and minimum staff numbers needed to effectively lead and manage a level 2 (major) EPP and apiary biosecurity incident.

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**Staff resources** In 2020, khapra beetle was detected in goods distributed to retail stores and warehouses across Australia. Agriculture Victoria successfully led Victorian activities in the national response and helped develop the national response plan.

Agriculture Victoria internally evaluated its role in the successful national khapra beetle eradication. It concluded that it did not have enough skilled and knowledgeable staff to effectively respond to a level 2 plant pest emergency.

Although Agriculture Victoria provides its staff with a broad range of emergency response training, it is not always clear how it prioritises and maps training to role needs and shortages identified through its Model of Cover.

Agriculture Victoria is finalising a plan that will help it identify gaps and develop staff capabilities to effectively respond to an EPP event.

DEECA is developing a resourcing system for emergency responses, which is due in 2026.

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# 1.

## Audit context

Plant pests and diseases can damage our agricultural plant industries, food production and environment. Plant biosecurity focuses on stopping harmful pests and diseases from entering Victoria and managing the impact of those already here. Agriculture Victoria manages Victoria's responsibilities for plant biosecurity at the national and state level. It carries out activities to prevent, prepare for, manage and respond to plant pest and disease incursions.

### Victoria's plant biosecurity system

#### National frameworks for collaboration

Victoria works within a national biosecurity system. The *Intergovernmental Agreement on Biosecurity* sets out each government party's commitment to the objectives, roles, responsibilities, and governance arrangements of the system. This supports collaboration and coordination between the Commonwealth and state governments.

Victoria is a signatory to the national Emergency Plant Pest Response Deed (EPPRD). The EPPRD:

- requires immediate reporting
- facilitates an early, comprehensive response to an EPP for all state and territory agencies
- specifies cost-sharing and decision-making requirements and processes for collaborative EPP responses between parties.

The *Australian Emergency Plant Pest Response Plan (PLANTPLAN)* puts plant biosecurity emergencies management into practice for all EPPRD signatories. Signatories include governments, peak industry groups and Plant Health Australia.

#### Plant Health Australia

Plant Health Australia is a not-for-profit company that coordinates the partnership between government and industry nationally for plant biosecurity.

#### Relevant legislation

Agriculture Victoria regulates Victoria's plant biosecurity system using the *Plant Biosecurity Act 2010* (the Act) under the Victoria's Chief Plant Health Officer's guidance.

The Act's main purposes include:

- providing for plant pests and diseases prevention, monitoring, control and eradication
- facilitating the movement of plants and associated products, equipment and earth material into, around and out of Victoria.

The Act allows the Minister for Agriculture to declare any pest or disease as exotic and subject to regulatory controls.

Agriculture Victoria also has emergency management obligations under the *Emergency Management Act 2013 (Vic)* and the *State Emergency Management Plan*. Under this plan, DEECA is the control agency for biosecurity incidents.

The *State Emergency Management Plan: Animal, Plant, Marine and Environmental Biosecurity Sub Plan* outlines that DEECA will provide the strategic policy and direction for a biosecurity incident response where national arrangements do not need to be involved.

## Strategies to protect agricultural plants from pests and diseases

**Surveillance and compliance** Agriculture Victoria manages Victoria’s plant biosecurity system through a range of activities, including plant research, quarantine, control orders and training. These activities work together to reduce the risk of plant pests and diseases entering and becoming established in Victoria.

Biosecurity systems are made up of activities, which fall into broad phases:

The ...	Involve(s) ...
prevention phase	activities to reduce the risk of pests and diseases entering and establishing, like early detection surveillance and compliance.
preparedness and response phases	activities to prepare and quickly deploy staff to respond to a threat, including eradication responses.
management and control phases	activities to contain or manage a pest or disease when eradication is not possible.

Agriculture Victoria carries out a wide range of integrated activities across these phases. In this audit we looked at a selection of these activities.

To manage biosecurity risks, Agriculture Victoria ...	Which means...
conducts surveillance to detect plant pests and diseases incursions and spread from controlled areas	<ul style="list-style-type: none"> <li>• setting and maintaining traps</li> <li>• conducting visual surveillance</li> <li>• collecting and testing samples</li> <li>• providing ways for the public to report suspect pests and diseases.</li> </ul>
undertakes compliance and enforcement activities to regulate plants and associated products moving in, around or out of Victoria	<ul style="list-style-type: none"> <li>• setting appropriate movement conditions for plants and associated products, equipment and earth material to enter or move within the state</li> <li>• setting up biosecurity zones across the state</li> <li>• issuing movement permits and infringement notices</li> <li>• accrediting business to self-certify their produce is pest and disease free</li> <li>• conducting audits and inspections to check compliance</li> <li>• educating businesses to raise awareness and encourage compliance.</li> </ul>
carries out education and communication campaigns	<ul style="list-style-type: none"> <li>• providing information on Agriculture Victoria's website and social media</li> <li>• contributing to industry publications and developing initiatives such as the Urban Plant Health Network for community gardeners</li> <li>• creating advertising campaigns to raise public awareness and encourage reporting</li> <li>• developing <i>Victoria's Biosecurity Statement</i> and <i>Victoria's Biosecurity Strategy</i> through regional workshops, focus groups, expert consultations and receiving public submissions.</li> </ul>

# 2.

## Preventing a plant pest biosecurity incursion

Agriculture Victoria carries out a range of activities to help prevent plant pest and disease outbreaks. This includes targeted and general surveillance, regulatory activities, and engaging widely with stakeholders on how to minimise biosecurity risks. Agriculture Victoria is meeting most, but not all, of its national surveillance program and compliance targets. But it does not always document its rationale for how it prioritises prevention activities.

### Agriculture Victoria undertakes a range of surveillance activities but has not always met its targets agreed under national surveillance programs

**Key surveillance activities** Agriculture Victoria participates in 3 national surveillance programs that focus on early detection of specific pests or diseases considered the highest biosecurity risk nationally. These programs are:

- the National Bee Pest Surveillance Program (NBPSP)
- the National Plant Health Surveillance Program (NPHSP)
- ForestWatch.

The ForestWatch program began in 2022–23. Before 2022, some pests surveyed under the program were part of the NPHSP. We discuss findings on these 2 programs together for ease of reporting across years.

Apart from the national programs, Agriculture Victoria does surveillance to certify that specific pests, such as cucumber green mottle mosaic virus and medfly, are not in certain areas or present in the state. These certifications are called area freedom claims.

Agriculture Victoria also receives and investigates community or industry reports of suspect plant pests and diseases, which is a form of general surveillance.

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#### National surveillance program commitments

Under the 3 national surveillance programs, Agriculture Victoria commits to annually survey:

- specific pests or diseases ('target pests')
  - a specified number of locations
  - a target number of trap or visual inspections
  - each location at a certain frequency, such as every 14 days.
-

**Commitments to survey target pests**

National governing committees that Agriculture Victoria is a member of decide which pests Agriculture Victoria must target for each national surveillance program.

Based on surveillance records in AusPestCheck, Agriculture Victoria carried out surveillance on all target bee pests and viruses in calendar years 2021, 2022 and 2023.

For the NPHSP and ForestWatch, Agriculture Victoria surveyed for most target pests, as shown in Figure 2.

Figure 2: Percentage of NPHSP and ForestWatch target pests that Agriculture Victoria surveyed for between 2020–21 and 2022–23, by financial year

Program	2020–21	2021–22	2022–23
NPHSP and ForestWatch	90%	95%	96%

Source: VAGO based on AusPestCheck data.

Agriculture Victoria told us it carried out surveillance for all target pests across the 3 years as shown in its program reports to the Department of Agriculture, Fisheries and Forestry (DAFF).

While these reports show that Agriculture Victoria surveyed more target pests, these records are not in AusPestCheck. And in some cases, Agriculture Victoria does not have the surveillance records. For example:

Our analyses of AusPestCheck data shows that Agriculture Victoria ...	Agriculture Victoria's program reports to DAFF ...
did not conduct surveillance for: <ul style="list-style-type: none"> <li>forestry and timber pests in 2020–21</li> <li>citrus canker in 2021–22</li> </ul>	included data on these pests but Agriculture Victoria does not have their surveillance records. Agriculture Victoria told us that staff who carried out the activity for forestry and timber pests had left the department.
did not conduct surveillance for xylella in 2021–22	included data for xylella.

For 2022–23, Agriculture Victoria told us it did not carry out visual surveillance for sudden oak death and eucalyptus leaf blight because it focused on other target softwood pests instead.

**AusPestCheck**

AusPestCheck is the national plant pest surveillance system that Plant Health Australia manages. Agriculture Victoria has its own system that captures surveillance data, which it regularly uploads to AusPestCheck.

**Surveillance locations**

Under the NBPSP, Agriculture Victoria carries out surveillance at 4 specific locations – Port Melbourne, Geelong, Portland and Western Port.

According to NBPSP surveillance records, Agriculture Victoria surveyed all 4 sites between 2021 and 2023.

As part of annual NPHSP and ForestWatch operational plans, Agriculture Victoria commits to survey a minimum or set number of locations. It either inspects traps, visually inspects host plants or both at each location depending on the target pest or disease.

Based on AusPestCheck data, Agriculture Victoria went above most targets for traps and visual surveillance between the 2020–21 and 2022–23 financial years, with some exceptions (see Figure 3).



Figure 3: Percentage Agriculture Victoria was above or under its NPHSP and ForestWatch survey location targets between the 2020–21 and 2022–23 financial years

Surveillance locations	2020–21	2021–22	2022–23
Trap target	31% above	22% above	15% above
Visual surveillance target	1% under	no inspections	87% above

Source: VAGO based on AusPestCheck data.

But our analysis of AusPestCheck records showed gaps in surveillance evidence for certain pests.

In ...	Our analyses showed Agriculture Victoria did not ...	Agriculture Victoria told us...
2020–21	<p>carry out:</p> <ul style="list-style-type: none"> <li>trapping and visual surveillance of Asian or white-spotted longhorn beetle and sawyer beetle</li> <li>visual surveillance for spotted wing drosophila and BMSB.</li> </ul>	it did carry out surveillance for Asian or white-spotted longhorn beetle and sawyer beetle. But it did not upload the surveillance data because the program did not have specific surveillance inspections targets.
2021–22	<ul style="list-style-type: none"> <li>carry out visual surveillance of any target pest or disease</li> <li>meet trapping targets for: <ul style="list-style-type: none"> <li>glassy-winged sharpshooter</li> <li>Huanglongbing vectors</li> <li>spotted wing drosophila.</li> </ul> </li> </ul>	it met trapping targets for glassy-winged sharpshooter and Huanglongbing vectors.
2022–23	<ul style="list-style-type: none"> <li>meet trapping targets for: <ul style="list-style-type: none"> <li>exotic spongy moth</li> <li>glassy-winged sharpshooter</li> <li>Huanglongbing vectors</li> <li>spotted wing drosophila</li> </ul> </li> <li>meet visual surveillance targets for sawyer beetle.</li> </ul>	it met all surveillance targets.

Agriculture Victoria told us its program reports to DAFF are more accurate about its surveillance activities. But these reports do not always show that Agriculture Victoria met its targets, and where they do, the records are not in AusPestCheck.

Agriculture Victoria told us that some surveillance records may not have uploaded because data fields between its internal records system and AusPestCheck do not fully match.

### Surveillance activities

For NPHSP and ForestWatch, Agriculture Victoria commits to regularly inspect traps or do visual surveillance at each survey site.

To calculate the annual target for each pest, we multiplied the number of survey sites by the number of required inspection rounds.

We also analysed Agriculture Victoria’s surveillance records from AusPestCheck between 2020–21 and 2022–23 to calculate Agriculture Victoria’s total trap and visual inspections for each pest.

Agriculture Victoria did not carry out all the required trap and visual inspections for NPHSP and ForestWatch for all years (see Figure 4).

Figure 4: Percentage of NPHSP and ForestWatch trap and visual inspections Agriculture Victoria carried out between 2020–21 and 2022–23

Surveillance activity	2020–21	2021–22	2022–23
Trap inspections	69%	93%	72%
Visual inspections	27%	0%	32%

Note: AusPestCheck did not have any visual inspection records for 2021–22, so the percentage completed is 0 per cent.  
Source: VAGO analysis of NPHSP and ForestWatch surveillance records.

Reflecting the overall shortfall, Agriculture Victoria did not meet inspection targets for most pest categories across 2020–21, 2021–22 and 2022–23 (see Figure 5).

Figure 5: Number of pest categories that Agriculture Victoria exceeded or did not meet trap and visual inspection targets for NPHSP and ForestWatch, by year

Financial year	Number of pest categories for trap inspections		Number of pest categories for visual inspections	
	Exceeded	Not met	Exceeded	Not met
2020–21	2	6	3	5
2021–22	3	5	0	8
2022–23	1	7	1	8

Note: Agriculture Victoria either exceeded or did not meet targets. There were no instances where Agriculture Victoria met the target exactly.  
Source: VAGO analysis of NPHSP and ForestWatch surveillance records.

The NBPSP has a target number for some, but not all, bee surveillance activities. We focused on these key activities:

- inspect hives and catch boxes
- floral sweep netting
- sampling for tracheal mites
- an 'additional activity' – either drone uncapping, sugar shake or alcohol wash.

Agriculture Victoria met or exceeded some, but not all, targets for these activities (see Figure 6).

We could not assess if Agriculture Victoria met its catch box inspection target for 2021 as it could not provide this data. But it did provide evidence it completed these inspections.

Figure 6: VAGO assessment of Agriculture Victoria's key NBPSP activities against program targets between calendar years 2021 to 2023

Bee surveillance activity	2020	2021	2022
Hive activity (frame inspection and sticky mat application)	-11%	-7%	+5%
Catch box inspection	No data available	-34%	+8%
Drone uncapping, sugar shake or alcohol wash	-12%	+364%	+432%
Tracheal mite sampling	Equal target	+4%	-21%
Floral sweep netting	-43%	Equal target	-13%

Source: VAGO analysis of NBPSP surveillance records.

## Surveillance rounds

For some NPHSP and ForestWatch pests, Agriculture Victoria must carry out surveillance:

- a minimum or set number of times at each trap or site (surveillance rounds)
- every 14 days, for either a fixed period or throughout the year.

As Figure 7 shows, Agriculture Victoria did not meet the surveillance rounds targets for most pest categories in 2020–21, 2021–22 or 2022–23.

Figure 7: Number of pest categories that Agriculture Victoria met, exceeded or did not meet surveillance rounds targets by financial year

Financial year	Number of pest categories for traps		Number of pest categories for visual surveillances	
	Met/exceeded	Not met	Met/exceeded	Not met
2020–21	2	6*	4	4
2021–22	5	3	0	8*
2022–23	2	6	2	7

Note: \*This includes pests that did not have records in AusPestCheck.

Source: VAGO analyses of Agriculture Victoria's surveillance records in AusPestCheck.

We found that Agriculture Victoria's median time between trap or visual inspections across all pests is 14 days. Overall, Agriculture Victoria met its surveillance target.

But the time between trap inspections or visual surveillances was above the 14-day target 31 per cent of the time. The longest median time between trap or visual inspections was 18 days for BMSB visual inspections in 2022–23.

For the NBSP, Agriculture Victoria must carry out bee surveillance activities every 6 weeks, or 42 days. Overall, Agriculture Victoria met this target.

The median time between completing these activities was 42 days. But the elapsed time between bee surveillance activities went above the 42-day target 41 per cent of the time.

## Monitoring progress

Agriculture Victoria recently took steps to improve how it monitors its progress against NPHSP and ForestWatch surveillance targets.

Agriculture Victoria started using PowerBI in 2023 to track its progress in meeting NPHSP and ForestWatch targets, such as clearing traps, undertaking visual inspections and changing lures. It also identifies quality issues with NPHSP and ForestWatch surveillance activities and records.

Agriculture Victoria advised us that it is still refining this tool, but it should help Agriculture Victoria act early when reporting shows it is not on track to meet its national surveillance targets.

## General surveillance

Agriculture Victoria collects and investigates community reports of suspect detections, which is a form of general surveillance. If Agriculture Victoria suspects an EPP or a national priority plant pest, it may take further action, such as obtaining samples to diagnose or conduct targeted surveillance.

Agriculture Victoria told us it expects staff to acknowledge or respond to a community report within one business day. But it has not documented this target to monitor its service standard and make sure staff expectations are clear. It has also not documented its process for triaging community reports to make sure staff respond consistently.

From January 2018 to December 2023, Agriculture Victoria received 2,789 reports. Our analysis of Agriculture Victoria data shows it responded to 47 per cent of community reports within its response target of one business day. We excluded 10 per cent of reports because they did not have a response date or their response date was before report date.

## Agriculture Victoria does not always document a risk-based rationale for where it targets surveillance activities under national programs

### Targeting surveillance activities

Agriculture Victoria needs to consider many factors when planning its surveillance activities, including when and where to set traps.

To detect incursions early, Agriculture Victoria needs to target areas where plant pests or diseases are more likely to enter, spread and establish, and optimise those activities. National surveillance programs set out some, but not all, surveillance requirements. Agriculture Victoria has discretion when these requirements are not clear.

### Risk-based rationale

For the NPHSP and ForestWatch, Agriculture Victoria has not always clearly documented the rationale for locations it surveys and how many traps and visual surveillance activities it carries out. The rationale for NBPSP activities is clear in some, but not all, areas.

<b>Agriculture Victoria told us it considers ...</b>	<b>We found ...</b>
DAFF guidance on entry pathway, survey locations and survey method.	<p>Agriculture Victoria's annual NPHSP operational plans that DAFF endorses includes this information.</p> <p>But Agriculture Victoria has not documented how it applied DAFF's guidance when developing its internal regional and pest-specific operational plans.</p>
<p>available risk maps or modelling for target pests, such as:</p> <ul style="list-style-type: none"> <li>• DAFF's risk maps for 3 specific NPHSP target pests – BMSB, exotic fruit flies and exotic spongy moth. The maps show the different risks of these pests entering and establishing across Victoria.</li> <li>• Agriculture Victoria's trapping locations for forestry pests review in 2018.</li> </ul>	<p>Agriculture Victoria sets traps in higher-risk areas identified in these maps and modelling.</p> <p>But we also found anomalies, like Agriculture Victoria choosing:</p> <ul style="list-style-type: none"> <li>• lower-risk locations over those with a higher risk</li> <li>• locations with the same level of risk over others.</li> </ul> <p>Agriculture Victoria also told us it considers other factors when prioritising where to survey, such as overlaps with risk areas for other pests and staff travel time. But it has not documented these considerations.</p> <p>Only a third of NPHSP pests have risk maps. It is not clear how Agriculture Victoria decides survey locations for the remaining pests.</p> <p>Agriculture Victoria told us it could use the maps for other pests because they have the same entry pathways and similar hosts. But there is no evidence Agriculture Victoria did this.</p>
where trap inspections can be more efficient.	<p>some instances of this, such as Agriculture Victoria requiring staff to:</p> <ul style="list-style-type: none"> <li>• set traps for multiple pests at a single site with a wide variety of hosts, like community gardens</li> <li>• inspect yellow sticky traps for both glassy-winged sharpshooter and BMSB because they are attracted to the same trap.</li> </ul> <p>Agriculture Victoria also clusters traps in areas where hazard maps or risk areas overlap.</p>
previous detections and other local knowledge.	<p>2 instances of this:</p> <ul style="list-style-type: none"> <li>• in 2022–23, Agriculture Victoria placed more traps for BMSB in locations where it was previously detected</li> <li>• Agriculture Victoria relied on expert advice from its Forest Biosecurity Officer who identified: <ul style="list-style-type: none"> <li>• Geelong as high risk because of its port</li> <li>• Portland because it is close to industry plantations.</li> </ul> </li> </ul>

Agriculture Victoria surveys 4 locations under the NBPSP – Port Melbourne, Geelong, Portland and Western Port.

NBPSP decided Port Melbourne is high risk for Victoria based on a September 2020 national risk assessment of ports for bee biosecurity (2020 national bee biosecurity risk assessment). It also sets clear requirements on the level of surveillance activity Agriculture Victoria must carry out at this location. For example, Agriculture Victoria must set up 6 sentinel hives and inspect them every 6 weeks.

Agriculture Victoria has not clearly documented its rationale for surveying Geelong, Portland and Western Port. These locations were part of NBPSP until 2021, when the previous program contract ended. NBPSP stopped funding them from 2022 because the 2020 national bee biosecurity risk assessment did not identify them as high risk.

Agriculture Victoria told us they decided to continue surveillance because of biosecurity risk factors they identified, as well as state and national risk assessments, and apiary industry concerns. While these considerations are important, there is no documentation to show how Agriculture Victoria assessed them as a higher priority than other bee biosecurity program activities.

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## Agriculture Victoria communicates and engages with relevant stakeholders on plant biosecurity risks and responsibilities

### Stakeholder engagement activities

Agriculture Victoria conducts a broad range of communication and engagement activities. It creates and distributes information across a range of formats and platforms.

These activities inform stakeholders of plant biosecurity risks and how to minimise potential impacts, prepare for and respond to an EPP event.

Agriculture Victoria also raise community awareness. It helps the public to identify and report suspect plant pests and diseases. Agriculture Victoria triage community reports of suspect plant pests and diseases and investigate further where relevant. This can lead to surveillance activities to confirm whether an exotic plant pest or disease is present and a risk to Victoria.

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**Stakeholder understanding of biosecurity**

Agencies can engage with stakeholders more effectively if they understand stakeholders’ level of knowledge, how they want to receive information and what influences their decision-making.

We found that Agriculture Victoria has researched stakeholders’ understanding of biosecurity. But this has been more heavily focused on animal or livestock biosecurity matters.

<b>Agriculture Victoria conducted ...</b>	<b>Based on ...</b>	<b>Which meant ...</b>
a statewide survey of stakeholders' baseline knowledge and attitudes towards biosecurity in 2021	a survey sample of 1,472 that included 761 farms, but these were drawn from a variety of sectors, including livestock, grain growing, horticulture, viticulture, and aquaculture	extracting plant industry-specific data was not always possible because of the sample size and composition.
research into understandings of shared responsibility in biosecurity amongst Victorian producers and the general population in 2023	<ul style="list-style-type: none"> <li>a qualitative sample size of 10 producers and 61 Victorians</li> <li>a quantitative survey sample size of 1,005 members of the public and 212 producers</li> </ul>	that detailed specific data on plant industry producers was not available because the research does not separately identify this group.
research with its counterparts in Queensland and New South Wales, to better understand livestock owners' biosecurity practices, some who were also horticulture growers in 2023	a sample of 333 participants, 93 of whom were farmers who also grew crops or plants for sale	the small sample size and focus on livestock owners meant findings on plant biosecurity issues are indicative only.

Due to the research participants' composition and sample size, Agriculture Victoria has not been able to clearly extract biosecurity data specifically related to plant agriculture (crop farming and industry, instead of livestock or animals).

This level of detail could help further Agriculture Victoria's understanding of stakeholder knowledge and biosecurity behaviours in plant-specific industries and across the sector.

## Agriculture Victoria uses a range of regulatory tools to help prevent plant pests and diseases entering and spreading in Victoria, and preserve market access

**Types of regulatory tools**

Agriculture Victoria has a program of regulatory activities to manage compliance with the *Plant Biosecurity Act 2010* and associated regulations. The plant biosecurity program has a 3-year Plant Biosecurity Compliance Strategy that identifies compliance risks or harms and prioritises them based on risk.

The 2023–26 strategy identifies high-priority harms:

- host material moving uncontrolled into Victoria from interstate or other countries
- host material moving uncontrolled from a restricted or a control area in Victoria
- host material moving uncontrolled from Victoria to other states.

These harms could result in pests or diseases entering and spreading in Victoria, or to other states and territories. This could lead to Victorian producers losing access to these markets.

To mitigate harm, Agriculture Victoria has various regulatory tools at its disposal. For example:

- The Minister for Agriculture can declare importation orders that prohibit or restrict certain materials from entering Victoria, unless importers meet the conditions that Agriculture Victoria specifies.
- Agriculture Victoria can declare certain parts of Victoria 'control areas' or 'restricted areas' and uses permits to regulate movement or contain some plant pests and diseases to these areas.

Businesses can apply to Agriculture Victoria to issue a Plant Health Certificate, which certifies that their plant goods meet the relevant quarantine conditions.

Agriculture Victoria can also accredit businesses to self-certify that their produce, area or property meets the relevant quarantine or movement conditions.

There are 2 types of these accreditation arrangements:

- the Interstate Certificate Assurance (ICA) Scheme, which is a national scheme to accredit businesses to issue Plant Health Assurance Certificates for various ICA procedures.
- Plant Standards arrangements, which are biosecurity protocols that apply to Victoria only, or protocols bilaterally agreed between Victoria and other states and territories or DAFF.

Agriculture Victoria also conducts other compliance and enforcement-related activities, including:

- audits of arrangements and permits, to move plant pest and disease host material around Victoria
- verifying imports are free from specific exotic pests, such as red imported fire ants.

Agriculture Victoria can also enter compliance agreements with businesses. It can accredit businesses to verify imports without having to present them to an Agriculture Victoria inspector.

**Compliance activities to support market access**

Since 2022–23, the Plant Biosecurity Program has prioritised compliance activities in its annual project tracker using priority and consequence rankings. Priority rankings are either mandatory, 'should do' or 'may do or defer'. Consequence rankings are from '1' to '6'.

<b>If the ranking is ...</b>	<b>Agriculture Victoria must ...</b>
'1' being 'high (consequence) and urgent' activities	respond within 24 to 48 hours.
'2' being 'high' (consequence) activities	respond within 5 working days.
'3'	respond within one to 2 weeks.
'4' to '6'	deliver considering other Agriculture Victoria-planned commitments.

Our review of ranking outcomes for 2023–24 shows that Agriculture Victoria's priority is to react to potential noncompliance and facilitate and maintain market access. Mandatory activities with higher consequence rankings ('1' to '3') focus on:

- meeting national and interstate obligations, especially auditing higher risk arrangements and investigating noncompliance reports
- processing new arrangements and movement permits (for phylloxera and potato cyst nematode) and issuing Plant Health Certificates to maximise market access
- responding to new detections or suspect reports of pests that need containing, specifically phylloxera and potato cyst nematode.

This ranking broadly aligns with high-priority harms identified in the 2023–26 *Plant Biosecurity Compliance Strategy*.

## Agriculture Victoria is not meeting all its national and interstate targets to undertake arrangement audits

### Arrangement audit requirements

Agriculture Victoria schedules compliance audits of its arrangements with businesses under the ICA Scheme, Plant Standards and compliance agreements.

The national ICA Scheme requires Agriculture Victoria to audit accredited businesses. This is a mix of regular (annual or biannual), initial, random, and investigatory audits. Each ICA procedure sets out the schedule for annual and biannual audits.

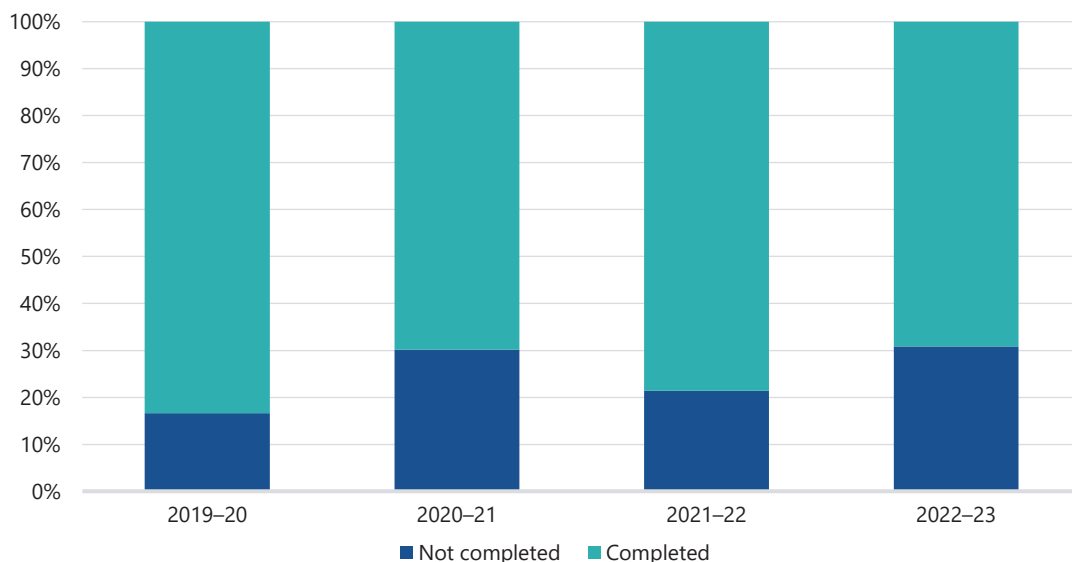
Agriculture Victoria has established its own audit schedules for businesses under compliance agreements and Plant Standards arrangements, which includes regular annual or biannual audits.

### Completing regular arrangement audits

We analysed Agriculture Victoria's data on annual and biannual arrangement audits for 2019–20 to 2022–23 and found that:

- on average, Agriculture Victoria did not complete 25 per cent of regular audits
- the proportion of regular audits not completed has increased in the last 4 years from 17 per cent in 2019–20 to 31 per cent in 2022–23 (see Figure 8).

Figure 8: Completed and uncompleted regular arrangement audits between 2019–20 and 2022–23



Source: VAGO based on Agriculture Victoria data.

Agriculture Victoria did not complete audits for some arrangements it identified as higher-risk based on factors such as economic, historical non-conformance and risk of damaging the state's reputation.

For example, Agriculture Victoria rated ICA 29 *Treatment of Nursery Stock for Export to the Interstate Markets* as its second riskiest arrangement. Agriculture Victoria's 2023 internal audit found that Agriculture Victoria did not audit 2 accredited businesses under this arrangement for 2 years in a row.

An internal audit Agriculture Victoria conducted in 2023 found that staff were not consistently creating audit events in its compliance management system for each arrangement to prompt compliance officers when the audit was due.

Agriculture Victoria is not meeting its targets to audit all businesses under the ICA Scheme, Plant Standards and compliance agreements.

Since 2022, Agriculture Victoria has prioritised audits it identified as higher risk, such as initial compliance audits and investigatory audits, along with annual and biannual audits of other arrangements considered high risk to minimise this impact.



## Agriculture Victoria uses a range of regulatory controls to contain phylloxera, but it is slowly spreading in Victoria

### Regulatory approach to contain phylloxera

Agriculture Victoria uses a range of regulatory controls to support early detection and limit the spread of phylloxera in Victoria. In line with the *National Phylloxera Management Protocol*, all grape-growing regions within Victoria are classified into 3 types of phylloxera management zones:

- Phylloxera Infested Zones (PIZs) – where phylloxera is known to occur. Includes a 5 km buffer from the closest infested vineyard. There are 6 PIZs in Victoria
- Phylloxera Exclusion Zones (PEZs) – an area demonstrated to be free of phylloxera. The movement of risk vectors into the area is controlled. There are 2 PEZs in Victoria
- Phylloxera Risk Zones (PRZs) – areas that have not been surveyed for phylloxera, so its presence is unknown.

Agriculture Victoria produces an annual Phylloxera Operational Plan to guide the implementation of pest-specific deliverables. These activities include:

- inspecting suspected reports of phylloxera
- responding to new detections
- issuing movement permits for control areas
- conducting surveillance for exclusion of phylloxera in PRZs
- carrying out compliance inspections for permits.

Agriculture Victoria issue permits for phylloxera host materials movement. A permit condition can be that Agriculture Victoria issues a Plant Health Certificate, which confirms host materials meet relevant quarantine conditions. Or, the permit holder may need to issue a Plant Health Declaration or meet permit conditions (such as maintaining treatment records).

### Phylloxera compliance inspections

The Phylloxera Operational Plan requires that Agriculture Victoria undertake compliance inspections on phylloxera permits issued to ensure compliance with movement conditions.

The target is 10 per cent of the movement permits issued in the year. Figure 9 shows Agriculture Victoria has not met this target in 2 of the last 3 years. Agriculture Victoria carried out more than the required number of inspections in 2020–21, but just 52 and 81 per cent in 2021–22 and 2022–23.

Figure 9: Phylloxera compliance inspections 2020–21 to 2022–23

	2020–21		2021–22		2022–23	
	Target	Actual	Target	Actual	Target	Actual
Number of inspections	28	38	25	13	21	17

Source: Agriculture Victoria based on data extracted from Agriculture Victoria's Vector Max database and BioWeb system.

Agriculture Victoria also carries out compliance audits of phylloxera-specific procedures and protocols as a condition of accreditation arrangements. Agriculture Victoria must:

- undertake an initial compliance audit within 4 weeks of the business receiving accreditation or issuing an assurance certificate
- carry out regular scheduled compliance audits twice a year for businesses that operate for more than 6 months each year.

ICA arrangements also require random audits on a minimum of 5 per cent of accredited businesses annually.

Agriculture Victoria's records show that in 2020–21, 2021–22, and 2022–23, it conducted over 90 per cent of regular compliance audits for phylloxera-specific arrangements.

But Agriculture Victoria staff have not consistently created audit events for each arrangement in its internal records system, Vector.

If staff do not create audit events in Vector, they will not be completed. This means there may be regular compliance audits stipulated in arrangements that Agriculture Victoria never carried out.

Agriculture Victoria told us that they recently centralised the processing of arrangement renewal applications to its Biosecurity Services Centre. This will standardise Vector processing, including the creation of annual audit events for all active arrangements.

The National ICA Audit Program found Victoria failed to conduct random audits on 5 per cent of ICA accredited businesses each year. Agriculture Victoria told us that random audits are a high priority but have a low consequence rating if not completed because Agriculture Victoria already carry out initial audits prior to issuing a Certificate of Accreditation for all new arrangements.

Despite random audits being a requirement under the national ICA Scheme, Agriculture Victoria advised us it has cancelled this deliverable for 2023–24.

### New phylloxera detections

Statewide, new phylloxera detections remain low (refer to Figure 10). But the Maroondah PIZ is expanding. Some properties recorded multiple detections.

Figure 10: Number of properties with confirmed new detections of phylloxera by year

Phylloxera detections	2018–19	2019–20	2020–21	2021–22	2022–23
Number of properties with confirmed new detections of phylloxera	3	4	0	1	2

Source: VAGO based on Agriculture Victoria reporting.

Figure 11 details these new phylloxera detections. When a new detection occurs either just within or just outside a PIZ boundary, the response is to extend the PIZ boundary.

Between 2018–19 and 2022–23, Agriculture Victoria carried out 6 extensions to the Maroondah PIZ. Agriculture Victoria has advised these extensions may be due to a natural pest spread, especially with the potential for uncontrolled movement within the PIZ. But the exact cause of this movement is unknown.

Agriculture Victoria did not need to extend the remaining 5 PIZs between 2018–19 and 2022–23.

Figure 11: Phylloxera detections and containment actions 2018–19 to 2022–23

Year	Detections and containment actions
2018–19	<ul style="list-style-type: none"> <li>One detection approximately 5 km inside a PIZ buffer zone, meaning there was no need to extend the zone</li> <li>One detection in a PRZ just outside a PIZ. This resulted in an extension</li> <li>One detection inside the PIZ within the 5 km buffer. This resulted in an extension</li> </ul>
2019–20	<ul style="list-style-type: none"> <li>2 detections inside a PIZ within a 5 km buffer. This resulted in an extension</li> <li>One detection in a PRZ resulting in an extension to the adjacent PIZ</li> <li>One detection inside the PIZ within the 5 km buffer. An extension would not incorporate any additional vineyards, mostly only state bushland park so there was no extension</li> </ul>
2021–22	<ul style="list-style-type: none"> <li>2 detections inside a PIZ within the 5 km buffer. This resulted in an extension</li> <li>One detection in a PRZ resulting in an extension to the adjacent PIZ</li> <li>One detection inside a PIZ within the 5 km buffer. An extension would not incorporate any additional vineyards, mostly only state bushland park, so a PIZ extension was not necessary</li> </ul>
2022–23	One detection inside a PIZ within the 5 km buffer. As part of the process for then extending the zone, Agriculture Victoria surveyed properties within 5 km of that detection. Agriculture Victoria confirmed another positive detection outside the PIZ in the PRZ, which resulted in a second extension of the PIZ

Note: There were no detections in 2020–21.

Source: Agriculture Victoria.

# 3.

## Responding to plant pests

Since 2018, there has been one new EPP incursion in Victoria that has been subject to an eradication response. Agriculture Victoria led the Victorian activities in a successful national response to khapra beetle in 2020–21 in line with state and national plans and policies. But Agriculture Victoria may not have enough trained and technical staff to respond effectively to a plant pest emergency.

### Agriculture Victoria's emergency management and response strategies for plant biosecurity incursions are consistent with national guidelines

#### Emergency response documents

Agriculture Victoria has plant pest biosecurity emergency response strategies and management plans that are consistent with national guidelines.

Agriculture Victoria's ConOps sets out:

- how to initiate and manage an emergency biosecurity response
- the roles and responsibilities of Agriculture Victoria staff.

The ConOps specifies how Agriculture Victoria emergency arrangements link with the *State Emergency Management Plan* and the *State Emergency Management Plan: Animal, Plant, Marine and Environmental Biosecurity Sub Plan*.

The ConOps also aligns with the EPPRD and PLANTPLAN in how it outlines:

- biosecurity response phases and activities
- levels and categories of EPPs
- reporting obligations.

Agriculture Victoria has also developed the priority exotic plant pest investigation (PEPPI) process. The PEPPI process guides the initial investigation following a suspect EPP report. This happens before the biosecurity risk is known and the response strategy has been developed.

The PEPPI process supports emergency responses by providing checklists of actions to take after a suspect report. It also provides templates to guide and document action plans, progress reports and management decisions.

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#### Approach to plant biosecurity preparedness

Agriculture Victoria takes a generic approach to plant biosecurity preparedness. Agriculture Victoria told us that this is because of the vast numbers of plant pests and diseases that could enter Victoria, which makes it impossible to have a pest-specific plan in place for even a fraction of them. Agriculture Victoria advised that generic preparedness allows them to respond to any pest or disease detection.

To guide a generic response, Agriculture Victoria relies on the framework in its emergency response documents to ensure decision-making and response activities are implemented.

Agriculture Victoria has developed specific preparedness plans for only 2 pest threats to date: BMSB and medfly. These provide operational detail and guidance on initial actions to take in the event of a detection in Victoria. Agriculture Victoria told us these pests met its criteria for developing a specific preparedness plan and had been prioritised. These criteria are:

- there is a high risk of detection
- the response requires specific operational requirements.

But Agriculture Victoria has not documented these criteria or how BMSB or medfly were assessed. Agriculture Victoria told us that it developed:

- the BMSB Preparedness Plan because there are regular BMSB detections in Victoria
  - the Medfly Preparedness Plan because there are inconsistencies in national plans and, although medfly is currently only present in Western Australia, Agriculture Victoria considers there is a significant risk it could spread to Victoria.
- 

## Agriculture Victoria effectively implemented its responsibilities as part of a national response to eradicate khapra beetle, but faced challenges resourcing emergency response activities

### National response to khapra beetle

Khapra beetle is one of Australia's plant pests of concern. In 2020, khapra beetle was detected in goods distributed to retail stores and warehouses throughout New South Wales, Western Australia, Queensland, South Australia, Tasmania and the Australian Capital Territory.

The Commonwealth Department of Agriculture, Water and the Environment, now DAFF, initiated and led a national eradication response.

Agriculture Victoria was Victoria's lead agency in the national response and implemented the state's activities in line with the EPPRD, PLANTPLAN and the national Khapra Beetle Response Plan.

Agriculture Victoria helped develop the national response plan. During the response, it:

- completed trace forward analysis to work out the likely movement path of khapra beetle from its original source and detections
- completed surveillance and trapping activities to check whether khapra beetle had spread
- reapplied chemical treatments where necessary
- coordinated public information, communication and engagement activities in Victoria.

In December 2021, the National Management Group decided that surveillance and emergency response activities in affected states and territories provided enough evidence to conclude that the khapra beetle had not established in Australia.

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### Resourcing challenges

Agriculture Victoria's evaluation of its role in the khapra beetle response found it had not sufficiently planned to ensure it had the resources needed to carry out an EPP response while maintaining business as usual. The evaluation found that:

- there were challenges resourcing staff with the right skills and knowledge, due to a limited pool of people
- the resourcing model was reliant on staff goodwill rather than effective resource planning, which is not a sustainable long-term approach.

Agriculture Victoria told us that these staffing challenges require significant resourcing and time to address but that progress has been made to address them.

The staffing challenge to ...	Is being addressed by ...
improve processes for onboarding casual staff	a project in the emergency animal disease program to ensure business processes are in place to engage a surge workforce, including other agencies and external casual staff, which is transferable to EPPs if required.
develop a new resourcing system	a new DEECA resourcing system for emergency responses due for completion in 2026.
provide training for state and local incident management teams	including content on response structures in all Agriculture Victoria emergency management training products.

## Agriculture Victoria may not have enough trained and technical staff to respond effectively to a future plant pest emergency

### Internal guidance on resourcing needs

Agriculture Victoria has both general guidance and more specific resourcing models that provide an overview of resourcing needs in an EPP response.

Agriculture Victoria's ConOps details the critical roles and staff responsibilities during an emergency response. The guidance is general in nature, noting that resourcing models will differ based on operational need, type of plant pest, and necessary response activities.

The EPP Model of Cover for Level 2 Biosecurity Emergencies sets out the roles, capabilities and minimum number of staff required to effectively lead and manage a level 2 (major) EPP and apiary biosecurity incident. Agriculture Victoria advised it is currently updating the Model of Cover to review the current number of available trained and technical staff, such as entomologists, pathologists and risk analysts, and capability gaps. It is due for completion by September 2024.

Agriculture Victoria has also developed a model of cover for a scenario where there are 3 concurrent emergency events – an EPP response, an emergency animal disease response, and an agricultural recovery event, such as a fire. The model calculates the number of resources Agriculture Victoria has, using a range of assumptions, to fill these roles if needed.

### Response preparedness training for Agriculture Victoria staff

Agriculture Victoria provides staff a broad range of emergency response training. It has conducted simulation exercises to prepare for a plant pest biosecurity incursion.

Agriculture Victoria's plant pest emergency response training includes:

- online foundational and emergency responder courses on the Agriculture Victoria corporate learning portal
- specialised training, such as Emergency Governance and Emergency Response Manager
- simulation exercises, including:
  - 'Exercise Coombes' in 2018, which tested the response to a tarnished plant bug incursion (a high-priority plant pest)
  - an industry liaison exercise in 2023, which scenario-tested BMSB detection, along with a virtual response training exercise to prepare for an EPP incident.

Agriculture Victoria also advised us that staff:

- receive training opportunities through external programs
- may join emergency responses in other jurisdictions as professional development
- may support response efforts within other parts of DEECA, such as animal health responses (for example, avian influenza) and the agricultural recovery from fires and floods.

As of 2024, Agriculture Victoria has 8 staff who participate in the National Biosecurity Response Team program. The program provides training and professional development activities around biosecurity emergency responses.

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## Response to an EPP

When determining what resources it needs to respond to an EPP event, Agriculture Victoria considers the complexity of the response and the available response options.

However, Agriculture Victoria's evaluation of their role in the national response to khapra beetle found that it had challenges resourcing staff with the right skills and knowledge.

Internal modelling by Agriculture Victoria also shows it does not have enough staff with the right capabilities to effectively respond to a plant pest emergency while maintaining business-as-usual functions.

Although Agriculture Victoria offers emergency response training to staff, it is not clear how Agriculture Victoria maps this training to address role needs and shortages, as identified through Model of Cover documents.

Business units across Agriculture Victoria add training needs for nominated staff into a specific spreadsheet. Agriculture Victoria told us it uses this to identify priority courses to address Model of Cover gaps. But we could not deduce from the spreadsheet:

- which courses are prioritised
- how courses and emergency roles align with EPP Model of Cover requirements
- how many staff attend each training course to meet Model of Cover requirements.

Agriculture Victoria is still finalising a plan that will provide guidance on how to identify gaps and develop staff capabilities to effectively respond to an EPP event. The draft Emergency Management Workforce and Capability Plan sets out the following:

- models of cover will be updated annually for high-risk pest and disease scenarios
- a comparison will be conducted to identify gaps in the capacity to respond to an emergency
- a training needs analysis will then highlight gaps, which will become the focus of capability development.

Agriculture Victoria advised that it addresses emergency response capacity and capability gaps via workforce 'pools' identified in its Emergency Animal Disease Surge Workforce Strategy. It achieves this through:

- deploying staff from other areas within Agriculture Victoria, DEECA and across the Victorian Public Service
- casual and contract employment arrangements, and labour hire
- a national agreement for the interstate deployment of response personnel, under the National Biosecurity Committee-endorsed Interstate Deployment Arrangements.

DEECA is also developing an internal resourcing system for emergency responses, which is due to be completed in 2026.

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# Appendices

[Appendix A: Submissions and comments](#)

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[Appendix B: Abbreviations, acronyms and glossary](#)

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[Appendix C: Audit scope and method](#)

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[Appendix D: Agriculture Victoria prevention and preparedness activities](#)

# Appendix A:

## Submissions and comments

We have consulted with DEECA, and we considered their views when reaching our audit conclusions. As required by the *Audit Act 1994*, we gave a draft copy of this report, or relevant extracts, to those agencies and asked for their submissions and comments.

Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

### Responses received

Agency	Page
DEECA	A-2





Department of Energy, Environment  
and Climate Action

PO Box 500, East Melbourne,  
Victoria 8002 Australia

SEC-240800363

Mr Andrew Greaves  
Auditor-General  
Victorian Auditor-General's Office  
Level 31 / 35 Collins Street  
MELBOURNE VIC 3000



Dear Auditor-General

**Proposed draft report - *Protecting the biosecurity of agricultural plant species***

Thank you for your invitation to comment on the Victorian Auditor-General's Office's (VAGO) proposed draft report for the performance engagement - *Protecting the biosecurity of agricultural plant species* received 21 August 2024.

The Department of Energy, Environment and Climate Action (DEECA) acknowledges the importance of effectively preparing for, preventing, managing and responding to plant pests and diseases in Victoria.

DEECA welcomes your findings and accepts the recommendations detailed in the report. A proposed action plan for implementing these recommendations is attached.

I thank your staff for their work and look forward to a continued productive relationship with your office.

Yours sincerely



**John Bradley**  
Secretary

9/09/2024

Encl. DEECA Action plan – *Protecting the biosecurity of agricultural plant species*



Official - Sensitive

## Department of Energy, Environment and Climate Action

### Action plan to address VAGO recommendations from report: *Protecting the biosecurity of agricultural plant species*

No	Recommendations	Acceptance	Agreed action	Completion Date
1	Develop a risk-based strategy to guide its surveillance activities. The strategy should cover general and targeted surveillance programs, and document the rationale for selected: <ul style="list-style-type: none"> <li>• priority plant pests and diseases.</li> <li>• target locations.</li> <li>• surveillance activities' frequency and timing.</li> <li>• required resources.</li> <li>• industry and community roles.</li> </ul>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> In part <input type="checkbox"/> In principle <input type="checkbox"/>	DEECA will develop a strategy document to capture existing risk-based practices that guide surveillance activities.	30 September 2025
2	Improve how it plans, monitors and internally reports surveillance activities against its targets	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> In part <input type="checkbox"/> In principle <input type="checkbox"/>	DEECA will improve alignment and documentation of how it plans, monitors and internally reports on plant pest surveillance activities with requirements and relevant targets.	30 September 2025
3	Improve how it uses its resources to plan, schedule, monitor and internally reports on arrangement audits in line with its targets	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> In part <input type="checkbox"/> In principle <input type="checkbox"/>	DEECA will review the annual audit plan and prioritise work aligned with a documented risk-based strategy. DEECA will continue to work nationally to review relevant audit arrangements to ensure these are risk-based and reflect contemporary assurance approaches aligned with resourcing.	30 September 2026
4	Complete the Emergency Management Workforce and Capability Plan. Document how it will address resourcing requirements and gaps identified in its Model of Cover in the event of an emergency plant pest incursion, through: <ul style="list-style-type: none"> <li>• specific training and capability development for Agriculture Victoria staff</li> <li>• recruitment and surge resources</li> </ul>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> In part <input type="checkbox"/> In principle <input type="checkbox"/>	DEECA will deliver these recommendations in stages. DEECA will complete the Emergency Management Workforce and Capability Plan to cover all hazards including plant pest emergencies by September 2025. This will be followed by training, recruitment and surge resources to be completed by September 2026.	30 September 2026

# Appendix B: Abbreviations, acronyms and glossary

**Abbreviations** We use the following abbreviations in this report:

## Abbreviation

the Act	<i>Plant Biosecurity Act 2010</i>
ConOps	Concept of Operations
medfly	Mediterranean fruit fly
PLANTPLAN	<i>Australian Emergency Plant Pest Response Plan</i>

**Acronyms** We use the following acronyms in this report:

## Acronym

BMSB	brown marmorated stink bug
DAFF	Department of Agriculture, Fisheries and Forestry
DEECA	Department of Energy, Environment and Climate Action
EPP	emergency plant pest
EPPRD	Emergency Plant Pest Response Deed
ICA	Interstate Certificate Assurance
NBPSP	National Bee Pest Surveillance Program
NPHSP	National Plant Health Surveillance Program
PEPPI	priority exotic plant pest investigation
PEZ	Phylloxera Exclusion Zones
PIZ	Phylloxera Infested Zones
PRZ	Phylloxera Risk Zones
VAGO	Victorian Auditor-General's Office

## Glossary

This glossary includes an explanation of the types of engagements we perform:

### Term

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**Reasonable assurance** We achieve reasonable assurance by obtaining and verifying direct evidence from a variety of internal and external sources about an agency's performance. This enables us to express an opinion or draw a conclusion against an audit objective with a high level of assurance. We call these audit engagements.

See our [assurance services fact sheet](#) for more information.

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**Limited assurance** We obtain less assurance when we rely primarily on an agency's representations and other evidence generated by that agency. However, we aim to have enough confidence in our conclusion for it to be meaningful. We call these types of engagements assurance reviews and typically express our opinions in negative terms. For example, that nothing has come to our attention to indicate there is a problem.

See our [assurance services fact sheet](#) for more information.

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# Appendix C:

## Audit scope and method

### Scope of this audit

#### Who we examined

We examined the following agencies:

Agency	Their key responsibilities in relation to plant biosecurity
Agriculture Victoria within DEECA	<ul style="list-style-type: none"><li>• Preventing and managing invasive species and plant disease in Victoria</li><li>• Responding to EPP incursions when they occur</li><li>• Educating and engaging with stakeholders to minimise plant biosecurity risks</li></ul>

#### Our audit objective

To determine whether Agriculture Victoria effectively prepares for, prevents, responds to and contains plant pests and diseases in Victoria.

#### Our mandate

The *Audit Act 1994* provides the mandate for our audits and reviews. VAGO's Strategic Plan sets the direction for how we approach and explore this mandate.

Central to VAGO's mandate are the '3 Es' specified in our legislation and described in the Australian Auditing and Assurance Standards, which enable us to pose questions that we address through our engagements.

The 3 Es are:

- **Effectiveness** – to what extent were the objectives at the program or entity level achieved?
- **Efficiency** – to what extent were inputs minimised to deliver the intended outputs or outputs maximised for a given level of input (in terms of quality, quantity and timing)?
- **Economy** – to what extent were the costs of resourcing the program or activity minimised, within operational requirements (timeliness and availability of required quality and quantity)?

The other performance objective we focus on in our work is compliance of an entity's activities with all relevant legislation.

This audit focused on effectiveness.

#### What we examined

We examined whether:

- Agriculture Victoria has an effective and well-designed approach to prepare for and prevent exotic and regulated plant pests and diseases in Victoria
- Agriculture Victoria implements timely responses that contain and minimise impacts of exotic and regulated plant pest and diseases within Victoria.

## Conducting this audit

### Assessing performance

To form our conclusion against our objective we used the following lines of inquiry and associated evaluation criteria:

Line of inquiry	Criteria
1. Does Agriculture Victoria have an effective and well-designed approach to prepare for and prevent exotic and regulated plant pests and diseases in Victoria?	1.1 Agriculture Victoria uses modern and effective tools, data and intelligence that enable it to plan for and respond to current and emerging plant biosecurity risks to Victoria.
	1.2 Agriculture Victoria has effective contingency and resource planning to respond to plant biosecurity incursions.
	1.3 Agriculture Victoria has contemporary strategies, policies and procedures that guide and prioritise its plant biosecurity activities.
	1.4 Agriculture Victoria undertakes risk-based activities to ensure prevention or timely detection of plant pests and diseases.
	1.5 Agriculture Victoria educates and informs relevant stakeholders on biosecurity risks and responsibilities.
2. Does Agriculture Victoria implement appropriate and timely responses that contain and minimise impacts of exotic and regulated plant pests and diseases within Victoria?	2.1 Agriculture Victoria implements timely eradication responses in accordance with relevant state and national standards and plans.
	2.2 Agriculture Victoria implements containment activities that prevent the spread and minimise the impact of established plant pests and diseases.
	2.3 Agriculture Victoria implements domestic market access activities that facilitate agricultural trade when new pests become established and/or are contained.

### Our methods

As part of the audit we:

- reviewed and analysed information related to plant biosecurity, including:
  - Agriculture Victoria's frameworks, strategies, guidelines and policies
  - DAFF's frameworks, strategies, guidelines and policies
  - program documents, such as program plans, evaluation reports and audit reports
  - surveillance records from AusPestCheck, the national surveillance records system, via Agriculture Victoria
  - compliance records
- interviewed key Agriculture Victoria staff.

### Compliance

We conducted our audit in accordance with the *Audit Act 1994* and ASAE 3500 Performance Engagements to obtain reasonable assurance to provide a basis for our conclusion.

We complied with the independence and other relevant ethical requirements related to assurance engagements.

We also provided a copy of the report to the Department of Premier and Cabinet and the Department of Treasury and Finance.

### Cost and time

The full cost of the audit and preparation of this report was \$725,000.

The duration of the audit was 14.5 months from initiation to tabling.

# Appendix D: Agriculture Victoria prevention and preparedness activities

Figure D1: Agriculture Victoria plant biosecurity prevention and preparedness activities

## Agriculture Victoria plant biosecurity prevention and preparedness activities

Pest reports and triage	<ul style="list-style-type: none"> <li>• Reporting systems</li> <li>• Triage team</li> <li>• Operational support</li> <li>• Decision making support systems</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>• Laboratories</li> <li>• Accreditations</li> <li>• Protocols</li> <li>• Trained personnel</li> <li>• LIMS</li> </ul>
Surveillance	<ul style="list-style-type: none"> <li>• Targeted programs</li> <li>• General surveillance</li> <li>• Data systems</li> <li>• Protocols</li> <li>• Trained personnel</li> <li>• Equipment</li> <li>• Data and risk analysis</li> </ul>
Underpinning systems	<ul style="list-style-type: none"> <li>• IT systems</li> <li>• Template libraries</li> <li>• Provision of infrastructure</li> </ul>
Frameworks, policies etc.	<ul style="list-style-type: none"> <li>• <i>State Emergency Management Plan</i> and sub-plan</li> <li>• EPPRD and PLANTPLAN</li> <li>• ConOps</li> <li>• Model of Cover</li> <li>• BIMS</li> <li>• PEPPi</li> </ul>
Communications and awareness	<ul style="list-style-type: none"> <li>• Engagement programs</li> <li>• Trained personnel</li> <li>• Pre-established communication channels</li> <li>• Communication materials</li> <li>• Building effective relationships with key stakeholders</li> </ul>
Control orders, accreditations and compliance	<ul style="list-style-type: none"> <li>• Legislation and regulations</li> <li>• Importation orders</li> <li>• Interstate Certification Assurance program</li> <li>• Containment programs</li> <li>• Audits</li> <li>• Compliance activities</li> </ul>

## Agriculture Victoria plant biosecurity prevention and preparedness activities

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Pest prioritisation, planning and implementation	<ul style="list-style-type: none"><li>• Priority pest lists</li><li>• Biosecurity plans and implementation tables</li><li>• National Action Plans</li><li>• Farm biosecurity programs</li></ul>
Personnel preparedness	<ul style="list-style-type: none"><li>• Training programs</li><li>• Just-in-time training</li><li>• Exercises</li><li>• Resourcing systems</li><li>• Interstate deployment arrangements</li><li>• Model of Cover</li></ul>
Pest-specific response planning	<ul style="list-style-type: none"><li>• Contingency plans</li><li>• Preparedness plans</li><li>• National Diagnostic Protocols</li><li>• National Surveillance Protocols</li></ul>
Other preparedness areas	<ul style="list-style-type: none"><li>• Contribution to national committees</li><li>• Development of templates</li></ul>

Source: Agriculture Victoria.



# Auditor-General's reports tabled during 2024–25

<b>Report title</b>	<b>Tabled</b>
<i>Results of 2023 Audits: Technical and Further Education Institutes (2024–25: 1)</i>	July 2024
<i>Building a Capable and High-performing Public Service Workforce (2024–25: 2)</i>	August 2024
<i>Protecting the Biosecurity of Agricultural Plant Species (2024–25: 3)</i>	October 2024

All reports are available for download in PDF and HTML format on our website at [www.audit.vic.gov.au](http://www.audit.vic.gov.au)

# Our role and contact details

## The Auditor-General's role

For information about the Auditor-General's role and VAGO's work, please see our online fact sheet [About VAGO](#).

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## Our assurance services

Our online fact sheet [Our assurance services](#) details the nature and levels of assurance that we provide to Parliament and public sector agencies through our work program.

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## Contact details

Victorian Auditor-General's Office  
Level 31, 35 Collins Street  
Melbourne Vic 3000  
AUSTRALIA

Phone +61 3 8601 7000

Email [enquiries@audit.vic.gov.au](mailto:enquiries@audit.vic.gov.au)

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