GOULBURN BROKEN
CATCHMENT MANAGEMENT AUTHORITY

Goulburn Broken

Biosecurity, Invasive Plants and Animals Strategy

2019 - 2025

OUR VISION

Healthy, resilient and increasingly productive landscapes supporting vibrant communities.

Document name: Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy 2019 - 2025

Goulburn Broken Catchment Management Authority
168 Welsford Street
PO Box 1752

Shepparton, VIC 3632
T: 03 5822 7700
F: 03 5831 6254
E: reception@gbcma.vic.gov.au
www.gbcma.vic.gov.au

ISBN: 978-1-876600-12-9

Development of this publication was supported by funding from the Australian Government's National Landcare Program and the Victorian Government.

FOREWORD

Management of invasive plants, animals and biosecurity within the Goulburn Broken Catchment is an important component of implementing our Regional Catchment Strategy.

Preparation of this Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy (GB BIPAS) was identified in the GB CMA's 2018-19 Corporate Plan as a priority.

New guidelines, and the adoption by State and Federal governments of biosecurity approaches for invasive plants and animals management, have provided an additional incentive to review and develop updated approaches within the Catchment.

The GB BIPAS reflects the aims of catchment partners and community Its implementation will contribute to the protection of the Goulburn Broken Catchment's environmental, social and economic assets from the impact of invasive plants, animals and biosecurity risks.

Adrian Weston

Chair

Goulburn Broken Catchment Management Authority

CONTENTS

List of Figures

List of Tables

GLOSSARY

ARIER	Arthur Rylah Institute for Environmental Research
Ag Vic	Agriculture Victoria (Invasive Plants and Animals)
BAP	Biodiversity Action Plan
CaLP	Catchment and Land Protection Act 1994
CMA	Catchment Management Authority
DJPR	Department of Jobs, Precincts & Regions
DELWP	Department of Environment, Land, Water and Planning
FFGA	Flora and Fauna Guarantee Act
GB CMA	Goulburn Broken CMA
GB BIPAS	Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy (GB BIPAS)
IPA	Invasive Plants and Animals
NP	National Park
NLP	National Landcare Program
NRM	Natural Resource Management
MER	Monitoring, Evaluation and Reporting
PV	Parks Victoria
RCS	Regional Catchment Strategy
RPP	Regional Pest Plan
RPW	Regionally Prohibited Weed
RWP	Regional Weed Plan
SPW	State Prohibited Weed
VCMC	Victorian Catchment Management Council
VFF	Victorian Farmers Federation
VIF	Victorian Investment Framework
VNPA	Victorian National Parks Association
VPMF	Victorian Pest Management Framework
VWRA	Victorian Weed Risk Assessment
VRAN	Victorian Rabbit Action Network
WONS	Weeds of National Significance

EXECUTIVE SUMMARY

Introduction

The Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy (GB BIPAS) sets the strategic direction for invasive plants and animals investment and management in the Goulburn Broken catchment.

The Biosecurity Strategy for Victoria (Government of Victoria 2009) and the Invasive Plants and Animals Policy Framework (2012) provide the approach and policy behind invasive plants and animals management in Victoria, whilst the Catchment and Land Protection Act 1994 (CaLP Act 1994) provides a legislative framework and defines general duties of landholders and management of noxious weeds and pest animals.

The scope of the Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy (GB BIPAS) is invasive plants and invasive animals which can be any organisms that are, or can be, declared under the CaLP Act 1994 (that is, both declared and non-declared invasive plants and animals species). This excludes fish, invertebrates and micro-organisms. Also excluded by this definition are plants or animals that are listed under section 10(1) of the *Flora and Fauna Guarantee Act 1988* or declared to be threatened wildlife or notable wildlife under the *Wildlife Act 1975*. These cannot be declared under the CaLP Act 1994. However, the approaches set out in the GB BIPAS can be applied to a range of pest species.

The GB BIPAS is a high level document, guiding general direction for investment and effort. It is not an operational plan guiding day to day activities. It provides objectives and description of how to achieve objectives over a long term (five plus years).

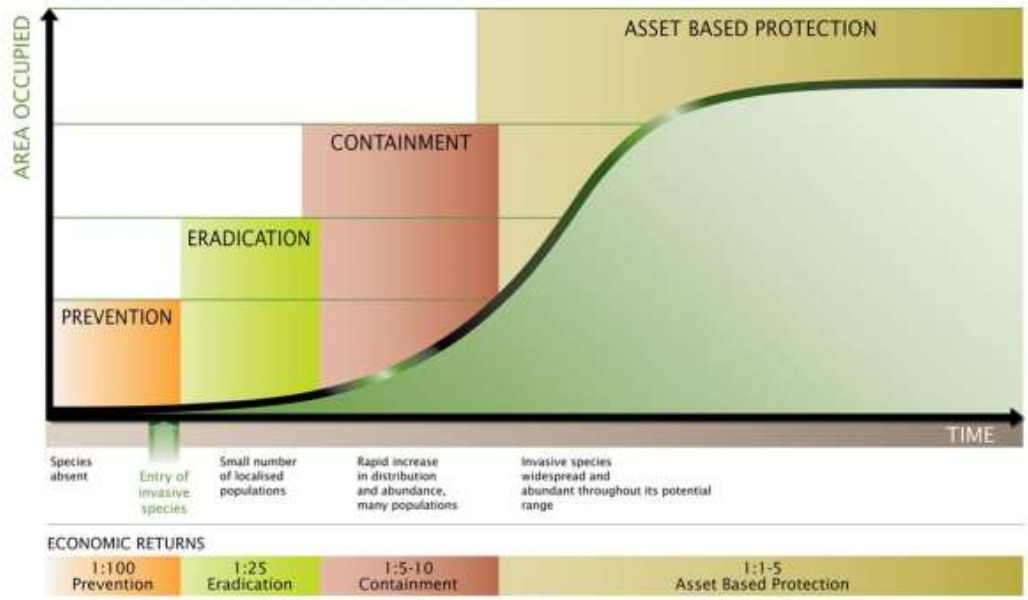
The Strategy - Linkage to RCS, SES local plans and sub-strategies

The GB BIPAS is underpinned by the "biosecurity approach". Informed by the invasive plants and animals invasion curve (Figure S1), the biosecurity approach adopts a risk-based strategy to intervention featuring four key responses: prevention, eradication, containment and asset protection.

Generally, priority will be given to programs that prevent introduction or eradicate newly establishing species, over containment and programs to reduce the impact of established species on priority assets. This approach provides the greatest public benefit for government investment. Linkage to respective RCS SES local plans (agricultural floodplains, productive plains, upland slopes, commuting hills, southern forests and urban centres) building '**resilience'** in these landscapes is important.

Each local plan has been developed to communicate the priorities and actions for supporting the local community as it responds to changes in land use, water policy reform, climate and farm production. Additionally, linkage of the GB BIPAS to other relevant GB CMA sub-strategies supporting the intent of the GB BIPAS include: GB Biodiversity 2016-2021, GB Land Health 2017-2020, GB Waterway 2014-2022 and GB Regional Floodplain Management Strategy 2018-2028.

FIGURE S1 INVASION CURVE (DPI 2010)



Program Goals

The Vision for the GB BIPAS is "Environmental, social and economic assets in the Goulburn Broken catchment will be protected from the impact of invasive plants and animals".

The Vision will be achieved by working towards seven key goals:

Goal 1 - Preparedness and prevention - *Prevent new high-risk invasive plants and animals from establishing in the catchment and ultimately, Victoria.*

Prevention and eradication programs form the basis of the 'species-led' approach to invasive plants and animals management, prioritizing one species above another based on the risk it poses to Victoria's economic, environmental and social values. The control of State Prohibited Weeds falls within this management approach.

Prevention involves minimizing the movement of new invasive plants and animals into the state and catchment by understanding and managing all pathways of entry and spread.

Goal 2 - Eradication - *Eradicate high risk invasive plants and animals in the early stage of establishment.*

In the early stages of range expansion, eradication of an invasive plant or animal may be feasible. There are several conditions to be met in determining whether eradication is feasible.

State Government programs for invasive plants and animals prevention and eradication are largely delivered at a statewide level.

Goal 3 - Containment - *Contain high risk established invasive plants and animals.*

Once established in the state beyond the possibility of eradication, an invasive plant or animal species may still be localized in small areas of one or more catchments. Containment approaches to limit the species further spread may then be appropriate to deliver the best return on public investment. From a statewide program perspective, the control of Regionally Prohibited Weeds falls within this management approach.

Goal 4 - Coordination - *Now supporting sustained community-led action. Coordinate and integrate invasive plants and animals management across, and within, land tenures.*

Effective invasive plants and animals management depends on the development and implementation of working partnerships between government, industry and the community. Roles and responsibilities of various stakeholders are comprehensively addressed in Module 1 of the Invasive Plants and Animals Policy Framework (2012) (link on page 10).

On ground invasive plants and animals management is primarily the responsibility of the land manager. The GB CMA will take a role in supporting coordination activities by convening with stakeholders from within the Catchment and relevant neighboring areas.

Goal 5 - Integration - *Integrate invasive plants and animals management with sustainable agriculture and other natural resource management activities.*

Invasive plants and animals can impact on the effectiveness of many land management programs such as soil stabilization, revegetation programs and the protection and rehabilitation of rare and endangered fauna. Integrating effective invasive plants and animals control into such projects will significantly improve their outcomes over time.

Goal 6 - Protecting assets and their values - *Protect key biodiversity and other natural resource assets and their values from the impact of invasive plants and animals.*

Once an invasive plant or animal becomes so widespread that containment or eradication is not possible, the focus of management effort should change to protecting the catchment's priority assets (often described as an "asset-based approach").

Asset-based protection programs focus upon reducing the impact of all threats, including invasive plants and animals, on high value assets in the state or catchment. Assets may provide a range of environmental, social and/or economic services. The control of widespread invasive animals, such as foxes preying upon rare and threatened species, falls into this 'asset-based' management approach.

Focusing on the protection and restoration of priority assets, rather than the invasive plants and animals per se, provides a clear focus for the land manager when dealing with established invasive plants and animals and enhances the likelihood of success.

Existing invasive plants and animals programs focus on support of community action to manage widely established species. Future programs will focus on protecting high value assets.

Goal 7 - Continuous improvement - *Continuously improve invasive plants and animals management.*

Regular reviews of the GB BIPAS are scheduled so that it can be improved. The Goulburn Broken Land, Biodiversity & Indigenous Program will support the GB CMA in this monitoring, reporting and improvement role.

Prioritisation

Because of the high number of potential species involved when managing invasive plants and animals in Victoria, government must prioritise its investment, targeting only the invasive plants and animals posing the greatest threat to the state's economic, environmental and social values. This prioritisation process involves risk assessment, knowledge of threats and potential impacts on assets and their associated values.

Threats

Many invasive plants and animals are found in the catchment. The GB BIPAS applies to all invasive plants and animals that are, or can be, declared under the provisions of the *Catchment and Land Protection Act 1994.*

Assets and values

Asset-based protection programs focus on reducing the impact of all threats, including invasive plants and animals, on high value assets and associated values in the state or catchment. Assets may provide a range of environmental, social and/or economic services.

As part of the process for identifying assets in the catchment, the Working Group recognized two major types of assets:

- Biodiversity - based on biodiversity action planning undertaken in the catchment
- Agricultural land including large water storages, such as Lake Eildon and Goulburn Weir, and associated infrastructure that supports irrigation in the Goulburn Broken and downstream catchments.

Some assets can be readily mapped e.g. Barmah Forest or the Goulburn River while other assets are dispersed and difficult to explicitly map (e.g. agriculture land) as they occur over most of the catchment.

Implementation

The Goulburn Broken Land, Biodiversity & Indigenous Program will provide oversight of GB BIPAS implementation and will regularly overview progress towards achieving goal.

The Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy comprises three parts:

Part A: Context

Part B: The Strategy

Part C: Appendices with more detailed information about relevant sections

PART A: CONTEXT

1. INTRODUCTION

The Goulburn Broken Catchment Management Authority's (GB CMA) Board identified development of an invasive plants, animals and biosecurity strategy as a priority in the 2018-19 Corporate Plan. Such a strategy is required to set the direction for invasive plants, animals and biosecurity management in the Goulburn Broken Catchment.

2. THE GOULBURN BROKEN CATCHMENT IN BRIEF

The Goulburn Broken Catchment (Figure 1) covers 2.4 million hectares (or about 11% of Victoria), has a population of over 204,000 people and supports major agricultural, food processing, forestry and tourism industries.

Includes approximately one million hectares of dryland agriculture and 270,000 hectares of irrigated agriculture. Public land covers 800,000 hectares, including extensive areas for conservation. Agriculture is a significant contributor to the Catchment economy with a gross value of agricultural production of $1.88 billion in 2015-16.

The catchment covers 2% of the Murray Darling Basin but generates 10.5% of the basin's water resources. It also contains Victoria's largest and most important water supply catchment - Lake Eildon. The Goulburn Broken catchment generates 18 % of Victoria's water which is used within the catchment as well as Victoria, South Australia and New South Wales. Significant wetlands include the Ramsar-listed wetland Barmah Forest, Winton Wetlands and the Corop Wetlands, all in the north of the Catchment.

Extensive land clearing and irrigation over the past 100 years has resulted in significant degradation of the catchment's land and water resources and biodiversity, as well as causing salinity and water quality problems (GB CMA 2009).

FIGURE 1 - LOCATION OF THE GOULBURN BROKEN CATCHMENT.

3. INTRODUCING THE STRATEGY

Updated State Guidelines have been prepared for development of pest strategies and plans and these have guided development of this Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy (GB BIPAS).

The Biosecurity Strategy for Victoria (Government of Victoria 2013) and the Invasive Plants and Animals Policy Framework (2012), Module 1- Weeds and Vertebrate Pests provide the approach and policy behind invasive plants and animals management in Victoria, whilst the *Catchment and Land Protection Act 1994* (CaLP Act 1994) provides a legislative framework and defines general duties of landholders and management of noxious weeds and pest animals (see Appendix 2).

3.1. SCOPE

The scope of the GB BIPAS is invasive plants and invasive animals which can be any organisms that are, or can be, declared under the CaLP Act 1994 (that is, both declared and non-declared invasive

plants and animals species). The Strategy does not cover invasive invertebrates and micro-organisms.

Also excluded by this definition are plants or animals that are listed under section 10(1) of the *Flora and Fauna Guarantee Act 1988* or declared to be threatened wildlife or notable wildlife under the *Wildlife Act 1975*. Such species cannot be declared under the CaLP Act 1994. However, the approaches set out in the GB BIPAS can be applied to a range of pest species.

The strategy takes a whole of catchment approach, focusing on those invasive plants and animals management issues where high value assets are threatened, and government investment maximises community benefit. Hence, the strategy does not consider invasive plants and animals managed solely for private benefit.

The GB BIPAS is intended to guide investment decisions in invasive plants and animal management. Funding for invasive plants and animals work in the region is rapidly and continually evolving.

The GB BIPAS is not an operational plan that guides day to day activities. It is a high level document, guiding general direction for investment and effort. It provides objectives and a description of how to achieve objectives over a long term (five plus years).

3.2. KEY PRINCIPLES UNDERLYING STRATEGY DEVELOPMENT AND IMPLEMENTATION

The State Guidelines for preparing regional pest plans set out key principles to be reflected in invasive plants and animals strategies. The principles are reproduced in full in Appendix 5. In summary:

Alignment - Catchment based invasive plants and animals plans will align with Regional Catchment Strategies (RCS) and the Victorian Invasive Plants and Animals (IPA) Policy Framework and should seek to align with other relevant policies, strategies and plans.

Biosecurity approaches - underpin the GB BIPAS and include:

- *prevention* - the highest priority for invasive plants and animals management is the prevention of, and early intervention in, the establishment of new and emerging invasive plants and animals species.
- *community-led asset protection* – a community-led asset-based approach will normally be adopted for widespread invasive plants and animals, focussing on the protection of high value environmental, social and economic assets in the Goulburn Broken catchment.

Risk assessment and management - transparent, scientific, evidence-based decision-making tools or criteria for setting priorities, including risk management, must be employed.

Across tenure approaches - *e*nsuring coordinated action across land tenures.

Address causes not symptoms - addressing the cause of invasive plants and animals invasion, not just the symptoms.

Integration - invasive plants and animals management programs integrated with the broader management of land and water resources.

Monitoring, evaluation and reporting - an outcome based approach adopted using monitoring, reporting and evaluation to inform continuous improvement.

Management responses - guided by consideration of the role of government, industry and community.

Roles and responsibilities - clearly identified.

Coordination and engagement - activities for improving catchment coordination, sustained by community-led action and the engagement of all stakeholders in the ownership of invasive plants and animals management and partnership opportunities described.

Maintaining gains - gains already made in managing invasive plants and animals threats to assets are supported and reinforced.

A set of investment principles (Appendix 6) have been adopted to help guide government investment in invasive plants and animals management.

3.3. Links to Goulburn Broken Regional Catchment Strategy and other strategies

The 2013-2019 Goulburn Broken Regional Catchment Strategy (GB RCS) identified a strategic direction aligned with the Goulburn Broken CMA's vision for the Goulburn Broken region:

Resilient landscapes, thriving communities

The GB RCS clearly identified invasive plants and animals as threats to the catchment's assets and included a Pest Plant and Animal Sub-Strategy. **Error! Reference source not found.** and Figure 2 provide an overview of linkages between federal, state, regional and local strategies, plans and actions.

Several other relevant invasive plants and animals strategies and plans are described in Appendix 12.

3.4. Strategy timeframe

The GB BIPAS has a life of five years and has been developed around a 20 year planning horizon with regular reviews aligned with RCS reviews (undertaken every five to seven years).

Figure 2: The Victorian policy and planning context

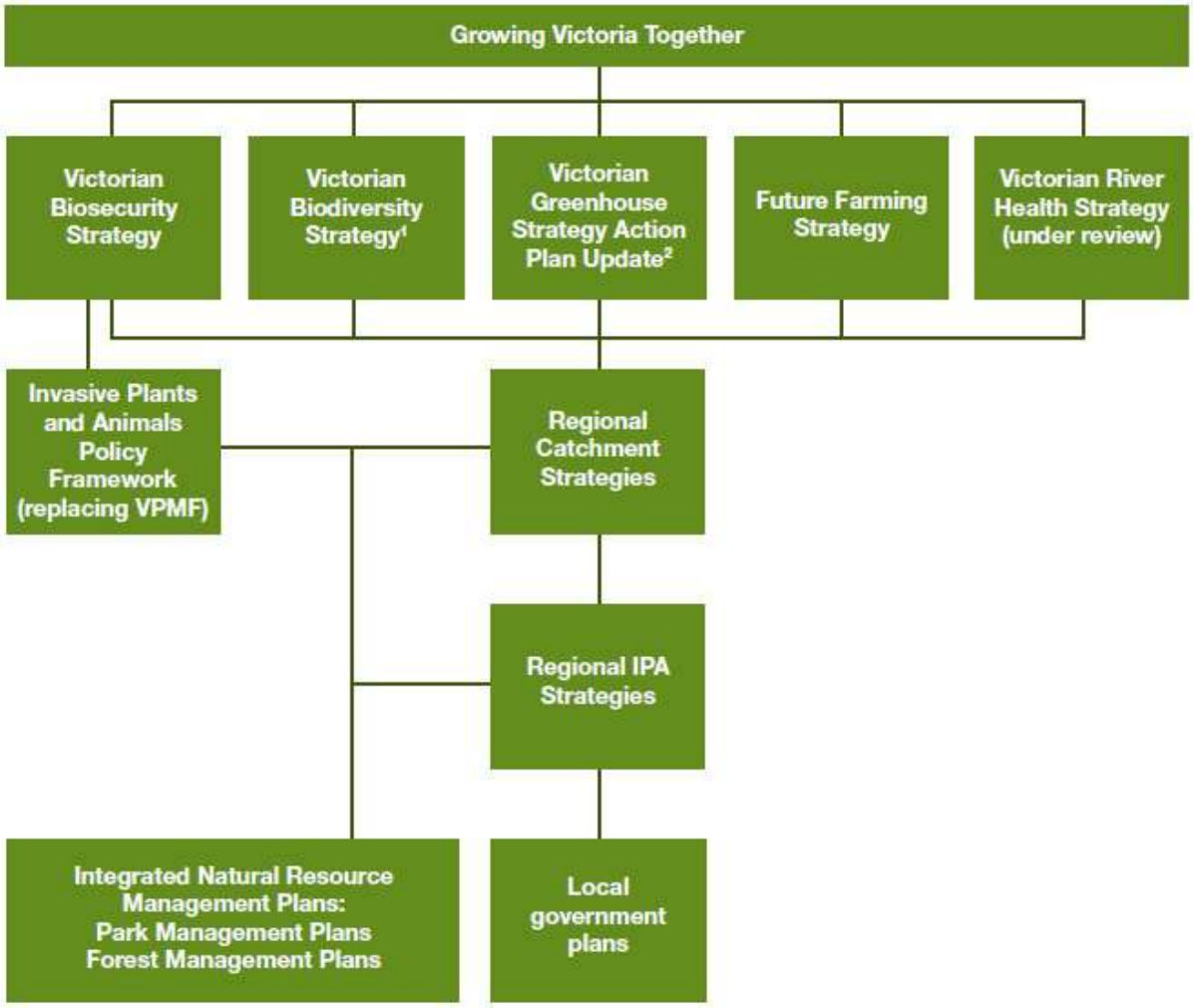
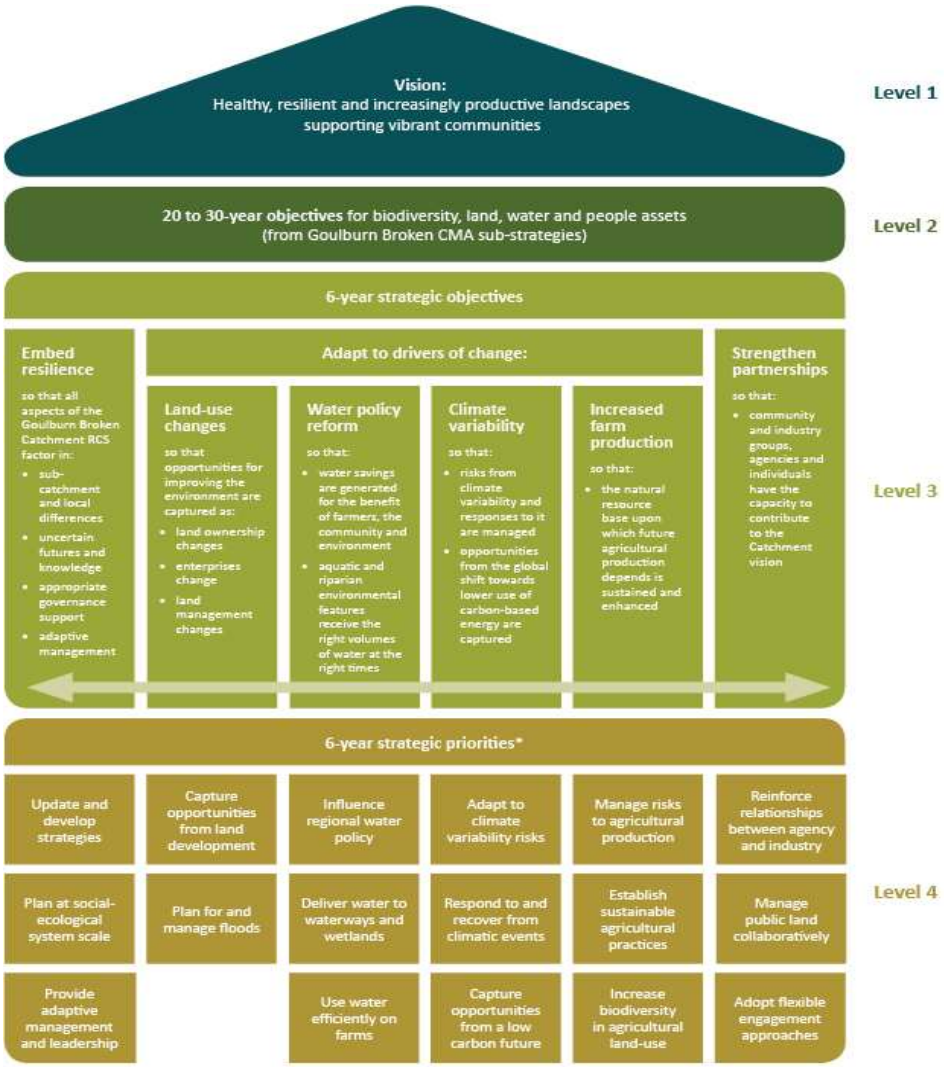


FIGURE 2 - GOULBURN BROKEN REGIONAL CATCHMENT STRATEGY AND SUB-STRATEGIES STRUCTURE



* Strategic priorities describe the focus for bundles of management measures

3.5. DRIVERS FOR CHANGE

Over time, the GB BIPAS will need to consider change in the occurrence and distribution of invasive plants and animals species and community action to manage invasive plants and animals species. In the Goulburn Broken catchment, drivers for these changes include:

- land use changes
- demographic changes
- economic changes
- fire and other natural disasters
- climate change.

Scheduled reviews of the GB BIPAS will identify and consider the effects of change drivers.

3.6. GB BIPAS APPROVAL PROCESS

The State Guidelines for preparing regional pest plans note that invasive plants and animals strategies are to be endorsed by CMA Boards.

3.7. PUBLIC COMMENT

The draft GB BIPAS will be made available for public comment. The draft is available for download from the GB CMA's web site.

4. ROLES AND RESPONSIBILITIES

Roles and responsibilities of various stakeholder are comprehensively addressed in Module 1 of the Invasive Plants and Animals Policy Framework (2012). These are shown in Appendix 11.

5. CURRENT INVASIVE PLANTS AND ANIMALS ACTIVITIES IN THE CATCHMENT

Current invasive plants and animals activities in the catchment are briefly described in Table 1. Ag Victoria programs have been based on threat (e.g. Gorse, Blackberry, Rabbits) but future programs developed in line with the GB IPABS will be based on protection of assets.

TABLE 1 CURRENT INVASIVE PLANTS AND ANIMALS ACTIVITIES IN THE GOULBURN BROKEN CATCHMENT

Pest	**Current activity**
State Prohibited Weeds (SPW)	Prevention, surveillance, planning, treatment of known infestations of SPWs for eradication e.g. Weed Alert. Ag Vic treats all known infestations annually with an aim of eradication
Regionally Prohibited Weeds (RPW)	Ag Vic Program identifies all infestations of RPWs and ensures they are treated for eradication (Serrated Tussock, Artichoke Thistle, Cape Tulip, Wild Garlic).
Regionally Controlled Weeds	Land managers (public and private) - 80%+ of invasive plants work in the catchment is done by land managers that focus on invasive plants of significance to them.
Priority Regionally Controlled Weeds Program	Focus for Landcare Groups under Victorian Landcare grants.
WONS	Willows, Cabomba, Blackberry and others that could impact on the ecological character of, for example, Barmah Ramsar site.
Environmental Weeds	E.g. Willow removal and Cabomba eradication trials as part of GB CMA River Health projects. Sagittaria (Arrowhead) management; Egeria management trials - G-MW.
High risk invasive animals	Ag Vic/DELWP activities - prevention, surveillance, planning and treatment for eradication.
Declared established Pest Animals: • Foxes • Goats • Hares • Pigs • Rabbits • Wild Dogs	Via Landcare Groups and Conservation Management Networks. Coordinated poisoning programs. Land manager (public and private) activities. Land manager (public and private) activities. Land manager (public and private) activities. Second Generation Landcare - via Landcare Groups/Vic Rabbit Action Network (coordinated works on ground, strategic rabbit virus releases). Activities in line with Wild Dog Action Plans. Ag Vic funded
Feral cats	Now declared on Established P.A. 'Specific' Crown Land under CaLP Act 1994, which will help protect Victoria's at-risk biodiversity and give threatened species the best chance of survival.

Pest	Current activity
Kangaroos and wombats (seen as a pest animal problem in some areas)	Ongoing and growing issue across the GB Catchment. A protected species. Can apply for damage mitigation permits to reduce numbers.
Deer (e.g. Sambar)	Growing populations in public land, moving out into private land. Non-declared.
Feral horses	Ongoing issue of feral horses impacting on the RAMSAR listed Barmah Forest ecosystem.

PART B: THE STRATEGY

This Part outlines the underlying biosecurity approach, describes the program logic, including goals and sets out strategic actions to be delivered as part of strategy implementation. It also describes assets and values, implementation and implementation case studies.

BIOSECURITY DEFINITION

Biosecurity is mitigating the risks and impacts to the economy, the environment, social amenity or human health associated with pests and diseases entering, emerging, establishing or spreading.

Good biosecurity is about protecting everyone's health, wellbeing and prosperity from the impacts of pests and diseases.

Everyone has a part to play in protecting Australia or their jurisdiction from pests and diseases. It involves everybody's business, everyday practices, everywhere.

Biosecurity includes:

- Animal pests and diseases (terrestrial and aquatic)
- Plant pests and diseases
- Introduced marine pests
- Vertebrate pests
- Weeds
- Environmental pests and diseases

Biosecurity is about governments, industry and community working together to manage biosecurity risks. Despite our best efforts, we must recognise we will have to manage a pest or disease incursion at some time. There are no such things as zero risk. Prevention, surveillance, early detection and a rapid, planned response are key to effective biosecurity management.

BIOSECURITY APPROACH

Recently, the Victorian and Australian Governments have adopted a biosecurity approach to the management of invasive plants and animals. This approach underpins the GB IPABS. Informed by the invasion curve (Figure 3), the biosecurity approach adopts a risk-based strategy to intervention featuring four key responses: prevention, eradication, containment and asset protection. A key objective of this approach is to ensure early detection of and rapid action against new invasive plants and animals problems. Preventing serious new introductions is significantly more cost effective and less time-consuming than waiting until a species spreads to a larger area. The approach also considers the level of economic, environmental and social impact of a particular species. The Victorian State Government Invasive Plants and Animals Policy Framework (2012) follows a biosecurity approach, focussing on prioritising state-wide invasive plants and animals management programs to produce the best return for government investment and therefore optimise public benefit. http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/protecting-victoria/invasive-plants-and-animals/invasive-plants-and-animals-policy-framework

Generally, priority will be given to programs that prevent introduction or eradicate newly establishing species, over containment and programs to reduce the impact of established species on priority assets, as this approach provides the greatest public benefit for government investment.

Although there is a greater focus on new and emerging invasive plants, widespread weeds such as Blackberry and Gorse worked on due to community-led projects and Serrated Tussock (a contained species and not widespread in GB) rank highly for management based on their social, environmental and economic impacts). Additionally, key National Industry Groups have developed a National Farm Biosecurity Manual for Grazing Livestock. These groups include: Animal Health Australia, Australian Dairy Farmers, Goat Industry Council of Australia, Sheep Producers Australia, Australian Alpaca Association, Cattle Council of Australia and Wool Producers Australia.

National Farm Biosecurity Manual for Grazing and Livestock

http://www.farmbiosecurity.com.au/wp-content/uploads/National-Farm-Biosecurity-Manual-Grazing-Livestock.pdf

Intergovernmental Agreement on Biosecurity
https://www.coag.gov.au/content/intergovernmental-agreement-biosecurity

National Biosecurity Engagement and Communication Framework
http://www.agriculture.gov.au/SiteCollectionDocuments/animal-plant/pihc/bepwg/national-engagement-communication-framework.pdf

Program Logic

The program logic of the GB IPABS is summarized in Table 3. The *program logic* captures the rationale behind the strategy and outlines the anticipated cause-and-effect relationships between strategic actions or outputs, strategies, goals and longer-term desired outcomes. Further details and actions to achieve goals are set out in later sections.

Definitions of the elements of the project logic table are shown in Appendix 13.

Relevant links to state and federal biosecurity plans and protocols

http://agriculture.vic.gov.au/agriculture/biosecurity

http://www.farmbiosecurity.com.au/

http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds

https://www.climatechange.vic.gov.au/

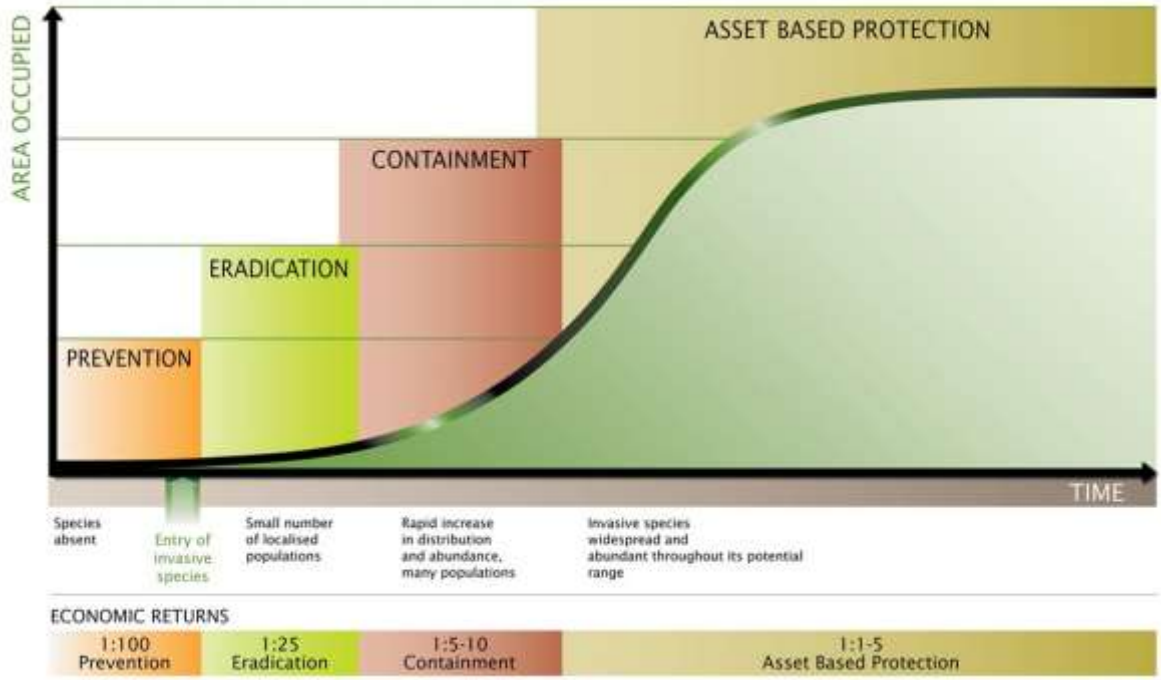
http://www.piccc.org.au./

https://www.emv.vic.gov.au/responsibilities/state-emergency-plans/state-biosecurity-sub-plan

http://www.agriculture.gov.au/biosecurity

http://www.environment.vic.gov.au/invasive-plants-and-animals/early-invaders

FIGURE 3 INVASION CURVE (DPI 2010)



TARGETS

Three levels of targets have been developed for the GB BIPAS:

TABLE 2 TARGET TYPES

Target type	Description
Aspirational	What are we hoping to achieve? This is the vision and desired outcomes in Table 3. It will take many years to achieve, and progress towards achieving this type of target can often only be measured in periods of five to ten years.
Strategic Outcomes	More specific medium-term impacts (e.g. trend data, targets or milestones) below the level of planned outcomes or aspirations. A combination of several strategic outcomes can at times be considered as a proxy for determining the achievement of outcomes or progress towards outcomes. These are shown in Table 3.
Outputs	Activities undertaken to achieve outcomes and intermediate outcomes. These are the strategic actions listed in Table 3.

TABLE 3 GB BIPAS PROGRAM LOGIC – THIS FORMS THE BASIS OF OUR STRATEGY

Vision for GB BIPAS	*Environmental, social and economic assets in the Goulburn Broken catchment will be protected from the impact of invasive plants, animals and biosecurity*						
Desired Outcomes for the Goulburn Broken catchment:	• Healthy and productive land and water systems • Flourishing biodiversity in healthy ecosystems • Community engaged in invasive plants and animals management.						
Strategy Intent	Guide invasive plants, animals and biosecurity investment in the Goulburn Broken catchment.						
GOALS **(GB BIPAS outcomes; based on state goals in Guidelines).** ***In the Goulburn Broken Catchment, we want to…***	*Preparedness and prevention* Prevent new high-risk invasive plants and animals from establishing in the catchment and ultimately, Victoria.	*Eradication* Eradicate high risk invasive plants and animals in the early stage of establishment.	*Containment* Contain high risk established invasive plants and animals.	*Coordination* Coordinate and integrate invasive plants and animals management across, and within, land tenures.	*Integration* Integrate invasive plants and animals management with sustainable agriculture and other natural resource management activities.	*Asset and value protection* Protect key biodiversity and other natural resource assets and their values from the impact of invasive plants and animals.	*Continuous improvement* Continuously improve invasive plants and animals management.
Strategic approach	Species or Threat based			Underpinning approaches	Asset (value) and Threat based		
Assumptions (these drive the program logic)	The introduction and spread of State Prohibited Weeds and other new high- risk invasive plants and animals	Statewide Prohibited Weed infestations and high-risk invasive animals will be eradicated by	High risk established invasive plants and animals will be contained by eradicating all populations of	Coordination of invasive plants and animals management will be achieved by: • increased community	Integrated management of BIPASs will be achieved by an informed and aware community	Assets will be protected from impacts of key invasive plants and animals by assessing threats, appropriate	Continuous improvement of GB BIPAS will be achieved by implementing effective

	will be prevented by supporting national and statewide programs.	supporting national and statewide programs.	Regionally Prohibited Weeds and preventing other identified high risk established invasive plants and animals from spreading outside core infestation boundaries.	capacity and effective partnerships • coordinated stakeholder action across public and private land and water managers • concurrent management of invasive plants and animals	and consideration of invasive plants and animals in all other management strategies.	management and support of informed community effort.	monitoring, evaluation, reporting and improvement programs.
STRATEGIC OUTCOMES	• Introduction and spread of State Prohibited Weeds and other new high-risk invasive plants and animals prevented.	• All known infestations of State Prohibited weeds and high-risk invasive animals treated for eradication.	• All known infestations of RPWs treated for eradication.	• Invasive species in high value asset areas treated to protect assets.	• Invasive plants and animals activities are integrated in all other management strategies.	• GB BIPAS coordination, community education and engagement activities are implemented.	• GB BIPAS continuous improvement activities are implemented.
STRATEGIES **(GB BIPAS Objectives based on State objectives in Guidelines).** ***We will achieve outcomes, goals and general directions by...***	• Supporting national and statewide programs aimed at preventing the introduction and establishment of State Prohibited Weeds and other new high- risk invasive plants and animals.	• Supporting national and statewide programs aimed at eradicating State Prohibited Weed infestations and other high- risk invasive plants and animals.	• Eradicating all populations of Regionally Prohibited Weeds in the catchment. • Preventing identified high risk established invasive plants and animals from spreading outside core infestation boundaries.	• Assessing the threat of invasive plants and animals on identified priority assets and their values. • Determining the feasibility of managing impacts of invasive plants and animals on the priority assets and their values.	• Supporting an informed and aware community in invasive plants and animals management. • Ensuring all land and water management programs include invasive plants and animals management.	• Increasing community capacity and effective partnerships between public and private land and water managers in invasive plants and animals management. • Ensuring management of invasive plants	• Effective monitoring, evaluation, reporting and improvement.

				• Supporting informed community effort in invasive plants and animals management.		and animals occurs.	
STRATEGIC ACTIONS	• Support delivery on currently by Ag Vic of Regional Weed Alert program • Support delivery of Regional Pest Alert program • Identify high risk IPAs • Distribute IPA lists • Understand introduction and spread pathways.	• Support delivery by Ag Vic of Regional Weed Alert program • Support delivery of Regional Pest Alert program • Support on ground works • Identify high risk IPABs and spread pathways • Distribute BIPAS lists • Understand introduction and spread pathways.	• Identify species for containment • Support Ag Vic compliance program to ensure all Regionally Prohibited Weed infestations are treated • Support land managers to ensure all RPW infestations are treated • Coordinate (seek, source) funding targeted to Regionally Prohibited species • Understand introduction and spread pathways.	• Assets identified and regularly reviewed • Threats assessed and regularly reviewed • Coordinated invasive plants and animals management funding targeted to high value assets • Develop actions for specific assets on case by case basis. • Understand introduction and spread pathways.	• Ensure GB CMA and agency programs include best practice invasive plants and animals management • Support land manager (public and private) programs and activities • Integrate BIPAS into other programs • Encourage land management practices that integrate management of IPAs • Support integrated asset protection plans.	• Regional Invasive Plants and Animals meetings • Support and coordinate community action to treat invasive plants and animals species at the public/private-land interface • Ensure funds are allocated for invasive plants and animals management • Develop investment standards • Communication, education and engagement activities • support coordinated community effort on private land	• Implement a MER program • Review Strategy (5 years) • Support State MER • Address information gaps • Undertake systematic monitoring • Review priorities

						• Support review of roles and responsibilities • surveillance.	
INPUTS (processes, $)	• Ag Vic informs partners of relevant activities • Regional Invasive Plants and Animals Forum meetings.	• Ag Vic informs partners of relevant activities • Regional Invasive Plants and Animals Forum meetings.	• Ag Vic provides $ • $ from various sources • Works on public land and roadsides • GB CMA provides some coordination.	• Knowledge about assets and threats • $ from various sources • GB CMA provides some coordination • Ag Vic inputs - $ and people • Land manager $ and people • Action plans	• Land manager $ and people • Invasive plants and animals management in strategies.	• Ag Vic Compliance Program • Local community engagement and planning forums • Community education • Partnership meetings.	• Outputs of statewide MER • Evaluation of data collected. • Regional Invasive Plants and Animals meetings.

GOALS

The GB BIPAS has seven goals which are described below, along with the strategic actions to be implemented to achieve the Goals.

GOAL 1 - PREPAREDNESS AND PREVENTION

Goal 1 - Prevent new high-risk invasive plants and animals from establishing in the catchment and ultimately, Victoria.

Prevention and eradication programs form the basis of the 'species-led' approach to invasive plants and animals management, prioritizing one species above another based on the risk it poses to Victoria's economic, environmental and social values. The control of State Prohibited Weeds falls within this management approach.

Prevention involves minimizing the movement of new invasive plants and animals into the state and catchment by understanding and managing all pathways of entry and spread (see Appendix 10). New invasive plants and animals problems emerge from a range of sources including commercial trade (e.g. nurseries, pet shops and aquaria) and changing environmental conditions (e.g. fire, drought, flood and climate change). Invasive plants and animals introductions to a catchment can occur through a variety of pathways including natural migration, hitchhiking in cargo, contaminants in fodder or spread by vehicles, stock or people.

Strategic actions:

- *support delivery by* Ag Vic *of Regional Weed Alert program*
- *support delivery by* Ag Vic *of High-Risk Invasive Animal Program*
- *participate in processes that will identify any potential high-risk IPAs and their pathways of spread into, and within, the catchment*
- *ensure lists of high risk species (both declared and others) are widely communicated to support surveillance and reporting activities*
- *identify and understand pathways of introduction and spread.*

GOAL 2 - ERADICATION

Goal 2 - Eradicate high risk invasive plants and animals in the early stage of establishment.

In the early stages of range expansion, eradication of an invasive plant or animal may be feasible. There are several conditions to be met in determining whether eradication is feasible. The principles around the management of invasive plants and animals are similar.

As a general rule, when dealing with weeds, conditions for eradication include:

- infestations are less than 100ha in area
- there are less than three infestations of the species
- sites are easily accessible
- the species is easily recognizable
- restricting trade may assist eradication, if it is a plant that is currently traded.

State Government programs for invasive plants and animals prevention and eradication are largely delivered at a statewide level.

Local knowledge will provide essential information about small populations of plants that are growing in the absence of cultivation. These plants can be assessed and monitored to determine whether eradication action should be taken before they become a significant weed problem for the future. Early intervention measures will need to include management of spread pathways to prevent the further spread of known infestations.

Generally, invasive animal infestations considered preventable or eradicable are managed on a statewide basis by Ag Vic. Currently catchment involvement is limited to reporting infestations (by all community members), and some local regulatory activity when required.

Strategic actions:

- *support delivery by* Ag Vic *of Regional Weed Alert program*
- *support delivery of* Ag Vic *High-Risk Invasive Animal prevention and eradication program*
- *support on ground work on infestations of species targeted for eradication.*
- *participate in processes that will identify high risk IPABs in the catchment and their pathways of spread into, and within, the catchment*
- *ensure lists of high-risk species (both declared and others) are widely communicated to support surveillance and reporting activities.*
- *identify and understand pathways of introduction and spread.*

GOAL 3 - CONTAINMENT

Goal 3 - Contain high risk established invasive plants and animals.

Once established in the state beyond the possibility of eradication, an invasive plant or animal species may still be localized in small areas of one or more catchments. Containment approaches to limit the species further spread may then be appropriate to deliver the best return on public investment. From a statewide program perspective, the control of Regionally Prohibited Weeds falls within this management approach. The principal aim of a containment program is to prevent the spread of the invasive plant or animal beyond the defined boundary of the current infestation area. This may involve reduction of the species' abundance and extent within the containment area where this will help prevent spread and the eradication of satellite infestations.

Effective containment programs are likely to be expensive and indefinitely ongoing and will be rarely justifiable except in the case of very high impact invasive plants and animals.

Containment and reduction programs focus on:

- defining the boundary or limit of the infestation
- targeting spread pathways (see Appendix 10), thereby minimizing movement beyond current infested areas
- prioritizing the eradication of small satellite infestations over the larger core infestation (including eradication of Regionally Prohibited Weeds from a catchment)
- reducing the abundance and density of the core infestation where this helps to prevent spread.

Invasive plants and animals are listed in Table 4.

Currently there are no management programs operating at the statewide level in Victoria that focus on the containment of declared invasive animal species.

Strategic actions:

- *participate in state level assessments of species that could be targeted for containment*
- *develop and conduct a catchment assessment process to identify other high-risk species for containment in the catchment*
- *support on ground work on core and satellite infestations of species targeted for containment:*
    - *support* Ag Vic *compliance program to ensure all Regionally Prohibited Weed infestations are treated.*
    - *support land managers to ensure all Regionally Prohibited Weed infestations are treated*
- *coordinate (seek, source) funding targeted to Regionally Prohibited species*
- *identify and understand pathways of introduction and spread.*

GOAL 4 - COORDINATION & SUSTAINED COMMUNITY-LED ACTION

Goal 4 - Coordinate and integrate invasive plants and animals management across, and within, land tenures.

Invasive plants, animals and biosecurity management depends on the development and implementation of working partnerships between government, industry and the community. Roles and responsibilities are outlined in Appendix 11.

On ground invasive plants and animals management is primarily the responsibility of the land manager. However, it is also appropriate for government to intervene in situations where that action results in a public or community benefit or to correct market failure.

In situations where strong community-led management of a widespread high-risk invasive plant or animal is succeeding at a local scale, government may provide limited support to allow the community partnership to work towards full control (e.g. enforcement activities in local community weed programs). It may be appropriate for cost sharing between government and the beneficiary group e.g. industry where there is public and private benefit. Appendix 6 discusses investment principles that can be developed to guide cost sharing.

Strategic actions:

- *support and coordinate community action to treat invasive plants and animals species at the public/private land interface*
- *ensure funds allocated for invasive plants and animals management support coordinated community effort on private land*
- *apply a set of investment standards (Appendix 6) as the minimum requirements for investment under this strategy*
- *develop and implement a communications plan for the GB BIPAS (this action contributes to all Goals)*
- *actively engage the Goulburn Broken community wherever possible in both shaping and implementing BIPAB management across the catchment*
- *ensure information resources on BIPAB management are maintained and widely available*
- *support local communities that are actively managing IPAs in their area*
- *support reviews of roles and responsibilities to reduce complexity and inefficiencies*
- *ensure invasive plants and animals surveillance is undertaken.*

GOAL 5 - INTEGRATION

Goal 5 - Integrate invasive plants and animals management with sustainable agriculture and other natural resource management activities.

Invasive plants and animals management requires a multi-faceted approach, from sustainable land management, to direct treatment of the symptom to long term biocontrol programs. Weed problems are often the symptom of a resource that is degraded because of practices such as overgrazing and disturbance of natural vegetation. In many cases, treatment of the symptom (e.g. direct weed control) will provide short-term success but requires repeated application in such circumstances. Treatment of the cause, in conjunction with rehabilitation of the resource through activities such as reducing grazing pressure, change of land use, building land management skills and capacity, re-sowing pastures and regenerating vegetation, will achieve long-term success. Assets can also be protected by enhancing their resilience, making them more resistant to invasive plants and animals. There are opportunities to link GB BIPAS activities with other relevant strategies and activities including the Biodiversity and Land Health Strategies for the Goulburn Broken Catchment, the Goulburn Broken Regional River Health Strategy, the Native Vegetation Framework and management of invasive organisms not declared under the CaLP Act 1994.

Invasive plants and animals can impact on the effectiveness of many land management programs such as soil stabilization, revegetation programs and the protection and rehabilitation of rare and endangered fauna. Integrating effective invasive plant and animal control into such projects will significantly improve their outcomes over time.

Droughts and changes to land use and stock management systems have led to increased movement of grains, hay, and livestock both intrastate and interstate. There is some anecdotal evidence that this accelerated during the 1982/83 drought and has continued over time, causing substantial spread of pest plants within the region, to other regions and states causing either new pest plants to establish or re-infest.

Strategic actions:

- *ensure GB CMA and agency programs include invasive plants and animals management*
- *support land manager (public and private) programs and activities*
- *ensure integration of invasive plants and animals management programs with other programs or actions that aim to protect and enhance catchment assets; ensure these programs consider introduction and spread pathways*
- *encourage the employment of land management practices that prevent the establishment or spread of invasive plants and animals (e.g. Whole Farm Planning, Environmental Management Systems (EMS) and industry directed programs)*
- *Support development of integrated asset protection plans that focus on managing IPAB threats to an asset as part of an overall asset protection process.*

GOAL 6 - PROTECTING ASSETS AND THEIR VALUES

Goal 6 - Protect key biodiversity and other natural resource assets and their values from the impact of invasive plants, animals and biosecurity risks.

Once an invasive plant or animal becomes so widespread that containment or eradication is not possible, the focus of management effort should change to protecting the catchment's priority assets (often described as an "asset-based approach").

Asset-based protection programs focus upon reducing the impact of all threats, including invasive plants and animals, on high value assets in the state or catchment. Assets may provide a range of environmental, social and/or economic services. The control of widespread and well-established invasive plants (such as blackberry) and animals (such as rabbits and foxes), to minimise their impacts on high value catchment assets, falls into this "assets based" management approach.

Assets considered important in the Goulburn Broken catchment are described in later in the Strategy. Focusing on the protection and restoration of priority assets, rather than the invasive plants and animals per se, provides a clear focus for the land manager when dealing with established invasive plants and animals and enhances the likelihood of success.

Existing IPAB programs focus on support of community action to manage widely established species. Future programs will focus on protecting high value assets. Threats posed by individual invasive species require regular review and assessment. Threat assessment must consider current threats (from invasive species already present) as well as future threats (from invasive species with high potential to invade).

Treating causes also involves understanding the pathways of introduction and spread especially of weeds (e.g. vehicle movement, garden escapes, altered hydrological regimes, poor land management practice such as overgrazing) and acting to address these. An ongoing need identified during preparation of GB BIPAS has been asset identification. While the assets identified in this version of the GB BIPAS are fit for purpose (i.e. a strategic level view) further details and better precision in understanding asset values and location is warranted, along with better explicit understanding of the impact of invasive plants and animals on these assets and values.

Strategic actions:

- *identify and regularly review assets and their values. Re-assess these assets to determine their overall priority for immediate action as part of on-going review of GB BIPAS*
- *regularly review and assess threats*
- *coordinate invasive plants and animals management funding targeted to high value assets and their values*
- *support BIPAS management action to protect high value assets, and their values, as part of overall asset protection work*
- *develop specific actions for dispersed assets on a case by case basis depending on the values of these dispersed assets. An asset-based approach used in conjunction with a risk management framework will be used when making these decisions*
- *underpin threat assessment and asset protection with identification and understanding of pathways of introduction and spread.*

GOAL 7 - CONTINUOUS IMPROVEMENT

Goal 7 - Continuously improve invasive plants and animals management.

The GB BIPAS will be improved over time. Monitoring and evaluation are best thought of as part of a continuous improvement cycle of review, setting objectives, implementation underpinned by monitoring and evaluation which enable reviews and improvements to be considered (Figure 4).

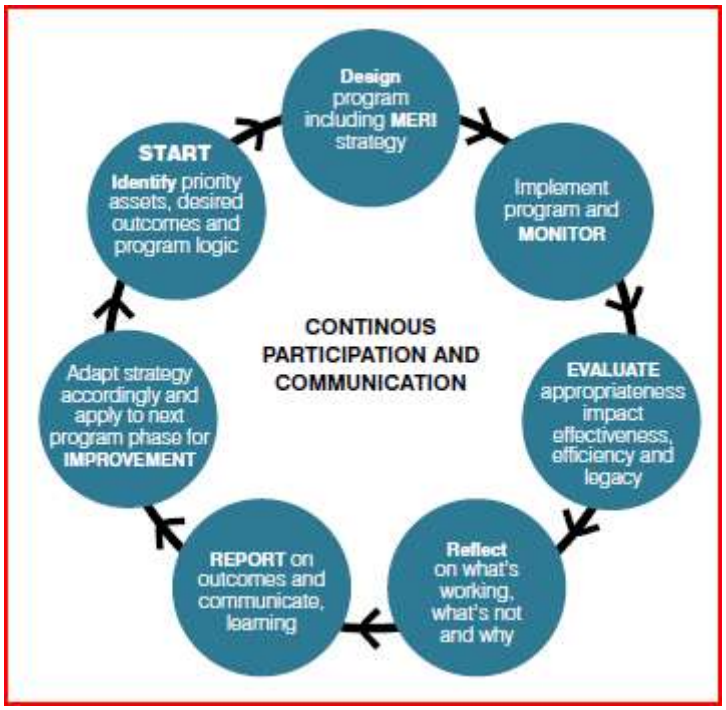
This can be simplified to a cycle of:

- plan
- do
- review.

The continuous improvement framework is underpinned by consideration of:

- evaluation questions
- outputs - generally works and measures undertaken to manage invasive plants and animals. Ag Victoria's invasive plants and animals monitoring, evaluation and reporting (MER) framework will provide much of the information required to report outputs
- outcomes - The GB RCS, which is reviewed every five or six years, should provide the basis for condition assessment (outcome assessment)
- reporting - The GB CMA's Annual Report provides one means of reporting outputs to stakeholders
- review - It is expected that the BIPAS will be reviewed every five years or in line with RCS reviews.

FIGURE 4 CONTINUOUS IMPROVEMENT (ADAPTIVE MANAGEMENT) CYCLE (AUSTRALIAN GOVERNMENT 2009)



Monitoring and evaluation programs aim to measure whether the desired outcomes and goals are being achieved to provide some accountability of the program's effectiveness. The GB CMA will monitor and report on the progress of implementation against priorities as set out in the GB IPABS based on specific monitoring, evaluation and reporting (MER) information provided by service providers in the catchment. In this way the GB CMA can provide advice to government and the community on the effectiveness of invasive plants and animals investment in the catchment.

Much of the monitoring information required in the catchment will be available via implementation of the state Invasive Plants and Animals Monitoring and Reporting Framework. This information will inform GB BIPAS review and improvement.

A MER schedule (Appendix 7) has been developed, and includes:

- annual review of strategy implementation and performance (provides a useful guide for annual works programs)
- mid-term review (year two or three) of the GB BIPAS
- year five of the GB IPABS, incorporating recommendations for updating the strategy.

Key evaluation questions include:

- to what extent is the program contributing to preventing introduction of new high-risk plants and animals in the catchment?
- to what extent is the program contributing to regional eradication of high-risk invasive plants and animals?
- to what extent has the program contributed to regional containment of high-risk invasive plants and animals of limited distribution?
- to what extent has the program contributed to the protection of key biodiversity and other natural resource assets by reduction in threat and/or impact of invasive plants and animals?
- to what extent has the strategy met stakeholder expectations?

Assessment of achievement of environmental objectives cannot be done annually. It will probably take five to ten years to be able to assess whether objectives are being achieved.

Processes to establish the classification of individual invasive species are expected to be implemented every two years.

The Goulburn Broken Land, Biodiversity & Indigenous Program will support the GB CMA in this monitoring and reporting role. The Forum will consider who will be responsible or accountable for reporting and how reports and reviews will be communicated to key stakeholders.

Strategic actions:

- *implement a MER strategy, including regular reporting*
- *review GB BIPAS (five years)*
- *support State MER framework implementation*
- *support and participate in work to address information gaps*
- *support systematic monitoring so that any changes in conditions (e.g. threat or asset value changes) are detected quickly. When priorities for action are periodically reviewed these assets need to be included in this re-assessment*
- *establish and implement a process for reviewing the priorities for asset protection. This process should consider nominations of new assets, changes in knowledge about threats to assets, knowledge about land managers around assets and introduction and spread pathways. Investment decisions will be guided by the information generated by this process*
- *utilize the Goulburn Broken Land, Biodiversity & Indigenous Program to support the GB CMA in its monitoring, reporting, evaluation and improvement role.*

ASSETS AND VALUES

The State Guidelines (Principle 3, Appendix 5) suggest an asset-based approach for widespread invasive plants and animals. Asset-based protection programs focus upon reducing the impact of all threats, including invasive plants and animals, on high value assets and associated values in the state or catchment. Assets may provide a range of environmental, social and/or economic services.

More importantly, we need to focus on the values associated with the assets. For example, the asset identified as Barmah Forest has values associated with biodiversity, wetlands, culture and water management, amongst others.

An asset-based approach to management (GB BIPAS) requires identification of the catchment assets most in need of protection from all threats, including invasive plants and animals, and ensuring management programs include appropriate invasive plant and animal management components.

It is intended that this approach identifies biophysical assets in a catchment; identifies and values the services the assets provide; and identifies and assesses the risk of threats to the value of the asset's services. A high value asset with high threat will be a high priority for action, while a high value asset with little or no threat will be a much lower priority for action.

This information can then be fed into the project development process to prioritize projects that protect assets of high value or that are subject to high-risk threats.

The objective of identifying assets is to help determine where invasive plants and animals investment should be targeted to achieve optimal public benefit. Investment decisions will be guided by the Investment Principles set out in Appendix 6.

As part of the process for identifying assets in the catchment, the Working Group recognized there are a wide range of assets present in the catchment. However, two major types of assets were selected:

- Biodiversity
- Agricultural land.

Some assets can be readily mapped e.g. Barmah Forest or the Goulburn River while other assets are dispersed and difficult to explicitly map (e.g. agriculture land) as they occur over most of the catchment.

PRIORITY LANDSCAPES AND BIODIVERSITY ASSETS

The process of identifying, and, valuing biodiversity assets is an adaptive and continuing process that aims to incorporate new information, modelling approaches and methodologies as they become available. For example, DELWP has prepared a GIS layer that models a 'Biodiversity Assets Surface' into nine classes based on the combined value of the level of habitat depletion, patch size, landscape connectivity, vegetation condition, conservation status of remnant vegetation, and presence of threatened species.

This is a preliminary model and is being further refined to assist with development of a statewide picture of the relative value and distribution of assets known as 'Nature Print', as forecast in the Land & Biodiversity White Paper (DSE 2009). This layer (assets surface) has been used as part of the supporting information base for the development of the GB CMA's Biodiversity Strategy (GB CMA 2016-2021), which in turn, provides the assets framework for this Strategy. It is anticipated that as more refined information and understanding becomes available it will be incorporated into the catchment approach.

The Aquatic Value Identification and Risk Assessment (AVIRA) decision-support tool for identifying aquatic asset values and threats is currently being developed by DELWP in consultation with the CMA Waterway Managers. This tool will inform the development of the next round of regional River Health Strategies (to be called regional Waterway Health Strategies). AVIRA will consider both the current and future threat of aquatic invasive species.

The GB CMA has invested substantially in a process known as Biodiversity Action Planning (BAP) (Platt and Lowe 2002), which seeks to document and map sites of significance for biodiversity conservation, management and restoration across the catchment. The catchment has been divided into 21 different landscape zones for this analysis. Sites are ranked into four classes from 'low' to 'very high' according to a range of factors (size, context, condition, conservation status, threatened taxa etc.) using both modelled and field-collected data (i.e., like that used for the Biodiversity Assets Surface).

Background work for the development of the Goulburn Broken Biodiversity Strategy (GB CMA 2016-2021) included a weighted multi-criteria analysis of the contribution of 14 sub-catchment areas (management zones) to elicit the biodiversity attributes of each zone, and their respective capacity to contribute to a range of desired outcomes, viz;

- Protected and secure habitat
- Landscape and habitat connectivity
- Improved ecological processes, including gene and energy flows
- Improved habitat quality
- Increased viability of threatened ecological vegetation classes

The 14 landscape zones have been ranked according to the results of the above analysis. Profiles of the 14 zones have been developed (Miles and Stothers 2009) to identify key characteristics such as the proportion of native vegetation, ratio of public to private land, and assets, threats and opportunities. A summary of the zones is shown in Table 4. A more detailed description on the zones and associated IPA threats in shown in Appendix 3.2.

These zones have been ranked, based on their existing biodiversity attributes into three major landscape types, or asset classes (Icon, Key & Dispersed), and shown geographically in Figure 5.

TABLE 4 BIODIVERSITY ZONE CHARACTERISTICS - RANKED

Asset Class	Zone (and functional landscape type)
Icon	South eastern Highlands
	Goldfields
	Murray Corridor
	Lower Goulburn and Broken Rivers
Key	Broken Boosey Nine Mile Creek System
	Strathbogie Tablelands
	Warby Ranges and Foothills
Dispersed	Longwood and Violet Town Plains
	Corop
	Upper Goulburn River
	Yarck/Mansfield
	Piper
	Dookie
	Northern Relictual Landscapes

Within these asset classes, the Very High priority BAP sites have been mapped. Further information on each of these sites is available from the relevant BAP reports (http://www.gbcma.vic.gov.au/default.asp?ID=bap).

Icon Landscapes in the Goulburn Broken catchment include the South Eastern Highlands, Goldfields, Lower Goulburn River and Broken River floodplains, and the Murray Corridor. These zones represent areas within the catchment with the highest concentration of natural values and make a substantial contribution to the delivery of environmental services within the catchment. Priority BAP sites within these zones are the highest priority assets for protection across the catchment. Examples include Barmah National Park, Lower Goulburn National Park, Mt Samaria National Park, Lake Eildon National Park, Lake Mountain / Mt Bullfight / Mt Buller (Alpine National Park, and the Heathcote - Graytown National Park.

Key Landscapes are represented in the Strathbogie Ranges, Warby Ranges, and the Broken / Boosey / Nine Mile Creek system. These zones contain moderate to large areas of natural vegetation, interspersed with moderate levels of agriculture and 'life-style' land-use. Connectivity is moderate but represents high potential for restoration. Very High priority BAP sites include the Broken Boosey State Park (e.g. Kinnaird's Wetlands, Wunghnu Bushland Reserve, Naringaningalook Grassland Reserve, Moody's Swamp); Warby Ranges State Park, Mt Meg Flora Reserve, Winton Wetlands, and Devenish Hills in the Warby Ranges zone; and Mt Teneriffe, Mt Strathbogie, Mt Wombat and the Warrenbayne Hills in the Strathbogie zone.

Dispersed Landscapes cover the more cleared parts of the catchment where agriculture (in many forms) is the predominant land-use. Biodiversity assets within these landscapes tend to represent the most threatened flora, fauna, and ecological communities, now existing in many instances in small and isolated remnants but of very high significance for conservation. Notable Very High value BAP and focus landscape assets include the Corop Wetlands, Dookie Bushland Reserve, Reef Hills State Park, numerous woodland and wetland remnants on the Longwood Plains (e.g. Balmattum Reserve) and the Mt Piper Conservation Reserve.

Although classified as a dispersed landscape, it is notable that the Longwood Plains has a high concentration of sites of biodiversity significance, but relatively poor levels of site security. The Longwood Plains, along with the Mt Piper and Goulburn & Broken Rivers zones are the Catchment's highest priority for ecological restoration.

AGRICULTURAL LAND ASSETS/VALUES

We note that agricultural assets are widely spread across the private land of the catchment and that it is extremely difficult to prioritize these assets. Government investment in IPA activities on agricultural assets will have to satisfy public benefit tests.

The agricultural assets also include large water storages, such as Lake Eildon and Goulburn Weir, and associated infrastructure that supports irrigation in the Goulburn Broken and downstream catchments.

Figure 6 shows the extent of land with agricultural assets and values in the region. This asset has been differentiated into irrigation (Shepparton Irrigation Region (SIR)) and dryland.

FIGURE 5 PRIORITY BIODIVERSITY ASSETS – GOULBURN BROKEN CATCHMENT

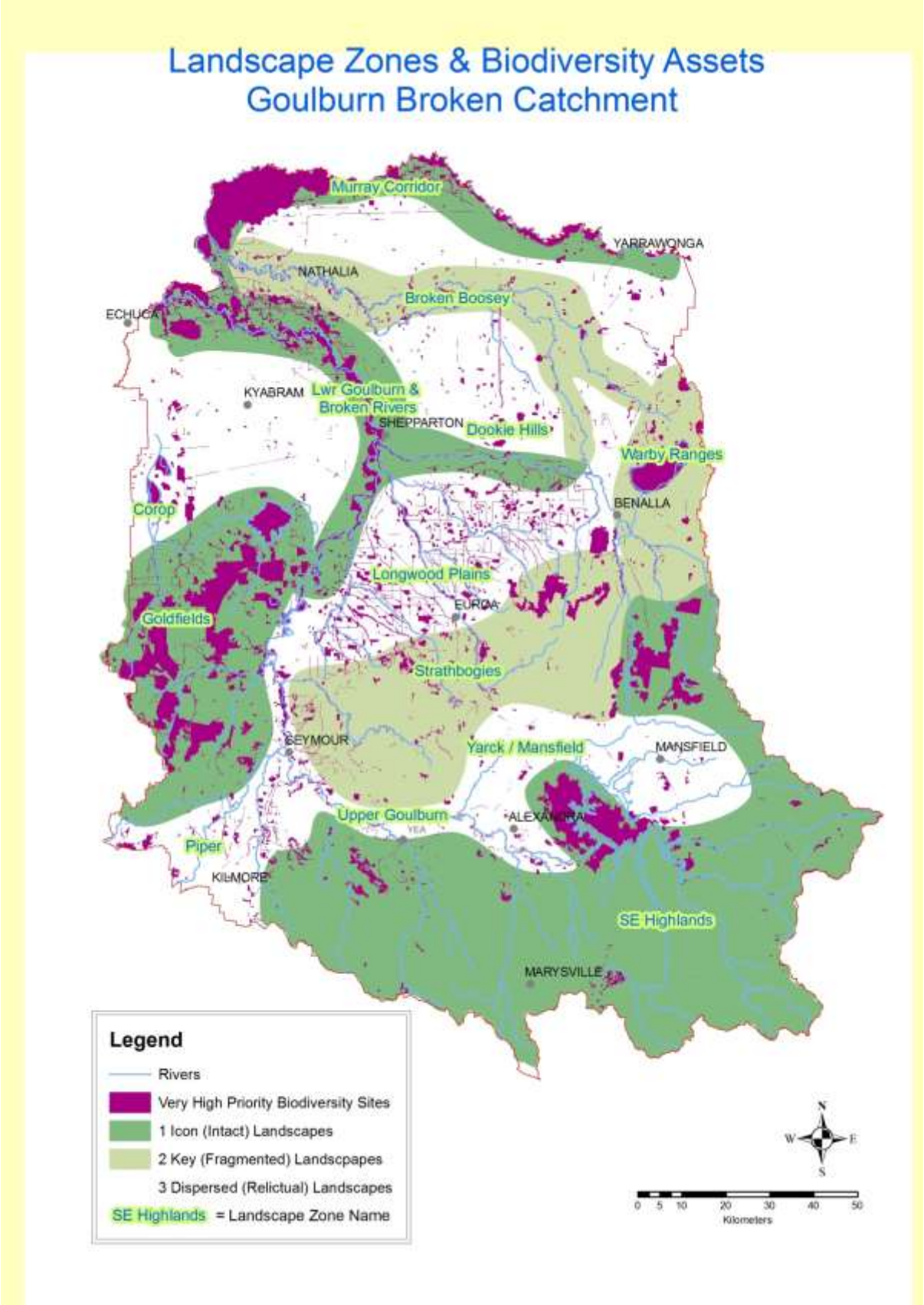
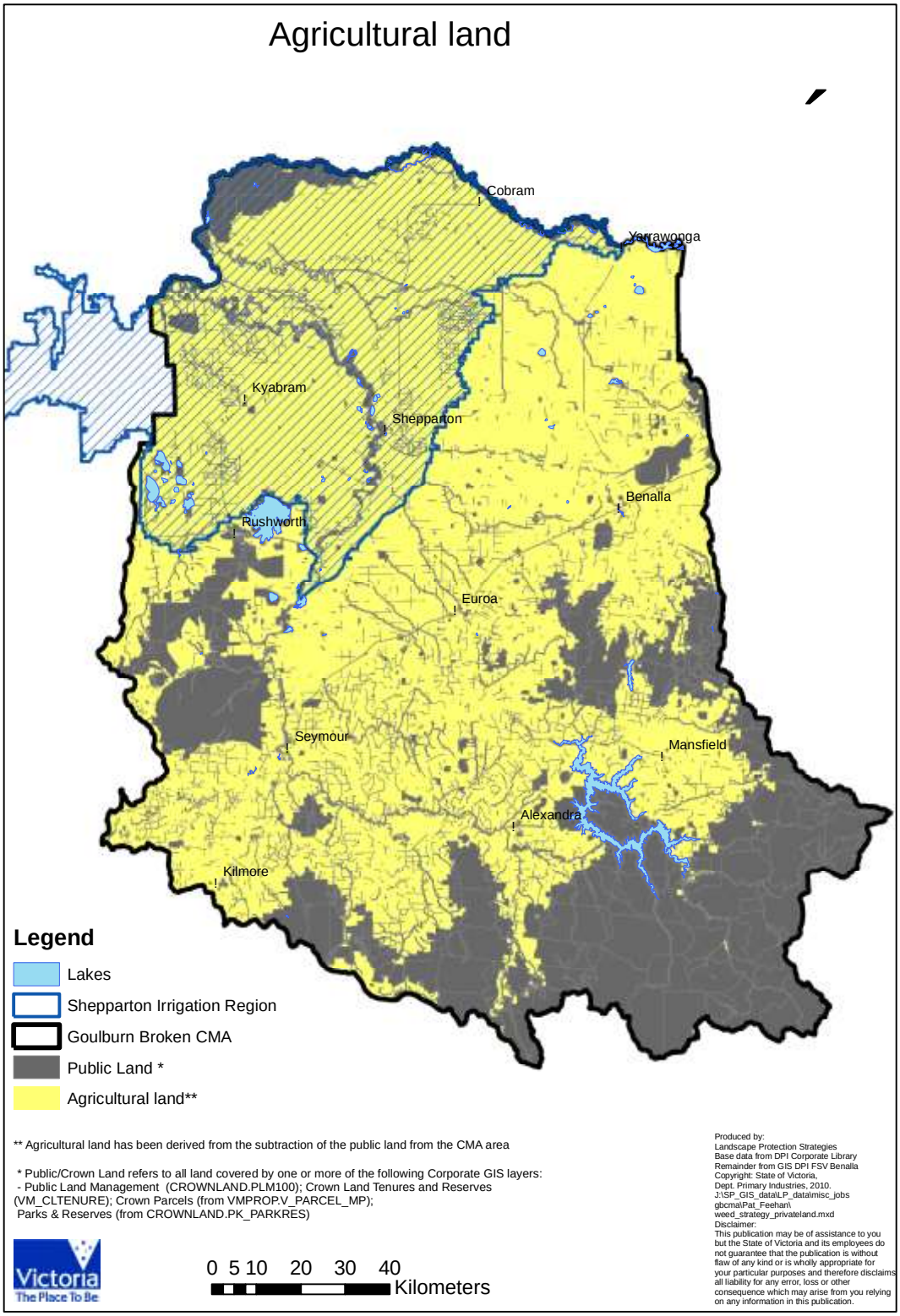


FIGURE 6 AGRICULTURAL LAND ASSETS



IMPLEMENTATION

As noted earlier, the GB BIPAS sets the direction for invasive plants and animals management in the Goulburn Broken catchment. The Strategy takes a whole of catchment approach, targeting those invasive plants and animals management issues where government investment maximises community benefit by focussing on high value assets.

The GB BIPAS is intended to guide invasive plants and animals investment decisions by others. It is not an operational plan that guides day to day activities. It is a high level document, providing general direction, objectives and description of how to achieve objectives over the next five or more years.

IMPLEMENTATION CASE STUDIES

These case studies are intended to provide examples of how the GB BIPAS will be used to guide investment priorities in the catchment.

SERRATED TUSSOCK - AN EXAMPLE OF GOAL 3 - CONTAINMENT

Serrated Tussock (*Nassella trichotoma*) is a Weed of National Significance (WONS) and is one of Victoria's most invasive pest plants. In the Goulburn Broken Catchment, it is listed as a Regionally Prohibited Weed under the Catchment and Land Protection Act 1994.

It can be one of the most costly and difficult invasive plants to control and is a weed of both agricultural and environmental importance.

Research has indicated that Serrated Tussock has the potential to spread across large areas of the Goulburn Broken catchment. If this was to occur, annual treatment costs would be in the millions of dollars, not to mention the significant impact on environmental values.

Currently, Serrated Tussock is only present in the southern part of the Goulburn Broken region, with most infestations occurring in the Kilmore area, however recently an infestation was recorded at Nathalia. In recent years though, satellite infestations have been located along major highways and freeways as far north as Benalla, and it has become evident that linear reserves are a major pathway of spread for this species.

The priority for control is to ensure that all known infestations are treated annually and that surveillance protocols are in place to locate any new infestations before they become established. The Goulburn Broken community is critical to the success of Serrated Tussock management, with most new infestations located and reported by vigilant community members.

The Goulburn Broken Serrated Tussock program is an example of the containment approach to weed management, with the Goulburn Broken / Port Phillip regional boundary considered to be the containment line.

CABOMBA - AN EXAMPLE OF GOAL 4 - PROTECTING ASSETS

Cabomba (*Cabomba caroliniana*) is a Weed of National Significance (WONS). It is a fully submerged aquatic weed naturalised in some east-coast waterways. Infestations are currently isolated and confined to relatively few water bodies but potentially, it could impact on waterways from Cape York to Hobart and from Sydney to Perth. Infestations occur in the Goulburn Broken catchment in Lake Benalla on the Broken River and downstream along the Broken River.

The large biomass produced by the fast growing infestations of Cabomba impact on the capacity of water storages, reduce the water quality and increase the maintenance costs of water delivery systems. Infestations develop as monocultures, reducing the abundance and species richness of aquatic plants and indirectly impacting on associated aquatic fauna. Fishing, swimming and boating are all impeded by the dense biomass.

Cabomba has the capacity to threaten values associated with the Broken River, Broken Creek, possibly Barmah Forest and lower Goulburn River (high priority in the Goulburn Broken River Health Strategy and a broad biodiversity asset in the Goulburn Broken Biodiversity Strategy). Because no suitable control option currently exists it is proposed that Cabomba will be classified as a Restricted Weed with management to focus on asset protection.

The Benalla Rural City, in partnership with the GB CMA is trialling Cabomba control options in Lake Benalla. This project is being undertaken with support from G-MW and DEDJTR.

SEVENS CREEK RABBIT PROJECT - AN EXAMPLE OF GOALS 4 AND 5 - PROTECTING ASSETS AND INTEGRATION

European rabbits (*Oryctolagus cuniculus*) are an established pest animal in Victoria with the potential to impact heavily on agricultural and environmental values. Rabbits invade riparian zones and properties adjoining waterways and their heavy grazing can result in erosion, reduced vegetation quality and increased runoff, reducing water quality through siltation, increased turbidity and nutrient input.

In the Goulburn Broken Catchment, Rabbit management programs are generally coordinated by community groups in partnership with Ag Victoria and partner organizations. Priority areas for Rabbit management in the catchment are areas where rabbits pose a threat to high value regional assets and where there is ongoing community support. This approach aligns with the asset protection section of the invasion curve, as identified in Figure 3.

The Sevens Creek is an “icon” stream in the Goulburn Broken catchment as it is one of the last remaining strongholds in Victoria for the endangered Trout Cod (*Maccullochela macquariensis*). It is considered by the GB CMA (GB CMA 2014) to be a high value regional asset. Rabbit numbers in some areas along the creek are high enough to negatively impact on water quality in the creek (and hence affect Trout Cod) and consequently, a coordinated control project has been established along a designated stretch of the creek in the Strathbogie area.

The project involves 65 properties, as well as all public land in the project area. All landowners have been requested to undertake appropriate control works on their properties to destroy all warrens and reduce available harbor.

Rabbit management is a critical pre-cursor to many land management activities and once a satisfactory level of Rabbit control is achieved along this section of the Sevens Creek, follow up programs involving revegetation or remnant vegetation can commence.

In the longer term, the aim of the Sevens Creek project is to maintain or improve ecological values in the creek to ensure that populations of threatened species such as the Trout cod not only survive in the system but continue to recover.

Victorian Rabbit Action Network (VRAN) - AN EXAMPLE OF Goal 7 - CONTINUOUSLY IMPROVE INVASIVE PLANTS AND ANIMAL MANAGEMENT

VRAN acts as a facilitating institution, bringing community together with government in deciding how Victoria invests in rabbit management. Its activities are focused on capacity building, network development, and community-based innovation across the people, communities, and organizations that manage rabbits in Victoria. VRAN hosts learning and mentoring networks, delivers workshops on best-practice rabbit control, and supports people and organizations to collaborate on rabbit action. It also provides occasional funding grants to support community learning, innovation, and rabbit management.

The Granite Creeks Project is a collective of 6 groups within the Gecko CLaN network near Euroa: Balmattum/Sheans Creek Landcare Group, Strathbogie Tablelands Landcare Group, Gooram Valley Landcare Group, Creighton Creek Landcare Group, Longwood East Landcare Group, and Burnt Creek Landcare Group.

The groups major projects over the past 25-30 years has been control of both rabbits and Patterson's Curse. Due to the reduction in funding the group now works mainly on the delivery of rabbit control, it is very active in this space and its successes have been recognized both locally and at a state level.

See below relevant links to for example, the Victorian Rabbit Management Collaborative Initiative (2014) and Victorian Rabbit Action Network.

https://www.pestsmart.org.au/wp-content/uploads/2014/11/VICRabbitInitiative_LAdams_Oct2014_FINAL.pdf

https://rabbitaction.com/

BIBLIOGRAPHY

Australian Government (2009). NRM MERI Framework - Australian Government Natural Resource Management Monitoring, Evaluation, Reporting and Improvement Framework, Department of the Environment, Water, Heritage and the Arts and the Department of Agriculture, Fisheries and Forestry.

Blood, K., James, R., Panetta, F.D., Sheehan, M., Adair, R., and Gold, B. (2019) Early invader manual: managing early invader environmental weeds in Victoria. Department of Environment, Land, Water and Planning, Victoria.

DNRE (2000). Goulburn Broken Rabbit Management Action Plan - 2001 - 2005, Department of Natural Resources and Environment, Melbourne.

DNRE (2001). Goulburn Broken Weed Action Plan - 2001-2005, Department of Natural Resources and Environment; Goulburn Broken Catchment Management Authority.

DNRE (2002). Healthy rivers, healthy communities and regional growth. Victorian river health strategy., Department of Natural Resources and Environment.

DNRE (2002). Victorian Pest Management - Wild Dog Management Strategy. Melbourne, Department of Natural Resources and Environment, Victoria.

DPI (2008). Victorian Blackberry Strategy 2008 - 2013, Department of Primary Industries Victoria.

DPI (2010). Invasive Plants and Animals Policy Framework, Department of Primary Industries, Victoria.

DPI (2010). Weeds and Vertebrate Pests. Module 1 within the Invasive Plants and Animals Policy Framework, Department of Primary Industries Victoria.

DSE (2003). Barmah Forest Ramsar Site: Strategic Management Plan, Department of Sustainability and Environment.

DSE (2006). Applying the Asset-Based Approach to Pest Management in Victoria Background Paper, Department of Sustainability and Environment, Victoria.

DSE (2009). Advisory list of environmental weeds of aquatic habitats of Victoria, Department of Sustainability and Environment.

DSE (2009). Advisory list of environmental weeds of the Inland Plains bioregions of Victoria, Department of Sustainability and Environment.

DSE (2009). Advisory list of environmental weeds of the Ranges bioregions of Victoria, Department of Sustainability and Environment.

DSE (2009). Guidelines for Preparing Regional Pest Plans, Department of Sustainability and Environment; Department of Primary Industries, Victoria.

DSE (2009). Securing our natural future- A white paper for land and biodiversity at a time of climate change, Department of Sustainability and Environment Victoria.

GB CMA (2003). Goulburn Broken Regional Catchment Strategy. Shepparton, Goulburn Broken Catchment Management Authority.

GB CMA (2004). Goulburn Broken Catchment Willow Management Strategy, Goulburn Broken Catchment Management Authority.

GB CMA (2005). Goulburn Broken Regional River Health Strategy 2005 - 2015, Goulburn Broken Catchment Management Authority.

GB CMA (2009). Goulburn Broken Catchment Management Authority Corporate Plan 2009-10 to 2012-13.

GB CMA (2010). Draft Biodiversity Strategy for the Goulburn Broken Catchment, Victoria. Consultation Draft, 6th May 2010, Goulburn Broken Catchment Management Authority.

GB CMA (2014) Goulburn Broken Regional Waterway Strategy 2014-2022, Goulburn Broken Catchment Management Authority.

GB CMA (2016) Goulburn Broken Regional Biodiversity Strategy 2016-2022, Goulburn Broken Catchment Management Authority.

GHD (2008). Cabomba Management Stages 1 to 3 Report, Goulburn Broken Catchment Management Authority.

Government of Victoria (2009). Biosecurity Strategy for Victoria.

Miles, C. and K. Stothers (2009). Draft background paper on priority biogeographical zones of the Goulburn Broken Catchment. Goulburn Broken Catchment Management Authority and DPI. (Unpublished).

NRMMC (2007). Australian Pest Animal Strategy – A national strategy for the management of vertebrate pest animals in Australia, Natural Resource Management Ministerial Council.

NRMMC (2007). Australian Weeds Strategy – A national strategy for weed management in Australia, Natural Resource Management Ministerial Council.

Platt, S. J. and K. W. Lowe (2002). Biodiversity Action Planning: action planning for native biodiversity at multiple scales - catchment, bioregional, landscape, local., Department of Natural Resources and Environment, Melbourne.

RuralPlan (2009). Sagittaria Strategic Plan - Final, Goulburn-Murray Water; Goulburn Broken Catchment Management Authority.

Thomas, N., J. Steel, et al. (2007). Tackling Weeds on Private Land Initiative weed spread pathway risk assessment – stage 2, Department of Sustainability and Environment; Department of Primary Industries.

VGT (2008). Victorian Gorse Control Strategy 2008-2013, The Victorian Gorse Taskforce.

PART C APPENDICES

APPENDIX 1 - LEGISLATIVE BACKGROUND

A1.1 *CATCHMENT AND LAND PROTECTION ACT 1994*

The *Catchment and Land Protection Act 1994* provides a legislative framework land management including general duties of landholders and management of noxious weeds and pest animals. Parts 8 and 9 are relevant:

TABLE 5 RELEVANT SECTIONS OF *CATCHMENT AND LAND PROTECTION ACT 1994*

Part or Section	**Relevance**
Section 20	***General duties of land owners*** (1) In relation to his or her land a land owner must take all reasonable steps to - (a) avoid causing or contributing to land degradation which causes or may cause damage to land of another land owner; and (b) conserve soil; and (c) protect water resources; and (d) eradicate regionally prohibited weeds; and (e) prevent the growth and spread of regionally controlled weeds; and (f) prevent the spread of, and as far as possible eradicate, established pest animals. (2) A land owner must take all reasonable steps to prevent the spread of regionally controlled weeds and established pest animals on a roadside that adjoins the land owner's land. (3) Subsection (2) does not apply to a roadside which is - (a) a freeway or an arterial road within the meaning of the *Road Management Act 2004*; or (b) Crown land held under a lease or licence by a person other than the land owner; or (c) land exempted from that subsection by a special area plan; or (d) Crown land in a national park or park within the meaning of the *National Parks Act 1975* or in a protected forest within the meaning of the *Forests Act 1958*; or (e) Crown land managed by a public authority other than the Secretary, or a Minister other than the Minister; or (f) Crown land reserved under the *Crown Land (Reserves) Act 1978* for a purpose other than a road.

Section 21	(1) The Secretary must take all reasonable steps to eradicate State prohibited weeds from all land in the State. (2) In relation to roadsides on Crown land the Secretary must take all reasonable steps to eradicate regionally prohibited weeds.
Part 8	Deals with noxious weeds and pest animals
Division 1 sections 58 - 69	Classification of pests – establishes a plant to be a state prohibited weed, regionally prohibited weed, regionally controlled weed or restricted weed; or an animal to be a prohibited pest animal, controlled pest animal, regulated pest animal or an established pest animal
Division 2 - sections 70 - 74	Responsibilities for general control of noxious weeds and pest animals
Division 3 - sections 75 - 78	Importing, keeping, trading in and releasing of pest animals
Part 9	Enforcement

A2.2 DUTY OF CARE

The Section 20 and 21 requirements can be interpreted as a duty of care requirement.

Duty of care can be defined in many ways. For example:

*"an individual must be owed a **duty of care** by another, to ensure that they do not suffer any unreasonable harm or loss'.*

So, Sections 20 and 21 require landowners to perform a duty of care to prevent pests (on/from) their property to cause damage to their neighbors.

Their duty of care can be discharged by undertaking all reasonable steps to eradicate and prevent spread of pests.

Reasonable steps could be defined as:

"adherence to, or implementation of, codes of practice and current recommended practices".

APPENDIX 3 - PRIORITIZATION

Because of the high number of potential species involved when managing invasive plants and animals in Victoria, government must prioritise its investment, targeting only the invasive plants and animals posing the greatest threat to the state's economic, environmental and social values. This prioritisation process involves risk assessment, knowledge of threats and potential impacts on assets and their associated values.

A3.1 RISK ASSESSMENT APPROACH

Risk assessment involves understanding threats and their impacts on regional assets and their values.

At its simplest, determining BIPAS priorities involves assessing the risks invasive species present to the catchment's assets and their values. Risk management activities can then be targeted at the highest risks.

In the context of the GB BIPAS threats are invasive plants and animals, while impacts can include, for example, loss of biodiversity values or reduction in food and fibre production.

Threat analysis has been undertaken by Ag Vic via the Noxious Weed Review (and subsequent weed categorization) and the Risk Assessment Prioritization Tool for invasive animals. Threat assessment must consider both current and potential future invasive species.

Regional assets and associated values are described in Part B.

Ideally, a risk assessment would be undertaken for each invasive species against the threat it poses for each identified catchment value. This would be a very large task and has not been attempted for the GB BIPAS.

A3.2 BIODIVERSITY ZONES CHARACTERISTICS AND THREATS

The tables in this section list landscape zone characteristics and potential threats to the biodiversity values of zones. The risk presented by the threat to the values of the zone must be assessed before action to protect values is considered. The species listed in the IPA threats column are either present or have the potential to establish in the zone (refer to DELWP Regional Environmental Weeds Advisory Lists (www.delwp.vic.gov.au) for more complete weed lists and further detail on taxonomy and level of threat). Introduced fish species are included for completeness.

TABLE 6 ICON LANDSCAPES - CHARACTERISTICS AND THREATS

Zone (and functional landscape type)	General characteristics	IPA Threats
South eastern Highlands	• Large proportion of native vegetation, significant contribution to ecosystem services • Land tenure security • Alpine bioregion and vegetation threatened species habitat • Nationally significant wetlands	• Red Fox, Rabbit, Wild dog, Feral Cat, Hare, Sambar Deer, Pig, Indian Mynah, Starling, Blackbird, European Sparrow • *Rubus* spp, English Ivy, Bridal Creeper, *Salix* spp, Box-elder, Sycamore Maple, Maple, English Holly, Montbretia, Periwinkle, Himalayan Honey-suckle, Japanese Honey-suckle, Wandering Jew, Sycamore Maple, Desert Ash, Radiata Pine, Sweet Pittosporum, Boneseed, Montpellier Broom, Spanish Broom, English Broom, Gorse, *Cotoneaster* spp, Desert Ash, Spanish Heath, *Glyceria* spp, *Alstroemeria* spp, *Robinia* spp, *Fallopia* spp, Orange Hawkweed, Soft Rush, • Introduced fish species - Trout, *Gambusia*, Redfin, Carp
Goldfields	• Large core areas of native vegetation • Land tenure security • Threatened species	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, Blackbird, European Sparrow, • Cape Broom, Paterson's Curse, *Nassella* spp, *Gazania* spp, *Phalaris* spp, *Pennisetum* spp, *Galenia* spp, Olive, Radiata Pine, *Rubus* spp, *Salix* spp, English Broom, Montpellier Broom, *Cotoneaster* spp, Hawthorn, Boxthorn, Sweet Pittosporum, Privet, Box Maple, Japanese Honeysuckle, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Gorse, Spiny Rush, Wheel cactus, Briar Rose, Tall Wheat-grass, Boneseed, Karoo Thorn • Introduced fish species - Oriental weather loach, carp, redfin
Murray Corridor	• Land tenure security, improved protection of River Red Gum Forests following VEAC investigation	• Red Fox, Feral Cat, Rabbit, Hare, Feral horse, Feral Pig, Indian Mynah, Starling, Mallard • Alligator weed, *Salvinia*, Water Hyacinth, *Cabomba*, Arrowhead, *Egeria*, *Elodea*, Parrot's Feather, *Lippia*, Bull-rush, *Salix* spp, *Nassella* spp, *Achnatherum* spp,

Zone (and functional landscape type)	General characteristics	IPA Threats
	• Nationally significant wetlands, Barmah Wetland (Ramsar listed) • Large-scale connectivity (along waterways) • Concentration of cultural sites • Modified flooding regimes	Periwinkle, Japanese Honeysuckle, Wandering Jew, *Phalaris* spp, *Galenia* spp, *Gazania* spp, Ragweed, Flax-leaf Broom, *Cotoneaster* spp, Olive, Radiata Pine, Peppercorn, Boxthorn, Hawthorn, Briar Rose, Noogoora Burr, Pampas Grass, Tall Wheat-grass, Blackberry, Horehound, Paterson's curse, , • Introduced fish species - Oriental weather loach, carp redfin, mosquito fish
Lower Goulburn and Broken Rivers	• Large Goulburn River floodplain • High regeneration potential • Moderate to high vegetation condition • Native pastures • Concentration of cultural sites • Nationally significant wetlands • Modified flooding regimes	• Red Fox, Feral Cat, Rabbit, Hare, Deer, Indian Mynah, Starling, Blackbird • African Boxthorn, Karoo Thorn, *Achnatherum* spp, Blackberry, Horehound, Paterson's curse, *Salix* spp, Arrowhead , *Cabomba*, *Lippia*, *Egeria*, *Elodea*, Parrot's feather, Bull-rush, *Nassella* spp, Periwinkle, Japanese Honeysuckle, Wandering Jew, *Phalaris* spp, *Galenia* spp, *Gazania* spp, *Rubus* spp, Ragweed, Flax-leaf Broom, *Cotoneaster* spp, Olive, Radiata Pine, Peppercorn, Boxthorn, Hawthorn, Noogoora Burr, Pampas Grass, Alligator weed, Salvinia, Water hyacinth, • Introduced fish species - Oriental weather loach, carp, redfin, mosquito fish

TABLE 7 KEY LANDSCAPES - CHARACTERISTICS AND THREATS

Zone (a*nd functional landsc*ape type)	**G*eneral characteri*stics**	**IPA Threats**
Broken Boosey Nine Mile Creek System	• Creek systems provide good connectivity • Mix of land tenures • Nationally significant wetlands • Concentration of cultural sites • Unique vegetation associations • Modified flooding regimes	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, Mallard • African lovegrass, Horehound, Paterson's curse, Prairie Ground-cherry, *Salix* spp, Arrowhead Cabomba, *Egeria*, *Elodea* spp, Bull-rush, *Nassella* spp, Periwinkle, Wandering Jew, *Phalaris* spp, *Galenia*, *Rubus* spp, Ragweed, Flax-leaf Broom, *Cotoneaster* spp, Olive, Radiata Pine, Peppercorn, Hawthorn, Noogoora Burr, African Boxthorn, Karoo Thorn, Pampas Grass, Alligator weed, *Salvinia*, Water hyacinth, Parrot's Feather • Introduced fish species - Oriental weather loach, carp, redfin, mosquito fish
Strathbogie Tablelands	• Significant area for peatlands and spring soaks • High vegetation condition (localised), broadly moderate • Distinctive vegetation associations • Wildlife refuge	• Red Fox, Feral Cat, Rabbit, Hare, Sambar Deer, Pig, Indian Mynah, Starling, Blackbird, European Sparrow, Portuguese Millipede • Paterson's Curse, St John's Wort, Holly Poplar, *Rubus* spp, *Salix* spp, English Ivy, Box maple, Periwinkle, Wandering Jew, Japanese Honey-suckle, Radiata Pine, Sycamore Maple, Gorse, Desert Ash, Flax-leaf Broom, Spanish Broom, English Broom, Sweet Pittosporum, Coprosma, Hawthorn, Boxthorn, *Cotoneaster* spp, Spanish Heath, Glyceria spp, Soft Rush, Giant Knotweed • Introduced fish species - Redfin, trout, *Gambusia*
Warby Ranges and Foothills	• Includes diversity of landscapes from foothills to Winton Wetlands where biodiversity restoration potential is high after decommissioning of Lake Mokoan • Some large areas of native vegetation such as the Warby Ranges • Threatened species (e.g., Warby Gum, Carpet Python)	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, Portuguese Millipede • *Nassella* spp, *Gazania*, *Phalaris* spp, *Pennisetum* spp, *Galenia*, Olive, Radiata Pine, *Rubus* spp, *Salix* spp, English Broom, Montpellier Broom, Boneseed, *Cotoneaster* spp, Hawthorn, Boxthorn, Sweet Pittosporum, Privet, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Gorse, Spiny Rush, Giant knotweed, Gorse, Serrated tussock, Patterson's Curse

TABLE 8 DISPERSED LANDSCAPES - CHARACTERISTICS AND THREATS

Zone (and functional landscape type)	General characteristics	IPA Threats
Longwood and Violet Town Plains	• Many of the areas within the Northern Inland Slopes (Box-Ironbark) provide high regeneration potential • Large area of native pastures • Highly cleared in some areas, competing productive land use in southern end of zone • East-west running creeks (e.g., Sevens and Pranjip), connecting Strathbogies to Goulburn River	• Red Fox, Feral Cat, Rabbit, Hare, Deer, Indian Mynah, Starling • *Nassella* spp, African Boxthorn, African lovegrass, Cape tulip, Chilean needle grass, Horehound, *Gazania*, *Phalaris* spp, *Pennisetum* spp, *Galenia*, Olive, *Rubus* spp, *Salix* spp, English Broom, Montpellier Broom, *Cotoneaster* spp, Hawthorn, Privet, Japanese Honeysuckle, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Spiny Rush, Tall Wheat-grass, Karoo Thorn, Serrated tussock
Corop	• Nationally significant wetlands • Highly modified surrounds • Modified flooding regimes	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, Mallard • Alligator Weed, Arrowhead, *Cabomba*, *Lippia*, *Egeria*, Parrot's Feather, *Salvinia*, Cordgrass, Bull-rush, *Salix* spp, *Nassella* spp, *Phalaris* spp, *Rubus* spp, Olive, Peppercorn, Boxthorn, Hawthorn, Noogoora Burr, Pampas Grass, Tall Wheat-grass, Feather • Introduced fish species - European carp, mosquito fish, weather loach
Upper Goulburn River	• Highly regulated stretch of the Goulburn River • Important riparian vegetation • Presence of large trees • Adjoining network of wetlands in various states of condition	• Red Fox, Feral Cat, Rabbit, Hare, Deer, Pig, Indian Mynah, Starling, Blackbird • Alligator weed, *Cabomba*, Gorse, Paterson's curse, Serrated tussock, *Rubus* spp, *Salix* spp, English Ivy, Box maple, Periwinkle, Wandering Jew, Japanese Honey-suckle, Radiata Pine, Sycamore Maple, Gorse, Desert Ash, Flax-leaf Broom, Spanish Broom, English Broom, Sweet Pittosporum, Coprosma, Hawthorn, Boxthorn, *Cotoneaster* spp, Spanish Heath, *Glyceria* spp, Ragwort, *Salvinia*, Water hyacinth, Arrowhead, Parrot's feather • Introduced fish species - Redfin, trout, *Gambusia*
Yarck/Mansfield	• Large areas of hill country with native grasses and nationally significant woodlands - ability (for native vegetation)	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, Blackbird, European Sparrow, Wild dogs, Deer

Zone (and functional landscape type)	General characteristics	IPA Threats
	to respond quickly/positively with improved grazing management	• *Nassella* spp, *Achnatherum* spp, *Phalaris* spp, *Pennisetum* spp, Olive, Radiata Pine, *Salix* spp, English Broom, Montpellier Broom, Boneseed, Olive, *Cotoneaster* spp, Hawthorn, Boxthorn, Sweet Pittosporum, Privet, Box Maple, Japanese Honeysuckle, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Ragwort, Gorse, Spiny Rush, Spanish Heath, Giant knotweed, Paterson's curse, Serrated tussock, • Introduced fish species - Carp, trout, mosquito fish
Piper	• Some large patches of native vegetation such as Cobaw Ranges, Tallarook State Forest and Mt Piper • Significant area for Golden Sun-moth and Striped Legless Lizard • Highly cleared and modified surrounds	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, Blackbird • Box-elder Maple, English Ivy, *Nassella* spp, *Phalaris* spp, *Pennisetum* spp, Olive, Radiata Pine, *Salix* spp, English Broom, Montpellier Broom, Boneseed, *Cotoneaster* spp, Hawthorn, Boxthorn, Sweet Pittosporum, Privet, Japanese Honeysuckle, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Gorse, Spiny Rush, Briar Rose, Spanish Heath, *Acacia decurrens*, Tree Lucerne, *Acacia baileyana*, Tall Wheat-grass, Giant knotweed
Dookie	• Some areas of nationally significant remnant vegetation such as the Dookie Bushland Reserve • Highly modified agricultural (mostly cropping) landscape	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, European Sparrow • African Boxthorn, African lovegrass, Chilean needle grass, Horehound, Paterson's curse, Prairie ground cherry, Silverleaf nightshade, *Nassella* spp, *Gazania*, *Phalaris* spp, *Pennisetum* spp, *Galenia*, Radiata Pine, *Rubus* spp, *Salix* spp, English Broom, Montpellier Broom, Boneseed, Olive, *Cotoneaster* spp, Hawthorn, Boxthorn, Privet, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Gorse, Spiny Rush, Tall Wheat-grass, Karoo Thorn
Northern Relictual Landscapes	• Small patches of threatened vegetation • Highly modified, with a high proportion of irrigation and dryland cropping • Numerous populations of threatened taxa	• Red Fox, Feral Cat, Rabbit, Hare, Indian Mynah, Starling, European Sparrow • African Boxthorn, Blackberry, Karoo Thorn, Horehound, *Nassella* spp, *Gazania*, *Phalaris* spp, *Pennisetum* spp, *Galenia*, Olive, Radiata Pine, *Salix* spp, English Broom, Montpellier Broom, Boneseed, *Cotoneaster* spp, Hawthorn, Boxthorn, Sweet Pittosporum, Privet, Box Maple, Japanese Honeysuckle, Periwinkle, Wandering Jew, Noogoora Burr, St John's Wort, Gorse, Spiny Rush, Gorse, Serrated tussock, and

Zone (and functional landscape type)	General characteristics	IPA Threats
		aquatic weeds such as Water Hyacinth, Parrot's feather, *Egeria*, *Elodea*, Arrow-head, *Cabomba* etc

A3.3 THREATS

Many invasive plants and animals are found in the Goulburn Broken Catchment. Tables 7, 8 and 9 list invasive plant and animal species considered as threats to biodiversity assets in the catchment.

The scope of the Goulburn Broken Biosecurity, Invasive Plants and Animals Strategy (GB BIPAS) is invasive plants and invasive animals which can be any organisms that are, or can be, declared under the CaLP Act 1994 (that is, both declared and non-declared invasive plants and animals species). This excludes fish, invertebrates and micro-organisms. Also excluded by this definition are plants or animals that are listed under section 10(1) of the *Flora and Fauna Guarantee Act 1988* or declared to be threatened wildlife or notable wildlife under the *Wildlife Act 1975*. These cannot be declared under the CaLP Act 1994.

Future changes in temperature and rainfall are likely to change the distribution of plants in Australia, including weeds. Government investment in many aspects of weed management needs to take account of possible changes in the vigor or extent of weeds already present and of possible increases in risk of invasion of new weeds.

Recent modelling of potential distributions of 20 weed species under climate change identified a number that are likely to be better able to establish in Victoria in the future. It identifies others that are likely to become less invasive and still others that may not have a noticeable response to climate change. There is considerable uncertainty about what may happen because weed responses to climate change will also be affected by how climate change affects competing plant species, natural enemies and land management practices (DPI 2010).

INVASIVE PLANTS (WEEDS)

Priorities for many invasive plants are already set via the declaration of noxious weeds in the *Catchment and Land Protection Act 1994*, although priority plant species can include declared or non-declared species. The declaration status makes different management options available. Declaration enables additional tools to be used to achieve the desired level of control, including the legislative requirement to prevent spread and the ability to enforce control. Declaration is also a requirement for biological control research funding. However, lack of declaration status does not preclude land managers from undertaking on ground works where appropriate.

Figure 8 shows the location of State and Regionally Prohibited weed infestations in the catchment. (Data sourced from IPMS - Integrated Pest Management System).

The State Guidelines propose a weed prioritization procedure (Table 9). Information in this table also guides strategic approaches (see major activities column) which can be termed “risk management approaches”.

Pest plants are categorized as follows:

State Prohibited - These weeds either do not occur in Victoria but pose a significant threat if they invade, or are present, pose a serious threat and can reasonably be expected to be eradicated. If present, infestations of a State Prohibited Weed are relatively small. They are to be eradicated if possible from Victoria or excluded from the State. The Victorian Government is responsible for the treatment of all State Prohibited Weeds under Section 70(1) of the CaLP Act 1994. This work is currently being undertaken by Ag Victoria.

Regionally Prohibited weeds are not widely distributed in a Region but are capable of spreading further. It is reasonable to expect that they can be eradicated from a region and they must be managed with that goal. Land owners, including public authorities responsible for Crown land management, must take all reasonable steps to eradicate Regionally Prohibited weeds on their land.

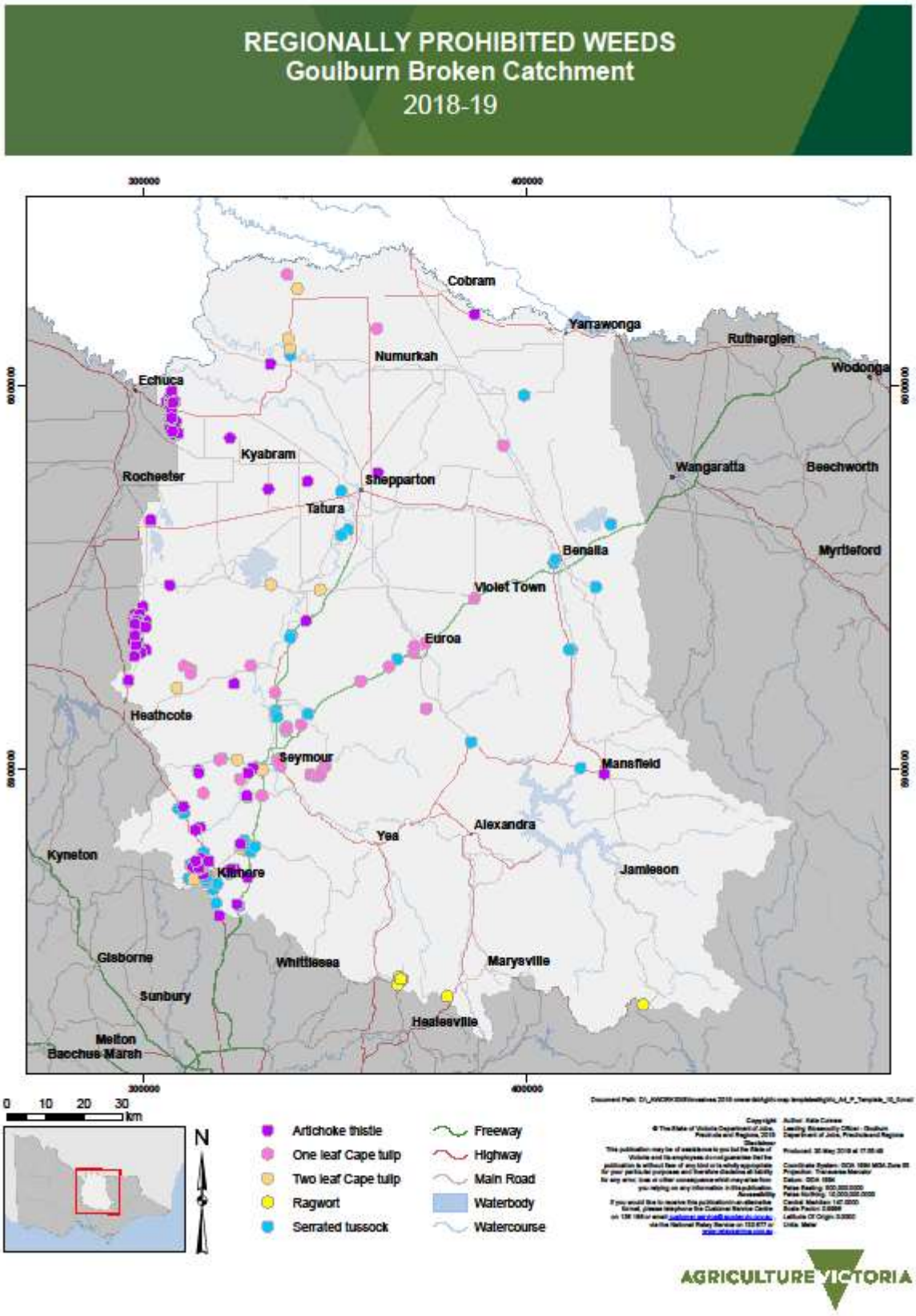
Regionally Controlled Weeds These weeds are usually widespread and are considered important in a region. To prevent their spread, continuing control measures are required. Land owners have the responsibility to take all reasonable steps to prevent the growth and spread of Regionally Controlled weeds on their land.

Restricted Weeds includes plants that pose an unacceptable risk of spreading in this State or to other parts of Australia if they were to be sold or traded in Victoria and are a serious threat to another State or Territory of Australia. Trade in these weeds and their propagules, either as plants, seeds or contaminants in other materials, is prohibited.

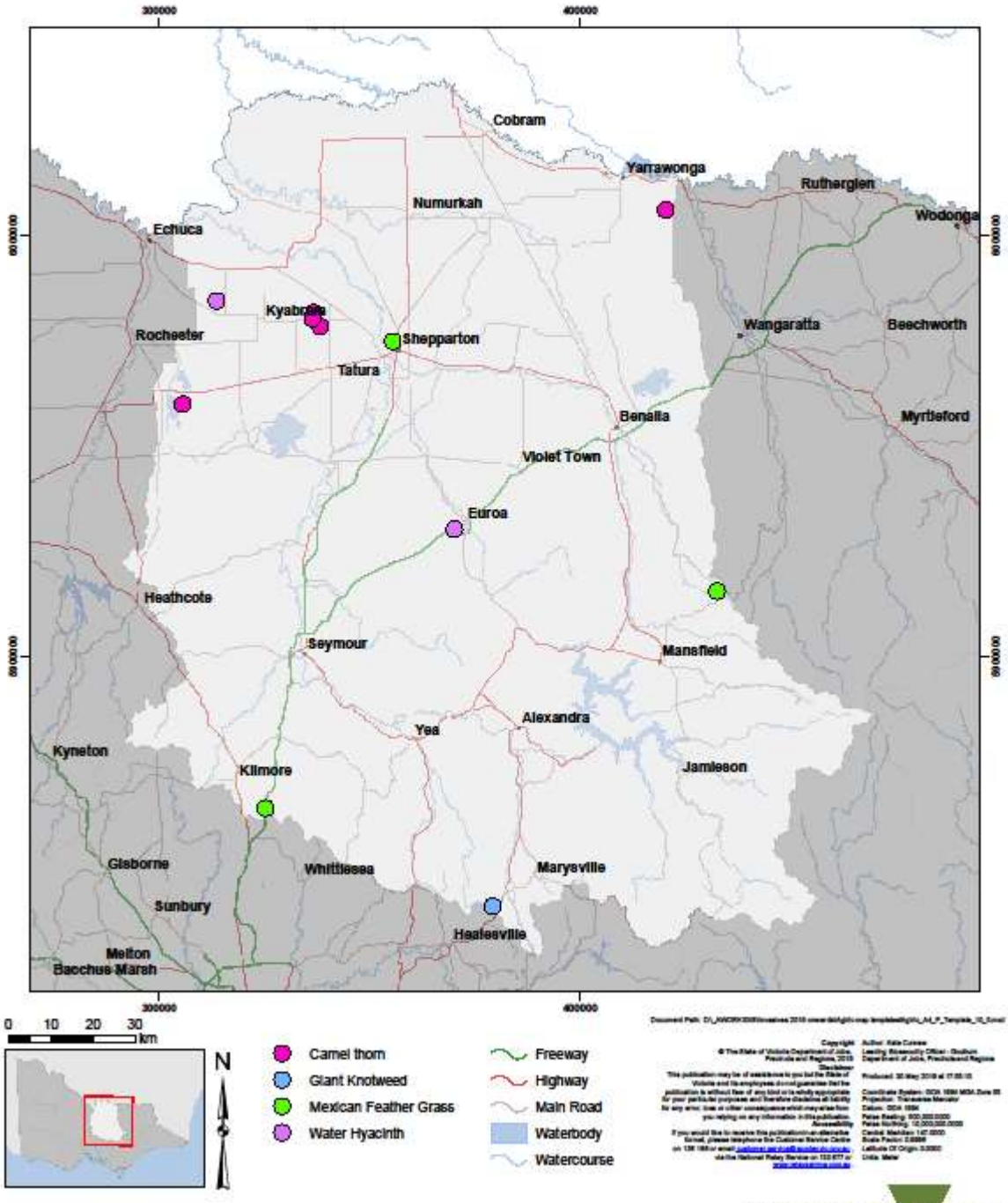
Appendix 8 provides a link to lists of Declared Noxious Weeds and advisory lists of environmental weeds. Figure 7 shows the location of known State and Regionally Prohibited Weed infestations in the catchment.

Appendix 9 shows a list of Weeds of National Significance (WONS).

FIGURE 7 LOCATION OF STATE AND REGIONALLY PROHIBITED WEED INFESTATIONS IN THE GOULBURN BROKEN CATCHMENT



STATE PROHIBITED WEEDS
Goulburn Broken Catchment
2018-19



AGRICULTURE VICTORIA

TABLE 9 SPECIES LED WEED PRIORITISATION PROCEDURE – MODIFIED FROM STATE GUIDELINES FOR PREPARING REGIONAL PEST PLANS

Priority	GB BIPAS Goal	VWRA score	VWRA distribution score	Alignment with CaLP Category	Descriptions of species that may be included in this group.	Major activities
1	Goal 1 Prevention	Very high Moderately high	1:00	State Prohibited Weeds Restricted Weeds	High risk species not known to exist in the State or region, e.g. some Victorian Alert Weeds	Support Weed Alert program through Weed Spotter activity. Incursion planning
2	2 -Eradication	Very high Moderately high	0.85	State Prohibited Weeds	Declared weeds considered eradicable in the region. Weeds not declared, but VWRA suggests that they may be eradicable. Weeds not declared, rapid assessment suggests they are eradicable, VWRA planned. Weeds not declared, rapid assessments suggest they could / should be eradicated, VWRA is not planned but recommended with potential for CaLP Act 1994 declaration (Stretch Action)	Aim for eradication in the region. Complete VWRA if not done. Collect distribution data for all these species. Support Weed Alert program through Weed Spotter activity.
3	Goal 3 - Containment to prevent spread where the benefit: cost is favourable	Very high Moderately high	0.75 < 0.75	Regionally Prohibited Weeds Regionally Controlled Weeds	Weeds that are established in the state beyond the possibility of eradication but remain localised in small areas of one or more regions. Weeds that are subject to a state-wide containment program.	Increase community awareness of species threat. Generate community support for local management Government to support strong existing community led effort, in partnership with industry and community groups. Prioritise eradication of satellite populations. Target activities to prevent the species from spreading outside the current core infestation boundaries including reduction in extent and abundance where appropriate and management of spread pathways.
4	Goal 4 - Asset-based protection		<0.75	Restricted	Plants that pose and unacceptable risk of spreading in Victoria or to other parts of Australia. Trade in these weeds is prohibited. Should also include environmental weeds.	Increase community awareness of species threat. Generate community support for local management Government to support strong existing community led effort, in partnership with industry and community groups – the “Community Weed Model”.

INVASIVE ANIMALS

Invasive animals threaten Victorian parks, forests, waterways, biodiversity and land asset values. They cause a range of serious problems through impacts on one or more of the environments, economic activity, social values or human health.

Invasive animals are non-native (introduced) species that are, or have the potential to become, established in the wild through escape from captivity and domestication, deliberate or accidental release and accidental or illegal importation.

Invasive animals can be declared under the CaLP Act 1994 as Restricted (Prohibited, Controlled and Regulated) or Established.

Restricted Pest Animals These animals are not established in the wild in Victoria, however they are, or have the potential to become a serious threat to primary production, Crown land, the environment or community health in Victoria. The importation, keeping, breeding and trading of restricted pest animals is illegal, and penalties apply. Occurrences of restricted pest animals, in the wild or being illegally kept, should be reported to DEDJTR customer service centre on 136 186.

- **Controlled** invasive animals detected in the wild include Red-eared Slider Turtle, Grey Squirrel, Cane Toad, and Indian Ring-neck Parakeet.
- **Prohibited** high risk invasive animals of concern include Macaque Monkey, Northern Palm Squirrel, Asian Black Spined Toad, Japanese Fire Bellied Newt, and Boa Constrictor
- **Regulated animals** include antelope, bison, water buffalo, Canadian goose, ostrich and peach-faced lovebird.

Established Pest Animals These animals are established in the wild in Victoria and are a serious threat to primary production, Crown land, the environment or community health in Victoria. Land owners have the responsibility to take all reasonable steps to prevent the spread of, and as far as possible eradicate, established pest animals on their land. It is not possible to eradicate these pest animals from the state; therefore, an asset protection is the most effective approach to minimise their threat on high value assets.

- **Established** in the wild invasive animals include rabbits, foxes, wild dogs, feral goats, and feral pigs.

None declared species, in some locations include deer, feral cats (now declared in crown and some lands) and other vertebrates also threaten the regions assets.

AQUATIC SPECIES

Prevention of entry and establishment of new aquatic invasive organisms is particularly critical given the high connectivity of aquatic systems and relative difficulty in identifying organisms or controlling them once they become established.

While the GB BIPAS does not cover invasive fish, invertebrates or micro-organisms species these also may pose a significant risk for aquatic assets (both biodiversity and agricultural assets).

APPENDIX 4 - STATE GUIDELINES

Invasive Plants and Animals Policy Framework (2012) helps facilitate the development of Regional Weed Plans and Regional Pest Animal Plans, or combined Regional Pest Plans, by all Catchment Management Authorities (CMAs) in Victoria by:

- providing background and an explanation of policy and principles relating to invasive plants and animals management in Victoria
- giving references to specific inclusions required in the plans
- describing processes and activities required to complete the document.

The Goulburn Broken Invasive Plants and Animals Strategy has been prepared in line with these Guidelines.

APPENDIX 5 - BIPAS GUIDELINE PRINCIPLES

The State Invasive Plants and Animals Policy Framework (2012) sets out key principles to be reflected in IPABS. These principles, in full, are:

Principle 1	The regional pest plans must be aligned with Regional Catchment Strategies (RCS) and the Victorian Invasive Plants and Animals (IPA) Policy Framework. They should also seek to align with other relevant state policies and current national strategies for pest management.

4.2. Scientific and management principles

Principle 2	The highest priority for pest management is the prevention of, and early intervention in, the establishment of new and emerging pest species.
Principle 3	An asset-based approach must be adopted for widespread pests. (PSC notes "An asset-based approach would normally be adopted for widespread pests").
Principle 4	Transparent, scientific, evidence-based decision-making tools or criteria for setting priorities, including risk management, must be employed.
Principle 5	A 'whole of landscape approach' must be taken to ensure coordinated action across land tenures.
Principle 6	Effective long-term solutions must address the cause of pest invasion, not just the symptoms.
Principle 7	Pest management programs must be integrated with the broader management of land and water resources.

Principle 8	An outcomes-based approach to monitoring, evaluation and reporting should be adopted.
Principle 9	Management responses should be guided by consideration of the role of government, industry and community. This includes consideration of: - Existence of market failure (public goods, externalities and potential spill-over benefits). - Whether the level of private and government co-investment reflects the potential beneficiaries of the response. - Whether the economic, environmental and social benefits of the proposed project significantly outweigh the costs.

4.3. Stakeholder Engagement principles

Principle 10	The roles and responsibilities of key stakeholders, including both public and private land and water resource managers, must be clearly identified.
Principle 11	Activities for improving regional coordination and the engagement of all stakeholders in the ownership of pest management and partnership opportunities should be described.
Principle 12	Acknowledge farm property, vehicle movement and foot contamination disease transfer are recognised as a potential risk to biosecurity, farm production and biodiversity values. Education and awareness in this space is important as is being ready to support and respond to outbreaks e.g. anthrax

APPENDIX 6 - INVESTMENT PRINCIPLES

The purpose of the GB BIPAS is to guide investment, from all investors, in IPA related programs and projects within the catchment. The strategy is also required to take a whole of catchment approach, focusing on those invasive plants and animals management issues where the government investment maximizes community benefit.

The Victorian Government recently released its new land and biodiversity policy titled 'Securing our natural future: A white paper for land and biodiversity at a time of climate change.' (DSE, 2009b) This document includes a set of principles that will guide future government investment in natural resource management.

They are:

1. State investment will focus on providing public, rather than private benefit.
2. Investment will be more likely where projects can show:

- cost effectiveness which includes urgency of action, feasibility and potential side benefits
- measurable improvements in both symptoms and causes
- an adaptive approach that changes as information changes
- strong support from local and catchment communities
- a strong evidence base that justifies the investment.

Two additional principles to be applied in the Goulburn Broken catchment are:

- clarity around the justification for a species led or asset based approach
- demonstration that management of invasive plants and animals is linked into management of other threats to that same asset.

Implementation of the GB BIPAS will be guided by these principles.

APPENDIX 7 - CONTINUOUS IMPROVEMENT

TABLE 10 - IPAS MER SCHEDULE.

MER framework element (Figure 4)	**How the evaluation question or MER element is addressed**	**Who**	**When**
Design	Outcomes, goals and assumptions are documented in GB BIPAS or individual species plans.	GB CMA	Year 1
Plan	Preparation of GB BIPAS or individual species plans	GB CMA	Year 1, Year 5
Implementation	Implementation of strategic actions.	Land and water managers and key agencies	Continuous
Monitoring	Ag Vic MER	Ag Vic	Annual
	Asset condition	GB CMA (as part of RCS review) and CMA output monitoring as well as outputs produced by PV/DELWP/etc.	5 year
	Other relevant activities (e.g. short- term initiatives)	Land and water managers and key agencies	Annual
Reporting	GB CMA Annual Report (including catchment condition – based on assumptions and incorporating GB BIPAS implementation progress). Ag Vic annual report	GB CMA/Ag Vic	Annual
	As part of GB BIPAS review and RCS review	GB CMA/Ag Vic	Five year

MER framework element (Figure 4)	**How the evaluation question or MER element is addressed**	**Who**	**When**
Review	Classification of individual pest species – work through process	GB CMA/Ag Vic	Biennially
Evaluation	At 5 yearly intervals; this will have to address the question "are long-term objectives being achieved – site specific monitoring may be required". To be undertaken as part of GB BIPAS review and update or as part of RCS review.	GB CMA/Ag Vic GB CMA/Ag Vic	Year 5

APPENDIX 8 - PRIORITY WEEDS

Table 4 lists invasive plant and animal species considered as threats to biodiversity assets in the catchment.

Listings of Declared Noxious Weeds can be accessed at:

http://www.dpi.vic.gov.au/dpi/nreninf.nsf/v/9A7E2C26C4A1E5ECCA25740A0011BB9E/$file/Declared_Noxious_Weeds_Listed_by_Common_Name.pdf

DELWP has produced lists of environmental weeds intended to provide general advice on the current and potential risk associated with plants naturalised in native vegetation.

https://www.environment.vic.gov.au/invasive-plants-and-animals/weed-risk-ratings

These lists can be accessed via:

Advisory list of environmental weeds in Victoria By White, M., Cheal, D., Carr, G.W., Adair, R., Blood, K. & Meagher, D. (2018). Arthur Rylah Institute for Environmental Research. Technical Report Series No. 287.

https://www.environment.vic.gov.au/invasive-plants-and-animals/weed-risk-ratings

APPENDIX 9 - WEEDS OF NATIONAL SIGNIFICANCE

From http://www.weeds.org.au/natsig.htm

Common name	***Scientific name***
Alligator Weed	*Alternanthera philoxeroides*
Athel Pine	*Tamarix aphylla*
Bitou Bush	*Chrysanthemoides monilifera*
Boneseed	*Chrysanthemoides monilifera* ssp. *monilifera*
Blackberry	*Rubus fruticosus* agg.
Bridal Creeper	*Asparagus asparagoides*
Cabomba	*Cabomba caroliniana*
Chilean Needle Grass	*Nassella neesiana*
Gorse	*Ulex europaeus*
Hymenachne	*Hymenachne amplexicaulis*
Lantana	*Lantana camara*
Mesquite	*Prosopis* spp.
Mimosa	*Mimosa pigra*
Parkinsonia	*Parkinsonia aculeata*
Parthenium Weed	*Parthenium hysterophorus*
Pond Apple	*Annona glabra*
Prickly Acacia	*Acacia nilotica* spp. *indica*
Rubber Vine	*Cryptostegia grandiflora*
Salvinia	*Salvinia molesta*
Serrated Tussock	*Nassella trichotoma*
Willows	*Salix* spp. except *S. babylonica,* *S. X calodendron* and *S. X reichardtiji*

APPENDIX 10 - INTRODUCTION AND SPREAD PATHWAYS

'Pathway' management is an essential tool used to protect both catchment and local assets from the impact of invasive plants and animals.

The mechanisms and avenues of introduction and/or spread of invasive plants and animals need to be identified to ensure that the spread of high risk invasive plants and animals species is prevented or minimised. The pathway approach is important in the management of new and emerging invasive plants and animals but is also applicable to other invasive plants and animals that threaten a catchment's assets. It is important to identify the pathways by which invasive plants and animals species expand into new habitat and to target these sources for control. The pathway approach is especially important in containing the further spread of invasive plants and animals to ensure efforts in one area are not negated by unchecked spread from other areas.

Weed introduction pathways and associated risks have been assessed (Thomas, Steel et al. 2007). Identified pathways relevant to the Goulburn Broken are shown in Table 11.

The highest risk pathways for spread of priority species are:

- deliberate introduction via business '
- deliberate introduction via community
- vectors (transport mechanisms)
    - contaminated goods/produce
    - contaminated vehicles
    - contaminated equipment
    - water.

Identification and understanding of pathways of introduction and spread underpin threat assessment and asset protection and is included as a strategic action in the GB BIPAS.

TABLE 11. DEFINITIONS, DESCRIPTION AND EXAMPLES OF PATHWAY CATEGORIES (FROM (THOMAS, STEEL ET AL. 2007))

Pathway Category (in no priority)	**Description**	**Examples**
Deliberate introduction via community	Deliberate introduction by community members for home or group use – mostly inadvertent.	Internet plants, garden clubs, cuttings, seeds / plants by mail.
Deliberate introduction via business	Deliberate introduction of plants / seeds / plant parts for business purposes.	Garden / aquarium plant sales, cut flowers, research for improved industry species such as pastures, crops or turf. Establishment of grass, shrub, and tree crops for industry.
Human movement	Inadvertent introduction by humans during business operations or recreation.	Seeds carried on clothing, boots or personal equipment such as when camping.

Pathway Category (in no priority)	Description	Examples
Controlled Stock movement	External or internal contaminant of livestock.	On wool or coats, mud, and ingestion of contaminated feed.
Contaminated vehicles	Vehicles used for business or recreation excludes equipment / machinery.	4WD, trucks, cars, motorbikes.
Contaminated equipment	Plant and equipment used for business operations.	Slashing, grading, harvesters, earth moving, farm machinery, bee hives, shipping containers, defense force.
Contaminated aquatic equipment	Equipment used on water for recreational or business purposes.	Jet ski, boats (fishing, skiing), boat trailers, house boats, yachts.
Contaminated goods or produce	Inadvertent introduction of weeds through contaminated goods or produce or products containing weeds.	Fodder, grains, straw, agricultural products, potting mix, mulch, soil, gravel, landscape & construction materials.
Waste disposal	Inappropriate disposal techniques for plants or plant parts. (Subsequent distribution of 'mulch' for sale or give away comes under Contaminated produce).	Mulches from tips, garden waste - "over the back fence", dumping of garden waste in reserves, viable seed and plant waste products.
Animal movement	Movement of animals other than stock. Seeds externally on coats or ingested.	Birds, native animals, dogs, cats, foxes.
Wind	Distribution of windblown seeds.	Not Assessed.
Water	Distribution of seeds or parts via waterways.	Not Assessed.

APPENDIX 11 - ROLES AND RESPONSIBILITIES

Reproduced from Weeds and Vertebrate Pests Module 1 within the Invasive Plants and Animals Policy Framework (DPI 2010):

A11.1 COMMONWEALTH GOVERNMENT

The Commonwealth Government's role in managing biosecurity is mainly in relation to national pre-border and border biosecurity, with a coordination and leadership role for achieving national biosecurity outcomes. This is likely to include cost-sharing arrangements for nationally significant incursion management.

A11.2 Victorian Government

The Victorian Government's role is to:

- establish and maintain a statewide strategic direction for invasive species;
- provide preparedness, prevention, eradication and containment for those invasive species that are not yet present across their full potential range and for which government intervention can be justified;
- provide pre-border and border biosecurity on a state level;
- engage with industry to minimise the risks of new incursions and to maximize protection from biosecurity risks;
- act where required as a regulator and enforcer in relation to invasive species and the techniques used to manage them by providing appropriate legislation and resources to achieve compliance;
- manage IPAB on public land including where necessary to protect adjoining land, and as required to fulfil responsibilities under relevant legislation;
- manage State Prohibited weeds wherever they occur;
- provide policy and funding for strategic research;
- engage with the community in pursuing coordinated action against widely established invasive plants and animals; and
- engage with Catchment Management Authorities (CMAs) and regional communities in community education, pest management planning, implementation and reporting on both private and public land and in freshwater environments.

The Victorian Government's roles and responsibilities in managing biosecurity are primarily delivered by Ag Vic and DELWP, with the management of parks and reserves directed through Parks Victoria.

A11.3 Victorian Catchment Management Council

The Victorian Catchment Management Council's responsibilities include a statutory function to advise the Minister on:

- matters relating to catchment management which apply throughout the State;
- the condition of the land and water resources of the State;
- priorities for catchment management throughout the State; and
- priorities for research and investigation on matters related to catchment management that apply throughout the State.

A11.4 Catchment Management Authorities

Under the CaLP Act 1994, catchment management authorities' responsibilities include:

- preparing a regional catchment strategy, coordinating and monitoring its implementation and making recommendations to the Minister about funding for the strategy; and
- advising the Minister on any matter referred to it by the Minister, including advice on any proposal to declare or revoke a pest plant.

Catchment management authorities are also responsible for:

- developing regional invasive plants and animals strategies to address IPA in private and public lands in accordance with the regional catchment strategy and any relevant state policy, framework, strategy, plan or guideline; and

- prioritizing action needed to address IPAB and monitoring, evaluating and reporting (to the extent achievable given available resources) on delivery of these actions by relevant agencies; and
- manage IPAB associated with waterways (provided by Melbourne Water in Port Philip and Westernport).

A11.5 Local government

Local government is responsible for:

- meeting all responsibilities as a land manager in relation to declared weeds and pest animals; and
- ensuring that its actions do not spread or exacerbate IPAB problems.

These responsibilities need to be met in accordance with the CaLP Act 1994, guided by established state and regional priorities.

Local government can also add value by:

- addressing local weed issues in whatever manner it sees fit, including local laws, if they do not duplicate or conflict with the CaLP Act 1994 or other relevant legislation;
- ensuring that planning decisions do not exacerbate weed and pest problems; and
- providing education and incentives to improve land management in the municipality and being an advocate for effective IPA management.

A11.6 Landholders

Landholder responsibilities (both private and public e.g. Goulburn-Murray Water, VicRoads) are to address their obligations under the CaLP Act 1994 and any local laws with respect to declared weeds and pest animals. Public land managers also have obligations under other Acts that must be met by undertaking further IPAB management.

Working with adjoining landholders to achieve effective local coordination will greatly increase landholder's capacity to achieve good outcomes from IPA management.

A11.7 Other organisations

Other organisations may have important roles in helping manage IPAs. For example, the Murray Darling Basin Authority's The Living Murray program aims to achieve a healthy working River Murray system for the benefit of all Australians. Management of invasive plants and animals is an important component of achieving the Authority's goals.

Appendix 12a - Other relevant strategies

There are several relevant strategies and plans currently guiding invasive plants and animals management in the catchment. These include:

The Australian Weeds Strategy (2017-2027) provides a framework to establish consistent guidance for all parties, and identifies priorities for weed management across the nation with the aim of minimizing the impact of weeds on Australia's environmental, economic and social assets.

Australian Pest Animal Strategy (2017-2027) - The focus of the Strategy is to address the undesirable impacts caused by exotic vertebrate animals (mammals, birds, reptiles, amphibians, and fish) that have become pests in Australia, and to prevent the establishment of new exotic vertebrate pests.

Weeds of National Significance (WONS) - Twenty-one Weeds of National Significance (WONS) have been identified by Australian governments because of their invasiveness, impacts on primary production and the environment, potential for spread and socioeconomic impacts.

The issues concerning WONS are of such a magnitude that they need coordination among all levels of government, organisations and individuals with weed management responsibilities. Each WONS has a strategic plan that outlines strategies and actions required to control the weed and identifies responsibilities for each action.

Each WONS has a Management Coordinator and a National Management Group/Steering Committee to oversee implementation of the goals and actions of the WONS strategic plans and to develop and coordinate priority actions.

Murray Darling Basin Plan - The Basin Plan is a coordinated approach to water management across the Murray–Darling Basin's 4 states (South Australia, Victoria, New South Wales and Queensland) and the Australian Capital Territory.

Barmah Forest Ramsar Site Strategic Management Plan (2011) - The Strategic Management Plan for the Barmah Forest Ramsar site is an integral component of a program to develop a comprehensive management framework for Victoria's Wetlands of International Importance (or 'Ramsar sites') listed under the Convention on Wetlands (Ramsar, Iran, 1971).
The primary goal of the management framework is to maintain the ecological character of Victoria's Ramsar sites through conservation and wise use.

Victorian Biosecurity Strategy (Government of Victoria 2010-2013) covers threats to primary industries, the environment, social amenity and human health, across Victorian public and private land, freshwater and marine habitats, caused by:

- plant pests and diseases
- animal pests and diseases, including diseases that can be transmitted between animals and humans (i.e. zoonoses)
- invasive plants and animals.

http://agriculture.vic.gov.au/agriculture/biosecurity

Victorian Plants and Animals Policy Framework (2012) represents the Victorian Government's approach to managing existing and potential invasive species across the whole of Victoria. Module 1 of the Framework deals with weeds and vertebrate pests.

Victorian Early Invaders Manual (2019) Managing early invader environmental weeds in Victoria.

Victorian Gorse Control Strategy (2014-2019) sets the longer term strategic direction for Gorse control in Victoria. It sets focus areas, goals and strategies with the overall vision of no further increase in Gorse distribution in Victoria.

Victorian Blackberry Strategy (2014-2019) sets out the vision for controlling Blackberry across the state, with goals, objectives and accompanying strategic actions for the next five years.

Victorian Waterway Strategy (2013) includes reference to willow management. (Note a number of sub-strategies sit within this document (refer link below).

https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/strategies-and-planning

Victorian Kangaroo Survey (DELWP 2017) www.delwp.vic.gov.au

Draft Deer Management Strategy (2018) out for public comment (State Government of Victoria)

https://www.environment.vic.gov.au/invasive-plants-and-animals/draft-deer-management-strategy

Other relevant plans also include:

- Goulburn Broken Willow Management Strategy (GB CMA 2004)
- Goulburn Broken Cabomba Management Strategy (GHD 2008)
- Goulburn Broken Sagittaria Strategic Plan (Arrowhead) (RuralPlan 2009)
- Action Plan for Managing Wild Dogs in Victoria (2014 - 2019)

The GB CMA has prepared a series of asset-based strategies, including

- Biosecurity, Invasive Plants and Animals Strategy (GB CMA 2019-2025)
- Regional Catchment Strategy (GB CMA 2013-2019)
- Waterway Strategy (GB CMA 2014-2022)
- Biodiversity Strategy (GB CMA 2016-2021)
- Land Health Strategy (GB CMA 2017-2020)
- Regional Floodplain Management Plan (GB CMA 2018-2028)

While alien fish are not within the scope of this BIPAS it is worth noting the *Native Fish Strategy for the Murray-Darling Basin 2003-2013* (the Native Fish Strategy) has identified eight key threats to native fish including the presence of alien fish. Management of alien ("pest") fish populations is addressed in Goulburn Broken Regional River Health Strategy (GB CMA 2014-2022).

APPENDIX 12B - PROGRAM LOGIC DEFINITIONS

Definitions associated with the program logic described in Table 3 are:

- ***Vision*** - the desired state of the catchment after GB BIPAS implementation.
- ***Desired outcomes*** for the catchment resulting from implementation of the strategy.
- ***Strategy intent*** - the purpose of the GB BIPAS.
- ***Goals*** - the things we seek to achieve.
- ***Strategic approaches*** to implementing the strategy.
- ***Assumptions*** - an assumption is an expectation, based on current knowledge and experience, about what needs to occur for a project's success. By implementing the strategies, it is assumed the desired outcomes will be achieved.
- ***Strategies*** - general approaches for achieving the Goals.
- ***Strategic actions (outputs)*** - describe priority activities and programs of all government agencies.
- ***Inputs -*** resources required to support the strategic actions.

Appendix 13A - Landcare and Conservation Management Network Pest Plant, Animal and Biosecurity Issues

- Up2Us Landcare Alliance
- Gecko Clan
- South West Goulburn Landcare Network
- Goulburn Murray Landcare Network
- Hughes Creek Landcare Network
- Upper Goulburn Network
- Granite Creeks Landcare Network
- Broken Boosey Conservation Management Network
- Whroo Goldfields Conservation Management Network
- Longwood Plains Conservation Management Network
- Strathbogie Ranges Conservation Management Network
- Lower Goulburn Conservation Management Network

National weeds of concern

http://environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html

Willows (*Salix* ssp.) along both the Delatite and Upper Broken Rivers

Chilean Needle Grass (*Nassella neesiana*) **-** We have one known location that we are monitoring and there are several other locations reported by contractors or the community that need to be confirmed.

Blackberries (*Rubus fruticosus*) and **Gorse** (*Ulex europaeus*) are still an issue

Pest animal concerns

Deer – Impact on the communities desire to undertake activities such as revegetation as it is a waste of time and money if deer are just going to destroy all of our hard work

The Climate Smart Ag project undertaken by Deakin University pointed to Mansfield as suitable site for horticulture. The presence of deer in the current numbers and the lack of control that is occurring on public land makes this not viable given the extra need for extreme fencing, netting, etc.

Wombats - These are obviously native but impact substantially on farm infrastructure and landholders ability to farm particular animals. For example, as result of the presence of wombats, landholders cannot farm sheep effectively as they cannot maintain a secure fence that will keep sheep in.

Because of the damage, landholders are having to spend more time on the farm repairing fences and revegetation plots. At least 1hr a day is spent on farm to repair damage because of wombats. (365hrs a year @$30/hr. = 10,950 in labor cost along on one property)

Kangaroos - Like deer these are having an extreme impact on both farm infrastructure as well as carrying capacity of the farm enterprise.

Note: the issue of getting damage mitigation permits from state is an issue?

Wild Dogs or Dogs gone wild - Are preying on predominately prime lamb farmers, one example has seen more than 300 Lambs taken because of dog attack. Once ready for market these lambs would make conservatively $150 each (300 x 150 $45k out of a farm budget is extreme because of pest animals)

Goats - Of a lesser extent however small populations are grazing on private land in areas abutting the public land around Tolmie and Strathbogie Ranges.

Pigs - Of a lesser extent however small populations are grazing on private land in areas abutting the public land around Tolmie and Strathbogie Ranges. The major on farm impact is soil disturbance and the potential to initiate weed infestation or erosion.

Hares/rabbits are an impact on revegetation projects, foxes an ongoing issue as are feral cats

Regional weeds of concern

English Broome (*Cytisus scoparius*) - Tolmie it is growing in thickets along the waterways.

Local weeds of concern

St John's Wort (*Hypericum perforatum*) - Delatite Landcare Group have been investing their own funds to control this weed is areas such as Rifle Butts Rd, and the Delatite River catchment. Big issue on roadsides with spread risk, problem is growing.

Saffron Thistle (*Carthamus lanatus*) - Again localized issues however several land holders have coordinated action to have a strong impact on this weed. An example of landholder contribution and will is that a $6k incentive provided by the government turned into $30k of private investment in aerial spraying.

Cape Weed (*Arctotheca calendula*) - It is a land management issue, but the existence of cape weed on the exposed hills of Bonnie Doon area can lead to major erosion. With the climate change predictions of more intense summer rainfall increased cover on these hills would be beneficial to the retention of soils and maintenance of good water quality in our streams and entering directly into Lake Eildon.

Biosecurity concerns (e.g. feral pigs/disease risk, plant diseases, weed seed spread)

Pigs in the Strathbogies and Tolmie**, Indian Myna** (*Carothers tristis*) in peri-urban and townships

Deer - Impacting social amenity (road accidents, destroying gardens, fruit trees etc.) as well as farm - If a bovine disease such as foot n mouth was present in the deer population we would have no way of keeping if out of our cattle.

Patterson's Curse (*Echium plantagineum*) **-** recurring problem, many non-compliant farmers, also rampant on crown land. Issues with organic farming/ use of chemicals and contamination issues

Other natural resource impact issues?

Pest animals are impacting on people's decision making, including challenging the viability of farming or horticulture. For example, deer eating planted material.

http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/protecting-victoria-from-pest-animals-and-weeds/legislation-policy-and-permits/noxious-weed-and-pest-animal-management-your-legal-roles-and-responsibilities

Possible areas for action

- We need to ensure that the crown manage their land not just attempt to pass the role via incentives, exemptions or licensing.
- Enabling all parishes in the shire to obtain (without major paperwork) permits to control wombats
- Maintain the pet meat program for kangaroos as well as deer
- Incentive programs for weeds work
    - Coordinated approach

    - Gorse (*Ulex europaeus*) is the only species that Ag Vic will currently consider in the area for compliance
- Make it viable for farmers to control deer
- Need more state funded dogger's to work with communities
- Have a bounty, create opportunities to harvest and market meats i.e. deer/kangaroos
- Access to land ownership details is impacting the Landcare networks ability to promote and encourage coordinated action.
- Currently because of government not investing in this space we are asking the Landcare groups to deliver on broad community expectations (previously filled and set by government) with little or no resources.
- We need a reporting mechanism that works and is time responsive for the community to highlight the presence of target weeds and ensure that the appropriate action is taken - including feedback to the original reporter.
- Prime safe regulations are impacting on farmers ability to market Deer meat and process it.
- Opportunity to create a landholder information pack
- Work with shire and community to promote native plant street scaping not introduced species

Broken Boosey CMN

National weeds of concern
Bridal creeper *Asparagus asparagoides* is still common

Pest animal concerns
Signs of deer are widespread and increasing, and impacting on native plant species e.g. *Dillwynias, Eutaxias, Pittosporums* and *Bursarias* at some sites

Regional weeds of concern
Boxthorn *Lycium ferocissimum*, olive *Olea europaea*, Prairie Ground Cherry *Physalis viscosa*

Local weeds of concern
Horehound *Marrubium vulgare*, Sour-sob *Oxalis pes-caprae* and *Opuntia* cactus ssp

Biosecurity concerns (e.g. feral pigs, plant diseases)
Growing deer populations transmitting disease

Other natural resource impact issues?
Noted kangaroos not having as big an impact on native vegetation in cropping country, opportunity to undertake revegetation works in properties adjacent to cropping areas.

Whroo Goldfield CMN

National weeds of concern
Blackberries *Rubus fruticosus* agg.

Pest animal concerns
Feral pigs, goats, cats, hares, foxes

Regional weeds of concern
Blackberries *Rubus fruticosus* agg.

Local weeds of concern
Blackberries of McIvor's Creek

Biosecurity concerns (e.g. feral pigs, plant diseases)
Feral pigs and growing deer populations transmitting disease

Other natural resource impact issues?
Erosion, sparrows, Indian Myna

Gecko Clan Network

National weeds of concern

Action groups are operating for WONS blackberry (*Rubus fruticosus*), serrated tussock (*Nassella trichotoma*) and gorse (*Ulex europaeus*) (need long-term committed resources), all species active and spreading in some areas.

Pest animal concerns

Action group for rabbits, strong support for initiatives such as the Victorian Rabbit Action Strategy. Concern over local area impacts of wild dogs (e.g. Upper Ryan's Creek), foxes and feral cats, growing numbers of deer, including wallowing behavior impacting on water quality i.e. dams, browsing affecting riparian vegetation in some areas, Indian mynas (*Acridotheres tristis*) in peri-urban landscapes, increased native impacts of noisy miners (*Manorina melanocephala*) on woodland biodiversity, growing kangaroos impacting on farms, management decisions i.e. growing crops and travelling i.e. collisions common, wombats similar (also carry sarcoptic mange), impacting on fences, burrowing behavior an OHS risk to farmers. Would like to explore opportunities for harvesting of kangaroos and deer i.e. pet food. Ongoing issue of shooting deer/kangaroos, leaving carcasses, increased fly strike etc.

Regional weeds of concern

St John's wort (*Hypericum perforatum*), an ongoing issue (explore options for biological control), Calthrop (*Tribulus terrestris*) and bindi-eye (*Soliva sessilis*) spreading in Stewarton area, Cape weed (*Arctotheca calendula*) and Paterson's Curse (*Echium plantagineum*) need education programs on pasture management etc. Fleabane (*Conyza* ssp.) is very invasive and spreading, poor roadside management is driving this problem.

Biosecurity concerns (e.g. feral pigs, plant diseases)

Anthrax and septicemia risk from feral pigs and deer spreading disease. Chilean Needle Grass (*Nassella neesiana*), one isolated population with potential to eradicate, African Lovegrass (*Eragrostis curvula)* along roadsides, issues with plant ID i.e. native grasses vs introduced (education and awareness), ongoing issue of provision of good follow up and maintenance of services in PPA space, i.e. rabbit work for maximum impact etc., concern over climate impacts, dry periods reducing focus on PPA.

Other natural resource impact issues?

- Investment into public and private NRM can be compromised by impacts of deer and kangaroos
- Freeway is seen as the vector for weed movement through the region
- Increased investment and management of crown land and NP
- Better acceptance that landholders are responsible
- Lack of awareness (community awareness) of PPA issues
- Perceptions of 'shelter belts' harboring kangaroos

- Wombat, deer and kangaroo impacts on fencing
- Compliance and enforcement are important, run a pilot addressing issues of bad land management, no funding should be provided for no action, noting one bad neighbor can destroy good work
- Increase the use of community coordinated actions
- Address problem of apathy amongst some landholders (education program)
- PPA in peri-urban landscapes (education program)
- Multi-benefit compliance i.e. removing rabbits and blackberries helps everyone
- Rabbit-warren ripping in Aboriginal heritage space (education program)
- Provision of $'s for maintenance of current and past investment in PPA
- Have face to face discussions of the issues and solutions, bring everyone to the table, community-led action
- Peri-urban and absentee landholders provide access to increase knowledge, compliance and rules
- Department needs more people on the ground to drive compliance programs
- Increase the potential of R&D in bio-control space
- Need to manage red tape around things like ripping, at least 200m from waterways etc.

Goulburn Murray Landcare

Goulburn Murray Landcare Network

National weeds of concern

Blackberry
Bridal Creeper
Chilean Needle Grass
Serrated Tussock
Boxthorn

Pest animal concerns

Fox
Rabbit
Indian Mynah
Feral Cat
Carp
Oriental weather loach
Mosquito fish
Feral Pigs
Feral Horses
Emerging species - deer

Regional weeds of concern
African lovegrass,
Horehound,
Paterson's curse,

Calthrop
Prairie ground cherry,
Silverleaf Nightshade
Noogoora Burr,
St John's Wort,
Peppercorn (roadsides),
Briar Rose,
Bathurst Burr,
Olives
Feral fruit trees
Poplars – along roadways
Arrowhead

Biosecurity concerns (e.g. feral pigs, plant diseases)

- Water weeds and the health of our waterways are a cause for concern in the irrigation areas of our network. - The potential to block up waterways and create conditions suitable for non-native fish and introduced water creatures.
- Grasses are easily spread along our roadways and from farm to farm trade.
- Contractors – GM Water and Electricity suppliers checking meters and poles are
- Diseases from feral species- pigs, rabbits, cats, horses, potentially deer.
- General ignorance in identifying invasive plants and the confusion between native species and introduced ones requires attention for all sectors.
- Coordinated approaches to issues would be an ideal way to prevent the spread of PPA.
- Education around biosecurity issues and the potential impact on farming enterprises need to be addresses without "fear mongering"
- Revisiting areas of previous infestations within a reasonable time frame would assist with the control of feral plants, animals and disease.
- Climate change and the change in the type and variety of PPA into the future needs to be addressed

Other natural resource impact issues?

- Lack of funding and resources is an ongoing issue
- Relying on farmers to deal with all of these issues to the benefit of the whole community is a burden - a lot of landholders are not aware of the scale of some of the issues
- Community awareness of issues rather than emotional reactions need to be addresses (e.g. 'the poor little bunny' type of attitude)
- The financial burden to landholders is extreme for PPA control - it benefits the entire community and no credit is given to this. It is seen as a rural landholder problem.
- Climate change should be on the agenda with the opportunity to react immediately to PPA changes and additions
- The lack of department assistance and on-ground people is concerning to landholders as they are now reliant on private companies who sometimes "push" their own products as a solution to problems.
- The cost of Chemical certificates and the amount of time taken to complete a course is unjustifiable when most courses can be done on line – travel to the nearest course is sometimes more than 100km. - this is a deterrent for time-poor property owners.
- Lack of communication regarding PPA and where control is taking place (all agencies)

- Perhaps reward for “best practice” and a type of audit program which can be “self-assessment” could assist with correct behaviours

Lower Goulburn Conservation Management Network

National weeds of concern

Blackberry
Bridal Creeper
Chilean Needle Grass
Serrated Tussock
Boxthorn

Pest animal concerns

Fox - an ongoing concern for the protection both native and farmed species
Rabbit - especially on our sandhills
Indian Mynah
Feral Cat
Carp
Oriental weather loach
Mosquito fish
Feral Horses - spreading along our rivers and forests
Emerging species - deer along the Lower Goulburn

Regional weeds of concern

African lovegrass
Horehound
Paterson’s curse
Calthrop
Silverleaf Nightshade
Boxthorn
Noogoora Burr
St John’s Wort
Briar Rose
Bathurst Burr
Olives
Arrowhead

Biosecurity concerns (e.g. feral pigs, plant diseases)

- Water weeds and the health of our waterways are a cause for concern in the irrigation areas of our network. - The potential to block up waterways and create conditions suitable for non-

native fish and introduced water creatures. These weeds are difficult to deal with as any chemicals have the potential to create further problems
- Grasses are regularly spread along our roadways and from farm to farm trade.
- Contractors – GM Water and Electricity suppliers checking meters and poles need to be more aware of biosecurity issues

- Diseases spread from feral species- pigs, rabbits, cats, horses, potentially deer.
- General ignorance in identifying invasive plants and the confusion between native species and introduced ones requires attention for all sectors.
- Coordinated approaches to issues would be an ideal way to prevent the spread of PPA. E.g. fox control programs – this has been done in the past with good results and the impact of everyone working together creates "ownership" of a problem
- Education around biosecurity issues and the potential impact on farming enterprises need to be addresses without "fear mongering"
- Revisiting areas of previous infestations within a reasonable time frame would assist with the control of feral plants, animals and disease.
- Educating the urban community on the impacts of PPA on production and supply of food is an area which needs more work.
- Climate change and the change in the type and variety of PPA into the future needs to be addressed

Other natural resource impact issues?

- Lack of funding and resources is an ongoing issue
- Relying on farmers to deal with all of these issues to the benefit of the whole community is a burden - a lot of landholders are not aware of the scale of some of the issues
- Community awareness of issues rather than emotional reactions need to be addressed (eg: the poor little bunny – type of attitude)
- The financial burden to landholders is extreme for PPA control - it benefits the entire community and no credit is given to this. It is seen as a rural landholder problem.
- The lack of department assistance and on-ground people is concerning to landholders as they are now reliant on private companies who sometimes "push" their own products as a solution to problems.
- The cost of Chemical certificates and the amount of time taken to complete a course is unjustifiable when most courses can be done on line – travel to the nearest course is sometimes more than 100km. - this is a deterrent for time-poor property owners.
- Lack of communication regarding PPA and where control is taking place (all agencies)
- Perhaps reward for "best practice" and a type of audit program which can be "self-assessment" could assist with correct behaviours
- Climate change should be on the agenda with the opportunity to react immediately to PPA changes.

<u>Regent Honeyeater Group Inc</u>.

National weeds of concern

Blackberry *Rubus fructicosus,* Bridal Creeper *Asparagus asparagoides,* Chilean Needle Grass *Nassella neesiana*, Gorse *Ulex europaeus,* Serrated tussock *Nassella trichotoma,* Willows *Salix sp.*

Pest animal concerns

Rabbits, strong support for initiatives such as the Victorian Rabbit Action Strategy, foxes and feral cats, Indian mynas *Acridotheres tristis* in peri-urban landscapes, increased native impacts of noisy miners *Manorina melanocephala* on woodland biodiversity, European carp *Cyprinus carpio* and other exotic fish impacting on wetlands and waterway ecosystems.

Regional weeds of concern

African Love Grass *Eragrostis curvula*, Caltrop *Tribulus terrestris,* Boxthorn *Lycium ferocissimum,* Horehound *Marrumbium vulgare,* Bathurst Burr *Xanthium spinosum*, Prairie Ground Cherry/Tomato Weed *Physalis viscosa,* Noogoora Burr *Xanthium strumarium,* Artichoke Thistle *Cynara cardunculus,* Sweet Briar/Briar Rose *Rosa rubiginosa*, Hawthorn *Crataegus monogyna.*

Local weeds of concern

Blue Periwinkle *Vinca major,* Box Elder/Maple *Acer negundo*, Arum lily *Zantedeschia aethiopica,* Arrowhead *Sagittaria graminea*, Japanese Honeysuckle *Lonicera japonica*, English Ivy *Hedera helix,* Castor Oil Plant *Ricinus communis*, Phalaris *sp,* Spiny Rush *Juncus acutus.*

Biosecurity concerns (e.g. feral pigs, plant diseases)

Exotic weed seed spread due to poor biosecurity practices transporting undesirable plants around.

Other natural resource impact issues?

Dieback in woodland habitats, loss of connectivity between remnants

<u>Upper Goulburn Landcare Network</u>

National weeds of concern

Blackberries remain an ongoing concern, the 'softly softly' approach to blackberry management has been tried for some years, however unless it is supported with genuine enforcement we will never succeed in controlling this weed, let alone eliminate it. Countless hours and costs have been incurred by serious controllers, are being put at risk by recalcitrant neighbours who openly flout the spasmodic attempts at enforcement.

Pest animal concerns

Deer have emerged as a major threat to biodiversity plantings due to browsing pressure and the ongoing risk to drivers and vehicles. It appears recent arrangements show that some action is happening, however there remains a sense that the arrangements are designed to accommodate the game hunters. Kangaroos remain an ongoing challenge similar to the deer space and their impacts. We note it is pleasing when deer and kangaroos are 'recycled'.

Regional weeds of concern

Blackberries

Local weeds of concern

Blackberries

Biosecurity concerns (e.g. feral pigs, plant diseases)

Other natural resource impact issues?

Longwood Plains Conservation Management Network

National weeds of concern

Chilean Needle Grass, Gorse, Blackberries

Pest animal concerns

Foxes, kangaroos, rabbits

Regional weeds of concern

Bridal Creeper

Local weeds of concern

Paterson's Curse, Horehound, Prairie Ground Cherry, Sweet Briars, St John's Wort

Weeds spread by shire in road materials

Biosecurity concerns (e.g. feral pigs, plant diseases)

Small landowners who have hobby farms with goats and fat lamb breeds and do not have secure fences potentially pose a threat to adjoining landholders with merino sheep in terms of spread of diseases such as lice and major financial costs associated with elimination of diseases.

Other natural resource impact issues?

Overgrazing of land by horses, goats, dorper sheep/other fat lamb breeds (that have no respect for fences), often by landowners who have small blocks of land and not secure fences for the type of animals they own.

Granite Creeks Landcare Network

National weeds of concern

Serrated Tussock (has been located in our area), Chilean Needle Grass, Blackberries

Pest animal concerns

Control of rabbits remains a central focus for our groups. The fact that rabbit numbers are at an historical low presents a significant challenge because people (community) don't understand a problem they cannot see. We need to be supported to continue the maintenance of low rabbit number, this has been the first year in about 25 years that we have not been supported through grant money. We have had to use our own money this year, this is not the basis of a sustainable future as our funds will run out very quickly. We are spending this money to maintain the community confidence in our group and what it has achieved. Deer are the new rising problem with numbers being seen rising rapidly across our area.

Regional weeds of concern

Control of blackberry is a part of our integrated rabbit control program. Blackberry is also controlled, in the area of 2 of our Landcare groups, through a Blackberry Action Group that has engaged more than 30 participants and continues to attract other landholders. Roadside control is addressed through the joint actions of the Landcare groups and the Strathbogie Shire via Roadside Weeds and Rabbits program funded by State Government. This program is currently under review by the government. St. John's Wort is extensively spread across our area, especially along roadsides but to an increasing prevalence on private land.

Local weeds of concern

Prairie Ground Cherry, Ink weed, Briar rose, are localised, spreading in Landcare group areas

Biosecurity concerns (e.g. feral pigs, plant diseases)

Feral goats and increasing deer numbers.

Other natural resource impact issues?

- Urban and peri-urban rabbit control is a tough issue
- Increasing numbers of kangaroos, and hence impact on natural revegetation and pasture; and numbers of wombats hence the impact on stream banks and OH&S issues caused by unseen burrows
- Chilean needle grass and African love grass spreading along Vic Roads/shire roads
- Current review of the Compliance and Enforcement policy that is progressing, is likely to have an impact on the way pest plant and animal control may work into the future
- It is suggested that GB CMA (and all CMAs) strengthen their institutional and personnel networks by establishing a 'formal' relationship with each of the four 'taskforces': Victorian Rabbit Action Network (VRAN), Victorian Serrated Tussock Working Party (VSTWP), Victorian Gorse Taskforce (VGT) and the Victorian Blackberry Taskforce (VBT). These are the groups responsible for the community action and developing leadership within communities in regard to each of these pests.

Appendix 13B - Local Government Network Pest Plant, Animal and Biosecurity Issues

- Mitchell Shire Council
- Murrindindi Shire Council
- Campaspe Shire Council
- Mansfield Shire Council
- Benalla Shire Council
- Strathbogie Shire Council
- Moira Shire Council
- Greater Shepparton Shire Council

Mitchell Shire Council

National weeds of concern

Chilean Needle Grass *Nassella neesiana*, Willows *Salix sp.*, Blackberry *Rubus fructicosus*, Bridal Creeper *Asparagus asparagoides*, Boneseed, Broom species, Serrated Tussock *Nassella trichotoma*, Gorse *Ulex europaeus*

Pest animal concerns?

Rabbits, foxes, deer, kangaroos

Regional weeds of concern?

Same as WONS

Local weeds of concern?

Onion orchid *Microtis parviflora*, Kate Blood *Bulbil watsonia*, Spanish Heath *Erica lusitania***,** Monterey Pine *Pinus radiata*, Cootamundra wattle *Acacia dealbata*, *Prunus* species, Tagasaste *Cytisus proliferus*, *Pittosporum undulatum*

Biosecurity concerns? (e.g. feral pigs, plant diseases)

Phytophthora cinnamomi (dieback impacts on native trees)

Other natural resource impact issues?

Providing landholders technical assistance and advice with erosion

Decline of incentives for improved private land management

Lack of CALP Act 1994 compliance programs

Pest plant/pest animal control on crown land required.

Ongoing funding for local governments to continue with pest plant and pest animal control on roadsides

Murrindindi Shire Council

National Weeds of Concern (11 WONs out of 32**)**

- African Boxthorn
- Blackberry
- Boneseed (reported once on Melba Hwy and Vic Roads removed once reported)
- Bridal Creeper
- Cape Broom
- Chilean needle Grass
- English Broom
- Gorse
- Serrated Tussock (I believe there is an active watch by DELWP and Biosecurity around this plant in our shire because surrounding Shires have in their municipality)-currently not aware of presence but significant enough to list as a concern)
- Silver-leaf Nightshade
- Willows

Pest Animal Concerns

- Deer
- Feral Cats
- Feral Goats
- Feral Pigs
- Foxes
- Lerps (indicative of cleared understorey in the landscape - have decimated Red Gum trees in the district - as a final push after drought, isolation, compaction…
- Queensland Fruit Fly
- Rabbits
- Wild Dogs
- Wombats and Kangaroos can also be problematic at times

Regional Weeds of Concern

- Bathurst Burr
- Blackberry
- Cape Broom
- English Broom
- Gorse
- Great Mullein
- Hawthorn
- Heliotrope
- Paterson's Curse
- Ragwort
- Spear Thistle
- St John's Wort
- Sweet Briar
- Thistles
- Thorn Apple
- Tutsan

Local Weeds of Concern

- Agapanthus
- Arum Lily
- Bathurst Burr

- Blackberry
- Blue Periwinkle
- Bridal Creeper
- *Briza* species
- Cape Broom
- Cape Ivy
- Cherry Laurel
- Chilean Needle Grass
- Cocksfoot
- Cotoneaster species
- Couch
- Desert Ash
- English Broom
- English Ivy
- Fleabane
- Japanese Honeysuckle
- Gazania
- Gorse
- Hawthorn
- Heliotrope
- Himalayan Honeysuckle
- Holly
- Morning Glory
- Pampas Grass
- Paterson's Curse
- Phalaris
- Portugal Laurel
- Privet
- Prunus species
- Silver Poplar
- Silver-leaf Nightshade
- Spanish Heath
- Spear Thistle
- St John's Wort
- Sycamore Maple
- Sweet Pittosporum
- Sweet Vernal Grass
- Tradescantia
- Tree of Heaven
- Twiggy Mullein
- Watsonia
- Wild Oats
- Willows

Biosecurity Concerns

- Deer, feral pigs, feral goats, feral cats
- Dutch Elm Disease
- Elm Leaf Beetle
- Myrtle Rust
- Pine Scale
- Queensland Fruit Fly
- Rabbits

Other natural resource impact issues

- Grant funding to assist with control of invasive species - invasive species are ongoing issues that require continuous follow up. Grant funding needs bipartisan support to fund programs and contracts associated with employment of officers involved in pest species management for a minimum of 3 years.
- State Government funding for invasive pest management is essential for Local Councils, particularly smaller populated, large area rural councils such as Murrindindi. Whilst local government is appreciative of any funding for assistance in this area, some conditions around the expenditure of these funds causes operational constraints. Only spending on regionally controlled or regionally prohibited weeds neglects to address other problematic weeds that could be much more detrimental to both agricultural land and bushland. An example is Chilean needle grass, whilst considered a WoNS, in Victoria it is classified as a restricted weed which means there is no requirement for land managers to control on their property, and as such funding received does not cover for this. Both Holly and Ivy are very problematic in Murrindindi, and especially so in the higher rainfall areas of Marysville, Narbethong and Kinglake regions. These plants spread rapidly, invade bushland and destroy large areas of habitat. Again, because they are environmental weeds not noxious weeds, spending grant funds on these plants is not allowed. Observations over 10 years in the area have seen Holly and Ivy become more widespread and detrimental than Paterson's Curse, a regionally controlled weed that funds could be expended on. Grant funding needs to be flexible enough to address specific concerns.
- Blackberry Action Groups - seed funding important and valuable, however engagement of Project Officers beyond 1-2 years is essential for the ongoing success of the programs. In the past, a program may be gaining momentum just as the time the funding ends, often without the Project officer it falters.
- Good Neighbour funding has historically been inadequate and only spent on interface between public land and private property. There has been a long wait for good neighbour funding, and a new site must wait for a vacancy in order to be placed on a program. State Government funding for control of pest species on State Government land is inadequate.

<u>Campaspe Shire Council</u>

National weeds of concern

Blackberries, Bridal Creeper, Prickly Pear *Opuntia sp.*, Boneseed, Boxthorn, Silverleaf Nightshade, Chilean Needlegrass

Pest animal concerns

Rabbits, foxes, Indian mynas, feral cats

Regional weeds of concern

Calthrop, Sweet Briar, Paterson's Curse, Spear Thistle, Horehound

Local weeds of concern

Khaki Weed

Biosecurity concerns (e.g. feral pigs, plant diseases)

Fruit fly

Other natural resource impact issues?

Ongoing loss of habitat, through removal of native vegetation and increasing habitat fragmentation. While there is no large-scale clearing of native vegetation in the shire, continued incremental losses are occurring, through direct removal, decline of the native vegetation and lack of recruitment. Managing water quality and quantity. Impacts of climate change. Lack of CALP Act 1994 compliance programs, some landholders continue to have neighbors that don't undertake weed control on their property. Ongoing funding for local governments to continue with pest plant and animal control on roadsides.

Mansfield Shire Council

National weeds of concern

Chilean Needle Grass

Pest animal concerns

Deer, Wild Dogs, Pigs

Regional weeds of concern

Blackberries, Gorse, Broom, community concern about St John's Wort and Paterson's Curse.

Local weeds of concern?

Biosecurity concerns (e.g. feral pigs, plant diseases)

Works vehicles and equipment spreading weeds, wild fruit trees area an issue that is yet not understood in Mansfield with respect to future fruit fly issues.

Other natural resource impact issues?

Native vegetation loss in subdivisions, if the applicant proposes offsets, there are limited grounds to not support an application. Requirement for native vegetation offsets within an LG area of vegetation removal would strengthen the regulations.

Benalla Rural City Council

In brackets not as widespread or high priority

National weeds of concern

Cabomba
Chilean needle grass (R)
Bridal creeper (R)
Blackberry (C)
Cape Broom (C)
Gorse (C)
African boxthorn (C)

Pest animal concerns?

Wild dogs, Deer, Rabbits, Foxes, Wild pigs, Common myna, Fruit fly, European Hares

Regional weeds of concern?

St John's wort (C)
Paterson's curse (C)
Silver leaf night shade (C)
African love grass (C)
Bathurst burr (C)
Prairie ground cherry (C)
Sweet briar (C)
Caltrop (C)
(Prickly pear (R))
(Stinkwort (R))
(Hawthorn (C))
(Horehound (C))

Local weeds of concern?

Heliotrope, Prunus sp., Fleabane, Wild tobacco

Biosecurity concerns? (e.g. feral pigs, plant diseases)

Importing of hay/fodder
Stock agistment

Other natural resource impact issues?

Climate change/ Solar Farms, Firewood collection, Native vegetation - illegal clearing, cumulative effects of small losses, lack of offsets availability in municipality, Forestry (pine plantation management)

<u>Moira Shire Council</u>

National, Regional and Local weeds of concern

Weeds of note: Serrated Tussock (Small outbreak in Nathalia), Chilean Needle Grass (Small outbreak on Murray Valley Highway near Thombs Rd Burramine), Spiny Burr Grass (Mainly Cobram area- extent unknown-mainly on sandy soils)

Abundant (problem) species:

- Horehound;
- St John's Wort;
- Paterson's Curse;
- Sweet Briar;
- African Boxthorn;
- Bathurst Burr;
- Bridal Creeper
- Caltrop;
- Silver Leaf Nightshade;
- Prairie Ground Cherry;
- African Lovegrass; and
- Prickly Pear

Complete table of pest plant species identified in Moira:

Common Name	Species	Weeds Of National, Regional and Local Concern
Agapanthus	*Agapanthus praecox subsp. orientalis*	Local
Khaki Weed	*Alternanthera pungens*	Regional
Bridal Creeper	*Asparagus asparagoides*	National
African Lovegrass	*Eragrostis curvula*	Regional
Spiny Burr Grass	*Cenchrus longispinus*	Regional
Bindweed	*Convolvulus arvensis*	Regional
Pampas Grass	*Cortaderis selloana*	Local
Paddy melon	*Cucumis myriocarpus*	Local
Lucerne Tree	*Cytisus proliferus*	Local
Paterson's Curse	*Echium plantagineum*	Regional
Flax Leaf Fleabane	*Erigeron bonariensis*	Local
African Lovegrass	*Eragrostis curvula*	Regional
Fig Tree	*Ficus carica*	Local
Desert Ash	*Fraxinus angustifolia*	Local
Galenic	*Galenia pubescens*	Local
Gazania	*Gazania spp*	Local
Honey Locust	*Gleditsia triacanthos*	Local
Common ivy	*Hedera helix*	Local
St John's-wort	*Hypericum perforatum*	Regional
African boxthorn	*Lycium ferocissimum*	National
Horehound	*Marrubium vulgare*	Regional
White Cedar	*Melia azedarach*	Local
Chilean Needle Grass	*Nassella neesiana*	National
Serrated Tussock	*Nassella trichotoma*	National
Olive Tree	*Olea europaea*	Local
Prickly Pear	*Opuntia ficus-indica*	National
Coastal prickly pear	*Opuntia littoralis*	National
Date Palm	*Phoenix canariensis*	Local
Date Palm	*Phoenix dactylifera*	Local

Groundcherry	*Physalis heterophylla*	Local
Horehound	*Phytolacca octandra*	Regional
Poplar Tree	*Populus tremula*	Local
Fruit Tree	*Prunus sp*	Local
Sweet Briar	*Rosa rubiginosa*	Regional
Blackberry	*Rubus fruticosus*	National
Arrowhead	*Sagittaria spp*	Regional
Willow	*Salix spp*	National
Pepper Tree	*Schinus areira*	Local
Pepper Tree	*Schinus molle*	Local
Silverleaf nightshade	*Solanum elaeagnifolium*	National
Jerusalem Cherry	*Solanum pseudocapsicum*	Local
Bindii (Caltrop)	*Tribulus terrestris*	Regional
Bathurst Burr	*Xanthium spinosum*	Regional

Pest animal concerns

Rabbits and Foxes

Horses in Barmah (not sure you want to touch on that one)

Noisy Miners

Native Species - Corellas

Biosecurity concerns (e.g. feral pigs, plant diseases)

Ask Agriculture Victoria

Other natural resource impact issues?

Loss and degradation of native vegetation both grasslands and woodlands.

Extended dry conditions and droughts (climate change)

Blue Green Algae outbreaks / poor water quality / fish deaths etc.

<u>Strathbogie Shire Council</u>

National weeds of concern

Restricted Weed

Bridal Creeper - doesn't do well in drought conditions but even on our highest conservation rated roadsides it has a presence. Was sprayed in Euroa, Gooram and Ruffy in 17/18.

Pest animal concerns

Rabbits (Granite Creeks Landcare very active, and in partnership with Council on one project).

Feral cats - would like to have a program on cats. There is a feral Manx population in Nagambie (!!)

Common Myna birds - seems to be a local uprising on this

Feral deer - have even seen them on roadsides right next to Euroa and anecdotal evidence that they are getting much worse and quite quickly.

Regional weeds of concern

Serrated Tussock - Strathbogie spot sprayed and manually removed small numbers in 17/18 during Feb-Oct but luckily not many plants have been spotted in the district.

St John's Wort - Strathbogie, Ruffy, Euroa, Gooram, Violet Town, Sheans Creek, Longwood East are all highly impacted by SJW. Treatment was delayed in 17/18 due to weather conditions, but over 58km of roadsides as a vector was treated in all, though absentee landowners who are not across weed management methods are a concern. Council is partnering in Healthy Hectares to assist with this.

Blackberry - similar to St John's Wort. Also, across Avenel, but seems to be particularly an issue around Ruffy. Of concern around waterways, particularly isolated waterways licenced or adjacent to private land. Roadside Weed and Pest program treated 133km of Blackberry in 17/18.

Sweet Briar Rose - has been treated up Shean's Creek and Strathbogie where a lot is found on private land around waterways. Ruffy also is regularly treated. On the other side of the highway Mitchellstown and Longwood areas have been extensively treated. 15km of Sweet Briar on our roadsides were treated in 17/18.

Horehound - Nagambie and Ruffy, as well as Euroa – 18km of roadsides treated.

Local weeds of concern

Biosecurity concerns (e.g. feral pigs, plant diseases)

QLD fruit fly. We have the QLD Fruit Fly Taskforce, but all its testing and focus is on high production regions, so we don't have FF numbers.

Other natural resource impact issues?

We are tackling the issues on Castle Creek. Lots of erosion and scouring/deepening. There is a lot of erosion and salinity issues around Shean's Creek, Violet Town and on the plains areas. It would be good to look at a program for landowners using latest techniques. A lot of new landowners have been buying in these areas in the last year.

There seems to be a plague of illegal tree removals across the region. I am exploring a move into local government's local laws for roadsides as other peri-urban councils have done, as the Planning and Environment Act is not great as a deterrent. Also, I have long believed we need to all partner as Councils/CMA to put in for a professional publicity campaign. With external professionals who know our audience and what we want as outcomes. I'm happy to put money in, so are others, and it's far less money than what we pay to Spire to investigate people hacking away at 300 year old trees!

Strathbogie Shire is happy to share their 2017 Roadside Conservation Assessment access database with the CMA (roadside zones by EVC, by status, and roadsides by flora species, plus thousands of images) to maximise the information's utility to benefit the Shire. Information is also on www.vvb.org.au in spatial format. Weeds (too many of them!) were included in this study. Let me know and I'll organise.

Greater Shepparton Shire Council - PPA Issues/concerns

National weeds of concern

- Madeira vine (along banks of Goulburn River)
- Bridal creeper
- Chilean Needle Grass
- Willow
- Blackberry
- Silver leaf night-shade

Pest animal concerns

- Indian miners
- Cats
- Rabbits
- Hares
- Red Fox
- Oriental Weatherloach

Regional weeds of concern

- African Boxthorn
- African love grass
- Arrowhead
- Bathurst Burr
- Caltrop
- Khaki weed
- Noogoora Burr
- Paterson's Curse
- Prairie Ground Cherry
- Prickly Pear
- Skeleton Weed
- Soursob
- Spiny burr grass/gentle Annie
- St John's Wort
- Sweet Briar

Local weeds of concern

- All above
- Chilean Needle Grass
- Arum lily
- Blue periwinkle
- Desert Ash
- Hoary Cress
- Horehound
- Spiny Rush
- Variegated Thistle
- Moth vine/plant

- Boneseed
- Pampas Grass
- Galenia pubescens
- Lippia - *Phyla canescens*

Biosecurity concerns (e.g. feral pigs, plant diseases)

- Plant diseases such as myrtle rust
- Loss of native insects/increase in pest species

Other natural resource impact issues?

- Lack of a sense of urgency regarding climate change impacts on increasingly stressed natural environment and depleting biodiversity.

SIRPPIC Feedback on their biosecurity, pest plant and animal concerns with particular focus on the Irrigated landscape.

National weeds of concern

Bridal creeper - becoming increasingly prevalent in this region, particularly in existing remnants, along waterways and roadside vegetation

Chilean Needle Grass (recently found in Nathalia)

Serrated Tussock

African Boxthorn (particularly under remnant vegetation and roadsides)

Pest animal concerns

Deer, Feral Cats, Carp, Foxes, Rabbits, Common/Indian Myna (mynah)

Regional weeds of concern

Bindi weed
Paterson's Curse

Bathurst Burr/ Scotch Thistle (particularly on areas transitioning land use)

Blackberry & Sweet Briar Rose

Noogoora Burr (along waterways)

Biosecurity concerns (e.g. feral pigs, plant diseases)

Plant pathogens (e.g. in crops, remnant vegetation - including pest insects)

Other natural resource impact issues?

Blue-green algae in waterways, particularly river systems

Lack of funding to regional areas without existing control programs

Management of carp and understanding the potential impacts of release of the carp virus

Control of Common/Indian Myna birds and their dislocation of native species

Appendix 14 - STANDARD OPERATING PROCEDURE (GB CMA)

GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

RISK PROCEDURE

RSK 008

BIOSECURITY SITE VISIT PROCEDURE

DATE CREATED:	March 2019
DATE REVIEWED:	New procedure
REVIEWED BY:	GB CMA Management Team
EDITS/AMENDMENTS:	
DATE APPROVED:	09 April 2019
DATE OF NEXT REVIEW:	April 2022

PURPOSE

In order to prevent and / or minimise the spread of animal and plant pests and diseases, this Procedure covers the following types of site visits with regard to biosecurity controls at the Goulburn Broken CMA to be followed by all Personnel and Employees:

- Single site visits (to a farm or public land)
- Multiple site visits (e.g. farm to farm, farm to public land, etc.)
- Field days – many cars and visitors to a site
- Contractors employed by the GB CMA working on farm or public land sites
- Visits in Known Disease Zone or Protection Districts.

DEFINITIONS

CEO - Chief Executive Officer

Senior Managers - Direct reports to the CEO employed under a GSERP pro-forma contract.

Employees - Employees of the Goulburn Broken CMA engaged under the provisions the Goulburn Broken Catchment Management Authority Enterprise Agreement.

Personnel - includes all employees of the Goulburn Broken CMA, contractors, consultants, casual staff, committee members and board directors.

REPLACES

Nil

REFERENCES

GOV 006 - Motor Vehicle Policy

OHS Policy & Procedures

Community Event / Field Day JSA

Agriculture Victoria Standard Biosecurity Operating Procedure

Goulburn Broken CMA Biosecurity JSA checklist

PROCEDURAL TEXT

Application of the Procedure

This procedure is applicable to Goulburn Broken Catchment Management Authority (CMA) employees, consultants, casual staff, committee members, board members and contractors.

Consultation

The Goulburn Broken CMA is committed to consultation and cooperation between management and employees. The Goulburn Broken CMA will involve staff both formally and informally in workplace change that would impact on its employees.

Communication of the Procedure

All personnel will receive information about the procedure at induction and will be provided with electronic access or a written copy of the procedure after any revisions.

The approved procedure will be available to all staff on the Goulburn Broken CMA portal site.

1.0 Background

Biosecurity is fundamental to the health, well-being and prosperity of all Australians. Pests and diseases can threaten the region, state and national agricultural sectors, environment, horticulture and animal industries and potentially harm human health.

This procedure outlines a set of measures and processes designed to protect and / or minimise a property or public land from the entry and spread of pests, diseases and weeds.

GB CMA would take advice from Agriculture Victoria and support any operations in the event of outbreaks. Agriculture Victoria is the primary agency responsible for biosecurity in Victoria.

2.0 Procedure

The following procedure has been developed using a risk-based approach to the following site visits:

- Single site visits (to a farm or public land)
- Multiple site visits (e.g. farm to farm, farm to public land, etc.)
- Field days – many cars and visitors to a site
- Contractors employed by the GB CMA working on farm or public land sites
- Visits in Known Disease Zone or Protection Districts.

Types of Visit to site(s)	Response
1A Individual Farm Visits **No outbreak in place** **(GB CMA Risk Rating 3)**	• Standard vehicle cleanliness required (e.g. if dirty or contaminants obvious, vehicle must be cleaned) AND • As per vehicle maintenance requirements under the Motor Vehicle Policy AND • Ring landowner to seek any biosecurity instructions before entering property AND • Adhere to any biosecurity signs on farm gate AND • Avoid roaming unnecessarily on property and use property owners. vehicle if assessed by staff as safe to do so and best option.
1B Individual Farm Visits **Outbreak in place (Disease Zone and Protection Districts)** **(GB CMA Risk Rating 6)**	• **Reconsider need for visit and decide on option 1 or 2 below:** 1. Site visits not permitted in outbreak area OR 2. Exception is if required as per statutory or emergency requirements then: Adopt existing AgVic Standard Biosecurity Operating Procedure or Contractor Procedures if prequalified and to same standard as AgVic Procedure (see appendix).
2A • **Multiple Farm Visits OR** • **Field days** **No outbreak in place** **(GB CMA Risk Rating 4/5)**	• Standard vehicle cleanliness required (e.g. if dirty or contaminants obvious, vehicle must be cleaned) AND • As per vehicle maintenance requirements under the Motor Vehicle Policy AND • Ring landowner to seek any biosecurity instructions before entering property AND • Follow the Goulburn Broken CMA Biosecurity Checklist i.e. detailed steps regarding vehicle & equipment Hygiene and foot traffic (see appendix 2) entering/exiting a property (e.g. foot baths etc.) AND • Adhere to any biosecurity signs on farm gate AND • Avoid roaming unnecessarily on property and use property owners. vehicle if assessed by staff as safe to do so and best option.
2B • **Multiple Farm Visits OR** • **Field days OR** • **Visits in Known Disease Zone or Protection Districts.** **Outbreak in place** **(GB CMA Risk Rating 6)**	• **Site visits not permitted in outbreak area**
3A Contractors employed by the GB CMA	1. Use existing contractor biosecurity procedure if prequalified contractor.

Types of Visit to site(s)	Response
No outbreak in place **(GB CMA Risk Rating 5)**	OR in the absence of such a procedure above 2. Contractors must use GB CMA Procedure as per 2A above.
3B Contractors employed by the GB CMA **Outbreak in place (Disease Zone and Protection Districts)** **(GB CMA Risk Rating 5)**	• **Reconsider need for visit and decide on option 1 or 2 below:** 1. Site visits not permitted in outbreak area OR **2.** Exception is if required as per statutory or emergency requirements then: Adopt existing AgVic Standard Biosecurity Operating Procedure or Contractor Procedures if prequalified and to same standard as AgVic Procedure (see appendix).
4A Visits in Known Disease Zone or Protection Districts. **No outbreak in place** **(GB CMA Risk Rating 5)**	Reconsider need for visit. If needed: 1. Observe all restrictions of plant or animal material, equipment or machinery and follow official state advice and signage AND 2. Standard vehicle cleanliness required (e.g. if dirty or contaminants obvious, vehicle must be cleaned) AND 3. As per vehicle maintenance requirements under the Motor Vehicle Policy AND 4. Ring landowner to seek any biosecurity instructions before entering property AND 5. Follow the Goulburn Broken CMA Biosecurity Checklist i.e. detailed steps regarding vehicle & equipment Hygiene and foot traffic (see appendix 2) entering/exiting a property (e.g. foot baths etc.) AND 6. Adhere to any biosecurity signs on farm gate AND 7. Avoid roaming unnecessarily on property and use property owners. vehicle if assessed by staff as safe to do so and best option.

RESPONSIBILITIES / AUTHORISATION

Procedures are developed by management to implement policy, endorsed by the Management Team and Approved by the Chief Executive Officer. Review

The Corporate Manager will review this procedure every three years and forward to the Goulburn Broken CMA Management Team for endorsement.

AUTHORISATION AND ENDORSEMENT

Final version 1.0 endorsed and approved by Management Team at GBMT142 on 9th April 2019.

Appendices

1. AgVic Standard Biosecurity Operating Procedure
2. Goulburn Broken CMA Biosecurity JSA checklist

Appendix 1 AgVic Standard Biosecurity Operating Procedure

Document Title:	Minimum Biosecurity Considerations when Entering and Exiting Properties
Effective from:	27 January 2016

PURPOSE

In order to prevent the spread of animal and plant pests and diseases and invasive pests, this procedure outlines the basic principles that all staff must follow when conducting field work on public land/amenity sites and private property. Adhering to these principles will minimise the risk of weed, pest and pathogen spread and ensure public confidence in our efforts to protect and promote biosecurity.

SCOPE

1. This document supports a plan for the welfare of staff.
2. This document describes the biosecurity precautions to be taken by staff when visiting public land/amenity sites and private properties.
3. These are the **minimum** precautions to be undertaken.
4. This document **does not** detail measures to be undertaken in the event of specific emergency animal or plant diseases, nor personal protective equipment required for specific circumstances e.g. entry into an intensive poultry farm.
5. The precautions in this document apply only if staff enter production areas of a property or areas other than a residence or office infrastructure.

PROCEDURES

Pre-visit risk appraisal and planning

Prior to visiting unfamiliar properties, staff should discuss the visit with the local staff and/or refer to the regional maps available to identify potential issues for consideration. Identification of these issues will guide procedures to be followed when entering and exiting the property.

The table in **Appendix One** should be used as a precautionary risk assessment before entering and exiting public land/amenity sites and private property. For the purposes of this table 'Minimum Biosecurity Standard Operating Procedures' refers to this whole procedure.

General principles when visiting properties

- Where practical, talk to the land owner prior to entering the property to identify any potential biosecurity issues.
- Where practical, arrange to meet at the house or on a sealed or gravel area away from production areas.
- **Always** arrive at a property with a clean vehicle, protective clothing and appropriate equipment.
- Where practical, walk instead of driving within the property/site or, where possible, use the land owner's vehicle to avoid contamination and spread of potential biosecurity risks.
- Avoid unnecessary contact with plants and animals. Use disposable gloves or sanitize hands after contact with plants, animals, dirt, machinery or used equipment.
- Where required and/or requested, use clean protective clothing (i.e. disposable overalls).

Exit procedures where NO biosecurity hazards observed

- Clean tools and boots, and waterproof clothing of visible mud/soil with soapy water, and spray with disinfectant. Staff should be familiar with, and observe, all safety precautions recommended by the manufacturer when using disinfectants,
- Clean clothing so they are free of seeds or other organic debris (i.e. seeds in socks).
- Place soiled protective clothing and paper towels in a sealable bag for later cleaning and disinfection, or disposal
- Hands should be thoroughly cleaned with either soapy water, alcohol-based wipes or gel,
- Vehicles and equipment must be cleaned of all obvious dirt, mud or plant debris before continuing onto other properties,
- Where immediate cleaning of the vehicle is impractical (due to isolation etc.), it should be cleaned prior to returning to the depot provided the risk remains low
- **A record must be kept of the date, time and location at which the vehicle and equipment is cleaned, and the properties visited prior to cleaning. This is important for future trace-back. Records could be required if litigation arises from a pest/disease outbreak on a property visited by staff.**

Exit procedures where a potential biosecurity risk IS observed

- **Animal Health/Welfare Issue**

  Staff suspecting that a potential exotic animal disease is present **must** call their local DJPR office and follow their directions prior to exiting the property.

- **Invasive Plant or Animal Infestation**

  Staff suspecting that a property is infested with a high-risk invasive species **must** call their local DJPR office to report the issue and seek advice prior to exiting the property.

- **Emergency Plant Pest/Disease**

  Staff suspecting that an emergency plant pest/disease is present **must** call their local DJPR Office and report the issue and seek advice prior to exiting the property.

Recording

Staff **must** keep accurate records as to their movements and actions. A note book should be stored in each Biosecurity Kit for this purpose. Alternatively, records may be kept in diaries or field notebooks. For each property visit the following details must be recorded:

- The property address, land owner's name and contact details
- The date, time of entry and exit from the property
- Actions taken whilst on the property (including a map if possible)
- Biosecurity measures undertaken when entering/exiting property

Records could be required if litigation arises from a pest/disease outbreak on a property visited by AgVic staff.

Staff must ensure they use correct manual handling techniques when maneuvering the Biosecurity Kit.

Related Information

- Grape Phylloxera Survey Procedures (PSS-09)
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/PSS
- PCN Survey Procedure (PSS-07)

  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/PSS
- PSP-01 Pest/Disease Interceptions (S 5.2 & 5.5)
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/PSP
- On-farm hygiene for potato cyst nematode management
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/surveys
- Biosecurity Procedures when visiting farms or livestock facilities SOP
  bioweb2/sites/animal/Lists of SOPS
- ASBO Biosecurity Regional Maps

  bioweb2/sites/plant/zone map
- Legislation

  Plant: bioweb2/sites/plant/legislation

  Animal: bioweb2/sites/animal/legislation and compliance

APPENDIX ONE

Enterprise Type	Warning	Notes	Relevant Procedures
Vineyard	NO VEHICLE ACCESS WITHIN PRODUCTION AREA CHECK DISEASE ZONES	Observe all restrictions on movement of grapevine planting material (cuttings, rootlings and potted vines) and machinery	**For Phylloxera Infested Zones (PIZ), Phylloxera Risk Zones (PRZ) and Phylloxera Exclusion Zones (PEZ):** Follow hygiene, entry and disinfestation procedures outlined in **Grape Phylloxera Survey Procedures (PSS-09)**
Potato Growing Area	CHECK DISEASE ZONES AND PROTECTION DISTRICTS	Observe all restrictions on movement of potato material and equipment	**Within Potato Plant Protection Districts (Warragul, Colac-Otway and Portland):** Follow **On-farm hygiene for potato cyst nematode management** **Potato Cyst Nematode (PCN) infested and linked properties:** Follow hygiene, entry and disinfestation procedures outlined in **PCN Survey Procedure (PSS-07)** **Outside PCN regions:** **Minimum Biosecurity SOP**
Orchards	NO VEHICLE ACCESS WITHIN PRODUCTION AREA	**Production orchard** Adhere to any on-farm biosecurity procedures - respect any 'Farm Biosecurity' signage	**Minimum Biosecurity SOP** **Neglected orchard:** Clean on/clean off, follow **plant health hygiene procedures PSP-01 Pest/Disease Interceptions**

Standard Operating Procedure

Enterprise Type	Warning	Notes	Relevant Procedures
Horticulture	NO VEHICLE ACCESS WITHIN PRODUCTION AREA	If necessary, to enter property with own vehicle, stick to designated farm tracks only Adhere to any on-farm biosecurity procedures – respect any 'Farm Biosecurity' signage	**Minimum Biosecurity SOP**
Plant Nurseries			**Minimum Biosecurity SOP**
Controlled Growing Environment (Glasshouse)		Avoid entry to controlled growing environments if possible	**Minimum Biosecurity SOP**
Broadacre cropping	DO NOT DRIVE ACROSS AREAS UNDER CROP		**Minimum Biosecurity SOP**
Grazing properties Horse/Sheep/Cattle etc.			**Minimum Biosecurity SOP**
Intensive Agriculture Properties including: (Piggeries, Poultry, Feedlots)		Vehicles must not leave established roads/tracks in intensive farming area of property.	
Public land/amenity sties			**Minimum Biosecurity SOP**

Enterprise Type	Warning	Notes	Relevant Procedures
Known high risk areas and properties	DO NOT ENTER KNOWN HIGH-RISK AREAS WITHOUT PRIOR CONSULTATION WITH DJPR	This applies to: • State Prohibited and Regionally Prohibited Weed sites (see **regional biosecurity maps**). • Restricted Areas, Control Areas, Infected Place, Control notice or Infested Land as described in the *Plant BiosecurityAct2010.* • Acknowledged animal disease sites.	**Minimum Biosecurity SOP**

Appendix 2 Goulburn Broken CMA Biosecurity JSA checklist

Purpose

It is the responsibility of the landholder or land manager to manage the biosecurity risk on their property. This checklist outlines the steps that the GB CMA and its contractors will undertake to assist individual landholders and managers to implement their individual property biosecurity plans.

Outline of biosecurity risks

Dirty boots and vehicles pose a real risk to the spread of disease across property boundaries. People can unintentionally carry pest or disease-causing organism on unwashed footwear, bringing them onto properties without even realizing. Soil-borne pests (like phylloxera, anthrax, Panama disease) and weed seeds are carried in dirt and mud, pieces of infected plant material, manure and soil itself can carry diseases directly from one property to the next.

A very simple way to manage this biosecurity risk is to ensure that visitors and staff who need to access private or public land areas, thoroughly wash and disinfect their footwear.

Driving from the roadside on the main drive to the farmhouse and back again is not considered a risk when entering a property from a Biosecurity perspective. If the main driveway is through paddocks, then it would be considered a risk. The risk of disease spread increases greatly when both vehicle and foot traffic leave the main traffic areas

Resources and equipment in our Biosecurity kit

1. 10 litre water container	2. Tub to contain kit and to scrub boots, equipment.
3. Wipes	4. S 5. suitable disinfectants (refer to instructions below)
6. Scrubbing Bush	7. Measuring jug
8. Plastic bags for seeds and paper towel	9. High pressure spray bottle
10. Trowel for cleaning soles of shoes	11. Foot bath tray

Before & upon entering a property:

- Ask the landholder what their preference is when entering the property. If you have not contacted them prior to arrival and there is a biosecurity sign on their gate a good practice is to ring them before entering.
- Shed areas, driveways and house yards are traditionally high traffic, so these are the areas where we attempt to contain all biosecurity hazards within.
- Sign their visitors' book, if they have one.
- Some property plans will require vehicle details and the purpose of the trip to be recorded to maintain their individual biosecurity plan.

Vehicle:

- Start with a clean vehicle when doing farm visits. Cleaning a vehicle requires removal of all dirt and seeds especially underneath the vehicle with a high-pressure wash.
- If the vehicle has not been on any property prior to the farm visit and the landholder gives you approval to drive on the property this is adequate biosecurity. If offered, travel in the landowners' vehicle at your discretion, if you feel safe to do so. The landholder knows their property well and this is an advantage from an OH&S view.
- When driving on a property try to keep away from wet areas and stock stamps.

Sterilization products

- Farm detergents and disinfectants can be used as per label instructions.
- Specific options are bleach diluted to 1% active sodium hypochlorite.
- Dilute 4% bleach solution by using three parts water to one-part bleach.
  NOTE: *Use products according to MSDS instructions.*

  When using Milton 4% as a disinfectant, mix 50ml Milton (2 caps full off the Milton container) to 4 Lt of water. This solution will be effective for a 24hr period.

Cleaning foot wear and vehicles

For events

Before an event, check with the landholder about their biosecurity practices, and how we can operate to ensure compliance. Things to consider include: Containment of vehicle traffic and parking, mustering of people, controlling access to "Clean areas", decontamination areas.

If they would like a footbath used for the event the following should be followed.

- Before leaving the office make sure the kits are complete.
- Place signs up to direct people to the foot baths before entering the property.
- Pick a clean and dry area to place your foot baths E.G. not muddy or in a gateway preferably outside or on the edge of the property.
- A footbath consists of a tray with foam and a sterilizing agent with 1% sodium hypochlorite. Use the measuring jug supplied in your kit to help make your footbaths. When people arrive before walking onto the property ask them to place the soles of their shoes into the bath. If shoes are very dirty a brush may need to be used.
- For biosecurity reasons a copy of the sign in sheet for the event should be copied and given to the landholder for their records.
- Dispose of foot path sterilization responsibly on farm, ask landholder where the best place to empty the footbath solution. Do not empty close to waterways or in high traffic areas. Follow label directions for disposal.
- When back in the office dispose of rubbish from the event in the rubbish bin.

For individual farm visits

- Before you leave the office make sure the kit is complete and the spray bottle is made up with sterilizing agent.
- Ask the landholder before entering the property what biosecurity they follow for visitors.
- Remember to sign their visitor book to record your visit if required.

When entering a new property

- Ensure your car is clean by going through a car wash or a vehicle wash bay and bath.
- Make sure your boots are clean using the instructions.
- Check boots, socks, pants and clothing for grass seeds. Put any objects found into a bag for disposal (bags are available in your kits).
- Bang your boots together to dislodge loose soil and manure.
- Scrape soil / manure from tread using the edge of the scrubbing brush.
- Scrub the soles and edge of boots using the scrubbing brush.
- Pressure wash off loosened soil etc. using the spray bottle supplied in your kit.
- Use the spray bottle to rinse off the scrubbing brush at the same time.

Before you leave a property clean your boots using the above steps.

When back in the office dispose of rubbish from the event in the rubbish bin.

Appendix 15 - STANDARD OPERATING PROCEDURE

Document Title:	Minimum Biosecurity Considerations when Entering and Exiting Properties
Effective from:	27 January 2016
Enquiries to:	Ag Victoria (check nearest location on website) **agriculture**.vic.gov.au/**agriculture**
Approved by:	

Purpose

In order to prevent the spread of animal and plant pests and diseases and invasive pests, this procedure outlines the basic principles that all staff must follow when conducting field work on public land/amenity sites and private property. Adhering to these principles will minimise the risk of weed, pest and pathogen spread and ensure public confidence in our efforts to protect and promote biosecurity.

Scope

1. This document supports X Plan for the welfare of staff.
2. This document describes the biosecurity precautions to be taken by staff when visiting public land/amenity sites and private properties.
3. These are the **minimum** precautions to be undertaken.
4. This document **does not** detail measures to be undertaken in the event of specific emergency animal or plant diseases, nor personal protective equipment required for specific circumstances e.g. entry into an intensive poultry farm.
5. The precautions in this document apply only if staff enter production areas of a property or areas other than a residence or office infrastructure.

Procedures

Pre-visit risk appraisal and planning

Prior to visiting unfamiliar properties, staff should discuss the visit with the local staff and/or refer to the regional maps available to identify potential issues for consideration. Identification of these issues will guide procedures to be followed when entering and exiting the property.

The table in **Appendix One** should be used as a precautionary risk assessment before entering and exiting public land/amenity sites and private property. For the purposes of this table 'Minimum Biosecurity Standard Operating Procedures' refers to this whole procedure.

General principles when visiting properties

- Where practical, talk to the land owner prior to entering the property to identify any potential biosecurity issues.
- Where practical, arrange to meet at the house or on a sealed or gravel area away from production areas.
- **Always** arrive at a property with a clean vehicle, protective clothing and appropriate equipment.
- Where practical, walk instead of driving within the property/site or, where possible, use the land owner's vehicle to avoid contamination and spread of potential biosecurity risks.
- Avoid unnecessary contact with plants and animals. Use disposable gloves or sanitize hands after contact with plants, animals, dirt, machinery or used equipment.
- Where required and/or requested, use clean protective clothing (i.e. disposable overalls).

Exit procedures where NO biosecurity hazards observed

- Clean tools and boots, and waterproof clothing of visible mud/soil with soapy water, and spray with disinfectant. Staff should be familiar with, and observe, all safety precautions recommended by the manufacturer when using disinfectants,
- Clean clothing so they are free of seeds or other organic debris (i.e. seeds in socks).
- Place soiled protective clothing and paper towels in a sealable bag for later cleaning and disinfection, or disposal
- Hands should be thoroughly cleaned with either soapy water, alcohol-based wipes or gel,
- Vehicles and equipment must be cleaned of all obvious dirt, mud or plant debris before continuing onto other properties,
- Where immediate cleaning of the vehicle is impractical (due to isolation etc.), it should be cleaned prior to returning to the depot provided the risk remains low
- **A record must be kept of the date, time and location at which the vehicle and equipment is cleaned, and the properties visited prior to cleaning. This is important for future trace-back. Records could be required if litigation arises from a pest/disease outbreak on a property visited by staff.**

Exit procedures where a potential biosecurity risk IS observed

- **Animal Health/Welfare Issue**
  Staff suspecting that a potential exotic animal disease is present **must** call their local DEDJTR office and follow their directions prior to exiting the property.

- **Invasive Plant or Animal Infestation**
  Staff suspecting that a property is infested with a high-risk invasive species **must** call their local DEDJTR office to report the issue and seek advice prior to exiting the property.

- **Emergency Plant Pest/Disease**
  Staff suspecting that an emergency plant pest/disease is present **must** call their local DEDJTR Office and report the issue and seek advice prior to exiting the property.

Recording

Staff **must** keep accurate records as to their movements and actions. A note book should be stored in each Biosecurity Kit for this purpose. Alternatively, records may be kept in diaries or field notebooks. For each property visit the following details must be recorded:

- The property address, land owner's name and contact details
- The date, time of entry and exit from the property
- Actions taken whilst on the property (including a map if possible)
- Biosecurity measures undertaken when entering/exiting property

Records could be required if litigation arises from a pest/disease outbreak on a property visited by Astaff.

Resources and equipment

Appendix Two outlines a detailed list of standard equipment (Biosecurity Kit) that must be carried in vehicles **at all times**.

Staff must ensure they use correct manual handling techniques when maneuvering the Biosecurity Kit.

Related Information

- Grape Phylloxera Survey Procedures (PSS-09)
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/PSS
- PCN Survey Procedure (PSS-07)
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/PSS
- PSP-01 Pest/Disease Interceptions (S 5.2 & 5.5)
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/PSP
- On-farm hygiene for potato cyst nematode management
  bioweb2/sites/plant/QMS/BX102 QMS Library by document type/surveys
- Biosecurity Procedures when visiting farms or livestock facilities SOP
  bioweb2/sites/animal/Lists of SOPS
- ASBO Biosecurity Regional Maps

  bioweb2/sites/plant/zone map
- Legislation

  Plant: bioweb2/sites/plant/legislation
  Animal: bioweb2/sites/animal/legislation and compliance

APPENDIX ONE

Enterprise Type	Warning	Notes	Relevant Procedures
Vineyard	NO VEHICLE ACCESS WITHIN PRODUCTION AREA CHECK DISEASE ZONES	Observe all restrictions on movement of grapevine planting material (cuttings, rootlings and potted vines) and machinery	**For Phylloxera Infested Zones (PIZ), Phylloxera Risk Zones (PRZ) and Phylloxera Exclusion Zones (PEZ):** Follow hygiene, entry and disinfestation procedures outlined in **Grape Phylloxera Survey Procedures (PSS-09)**
Potato Growing Area	CHECK DISEASE ZONES AND PROTECTION DISTRICTS	Observe all restrictions on movement of potato material and equipment	**Within Potato Plant Protection Districts (Warragul, Colac-Otway and Portland):** Follow **On-farm hygiene for potato cyst nematode management** **Potato Cyst Nematode (PCN) infested and linked properties:** Follow hygiene, entry and disinfestation procedures outlined in **PCN Survey Procedure (PSS-07)** **Outside PCN regions: Minimum Biosecurity SOP**
Orchards	NO VEHICLE ACCESS WITHIN PRODUCTION AREA	**Production orchard** Adhere to any on-farm biosecurity procedures - respect any 'Farm Biosecurity' signage	**Minimum Biosecurity SOP** **Neglected orchard:** Clean on/clean off, follow **plant health hygiene procedures PSP-01 Pest/Disease Interceptions**

Standard Operating Procedure

Horticulture	NO VEHICLE ACCESS WITHIN PRODUCTION AREA	If necessary to enter property with own vehicle stick to designated farm tracks only Adhere to any on-farm biosecurity procedures – respect any 'Farm Biosecurity' signage	**Minimum Biosecurity SOP**
Plant Nurseries			**Minimum Biosecurity SOP**
Controlled Growing Environment (Glasshouse)		Avoid entry to controlled growing environments if possible	**Minimum Biosecurity SOP**
Broadacre cropping	DO NOT DRIVE ACROSS AREAS UNDER CROP		**Minimum Biosecurity SOP**
Grazing properties Horse/Sheep/Cattle etc.			**Minimum Biosecurity SOP**
Intensive Agriculture Properties including: (Piggeries, Poultry, Feedlots)		Vehicles must not leave established roads/tracks in intensive farming area of property.	**Minimum Biosecurity SOP**
Public land/amenity sites			**Minimum Biosecurity SOP**

Known high risk areas and properties	DO NOT ENTER KNOWN HIGH RISK AREAS WITHOUT PRIOR CONSULTATION WITH DEDJTR	This applies to: • State Prohibited and Regionally Prohibited Weed sites (see **regional biosecurity maps**). • Restricted Areas, Control Areas, Infected Place, Control notice or Infested Land as described in the *Plant BiosecurityAct2010.* • Acknowledged animal disease sites.	**Minimum Biosecurity SOP**

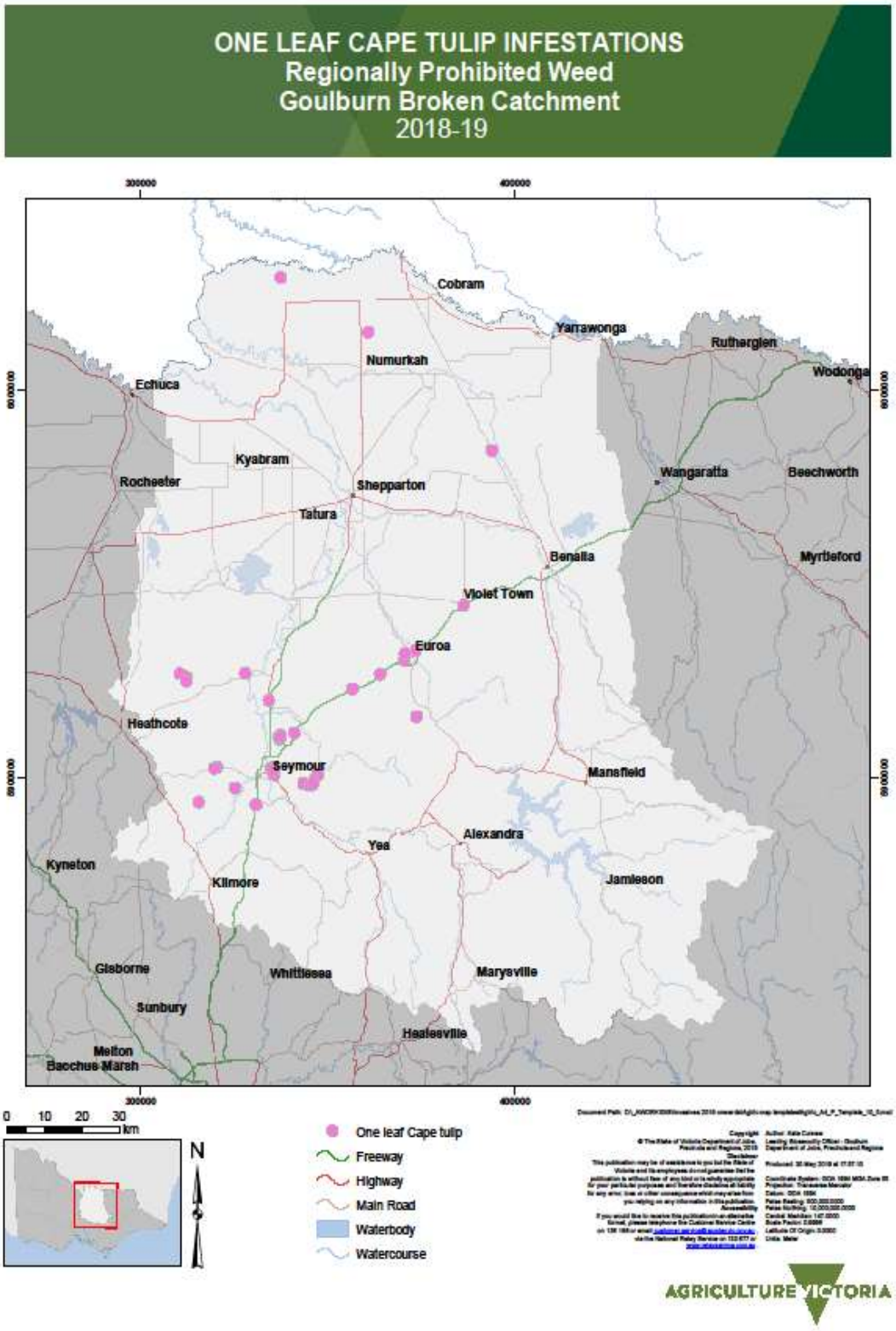
Standard Operating Procedure

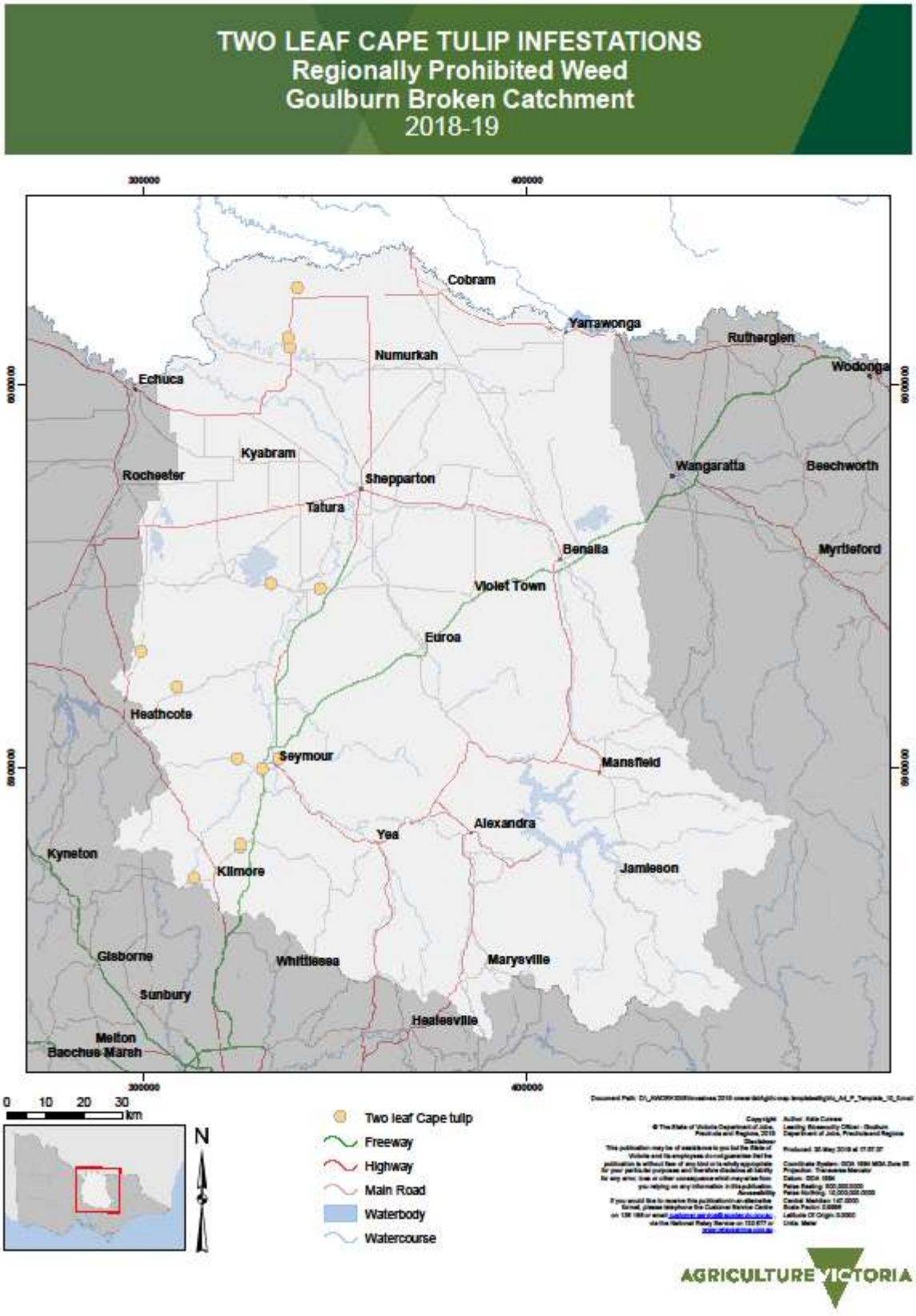
APPENDIX TWO

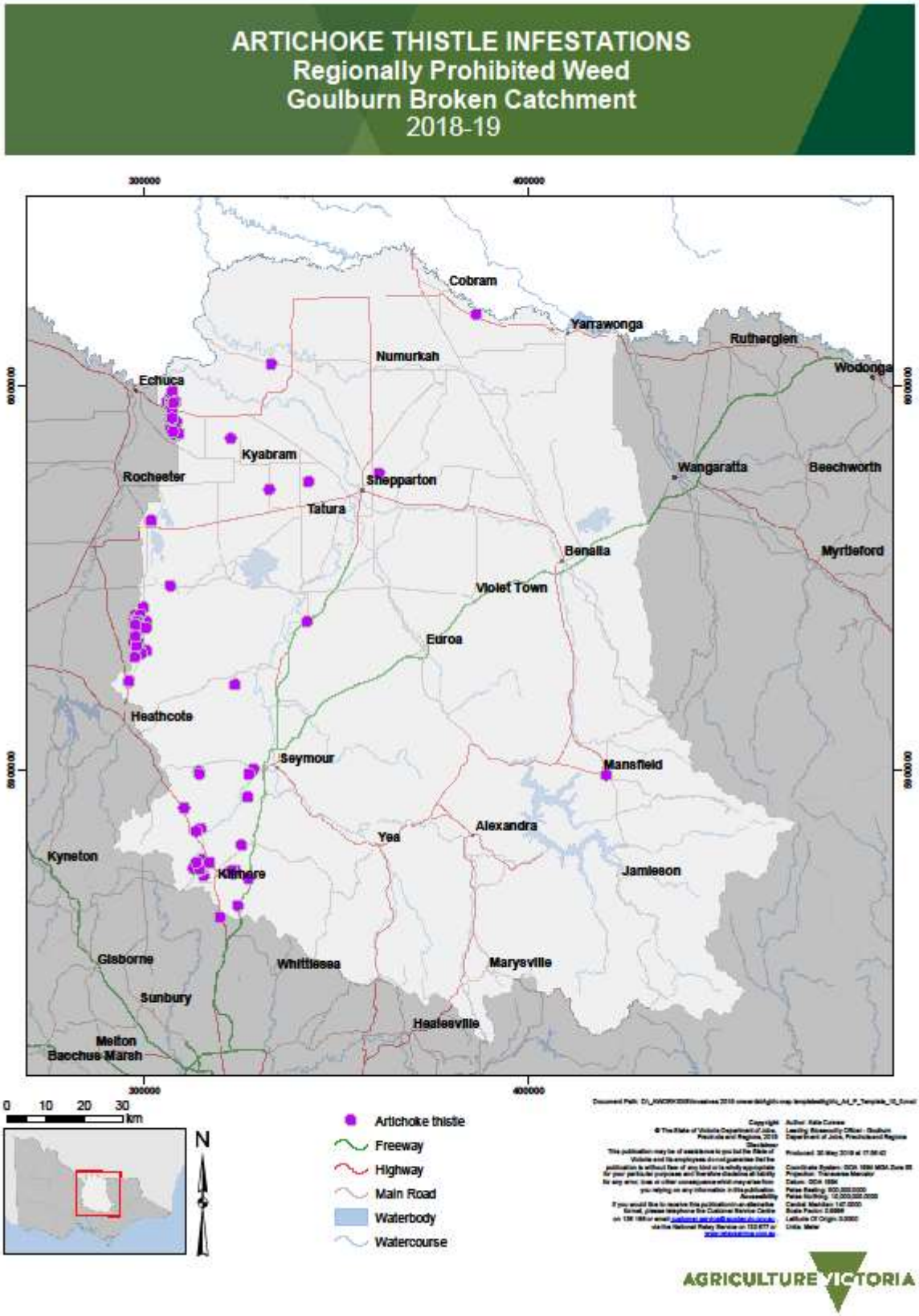
Resources and Equipment: 'Biosecurity Kit'

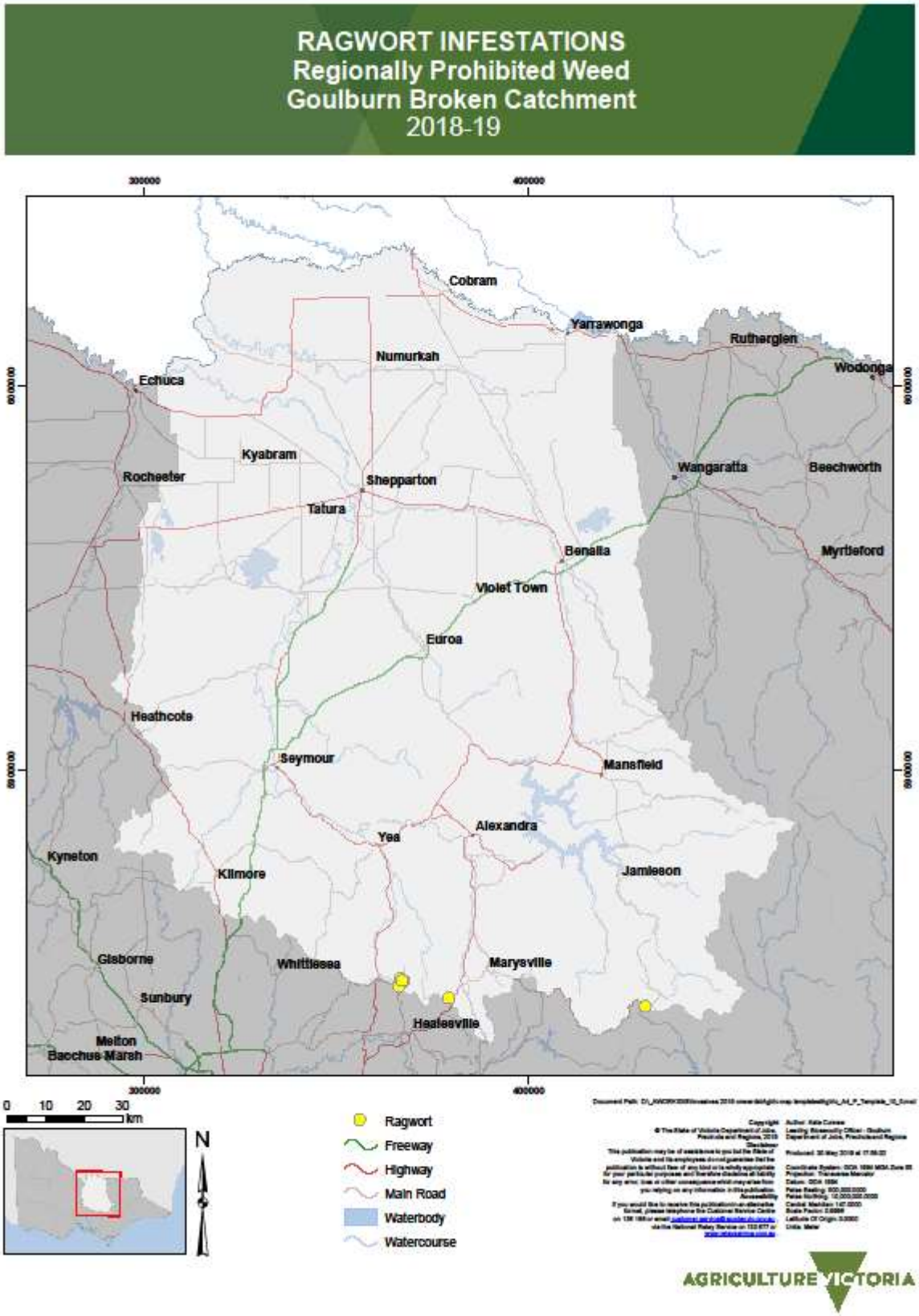
1. 5 litre water container
2. Paper towel
3. Hand cleaner
4. Scrubbing brush
5. Rubbish bags for used paper towel, disposable overalls etc.
6. Trowel for cleaning soles of boots (alternatives: screwdriver or hoof pick)
7. Disposable overalls
8. Record book and pen to complete after Biosecure entry/exit
9. Tub to contain kit and to scrub boots in
10. Gumboots
11. Suitable disinfectant for boots and equipment (e.g. F10, Stericide, Phytoclean)
12. Disposable gloves

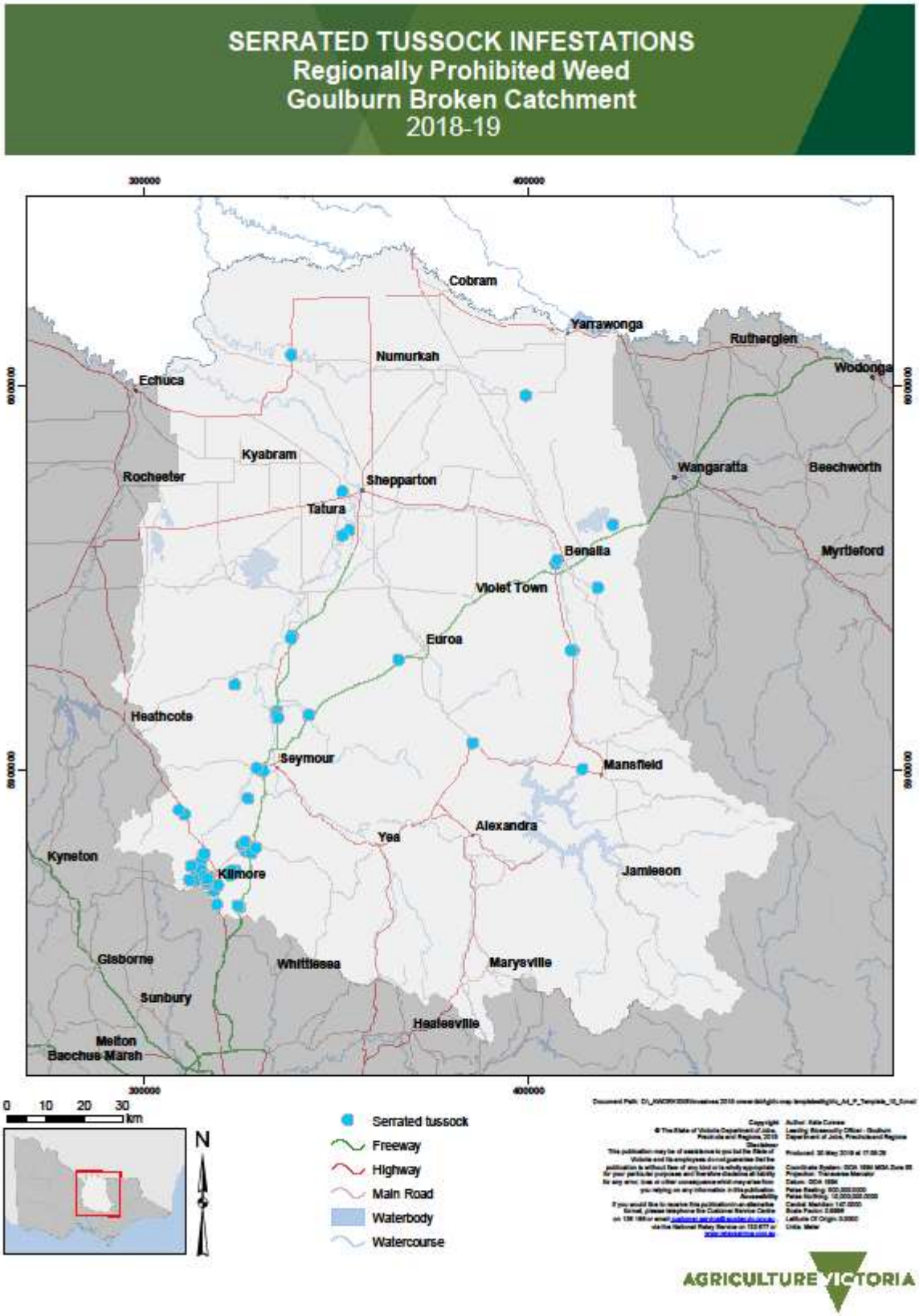
APPENDIX THREE (Catchment maps of weed infestations)

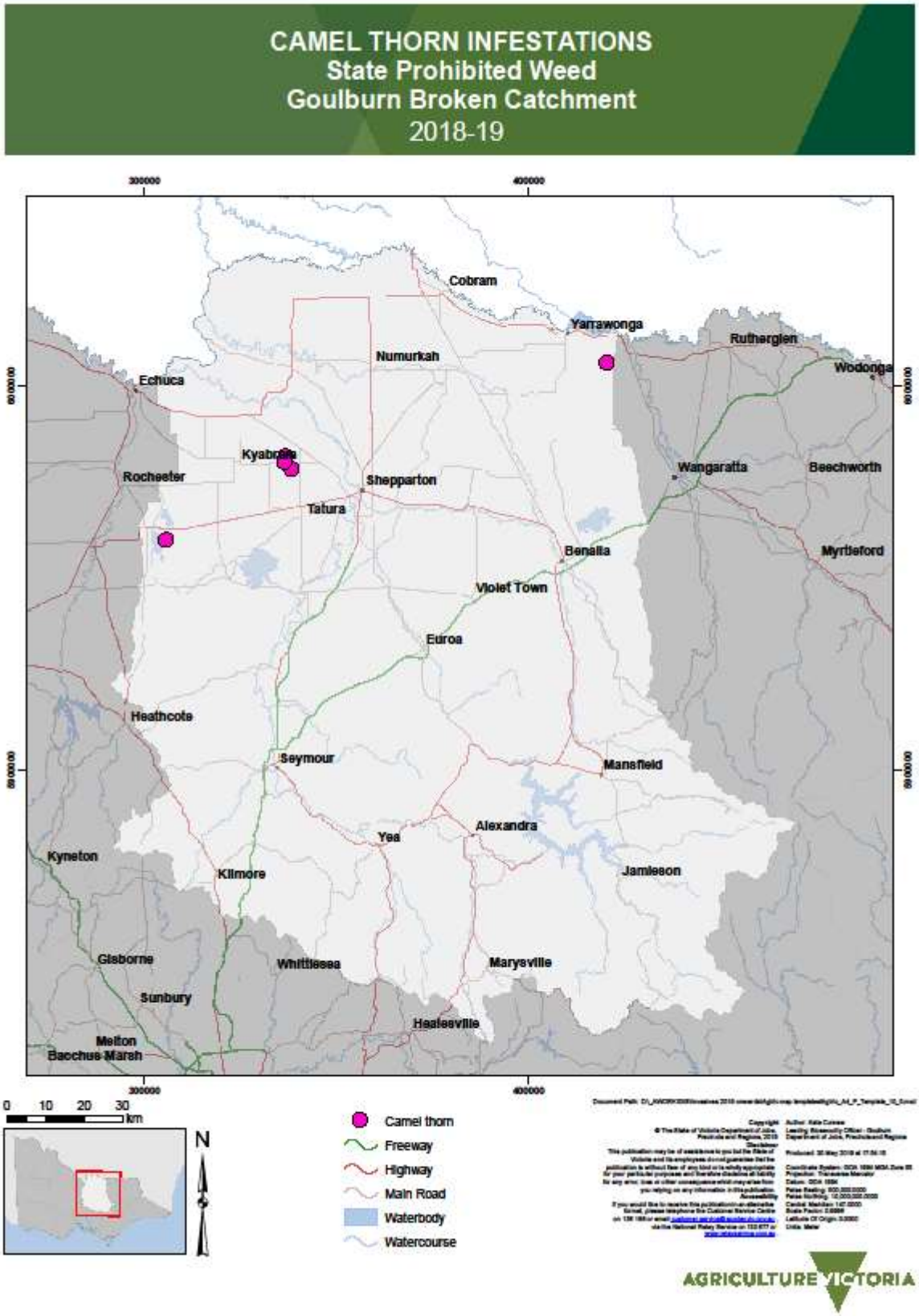


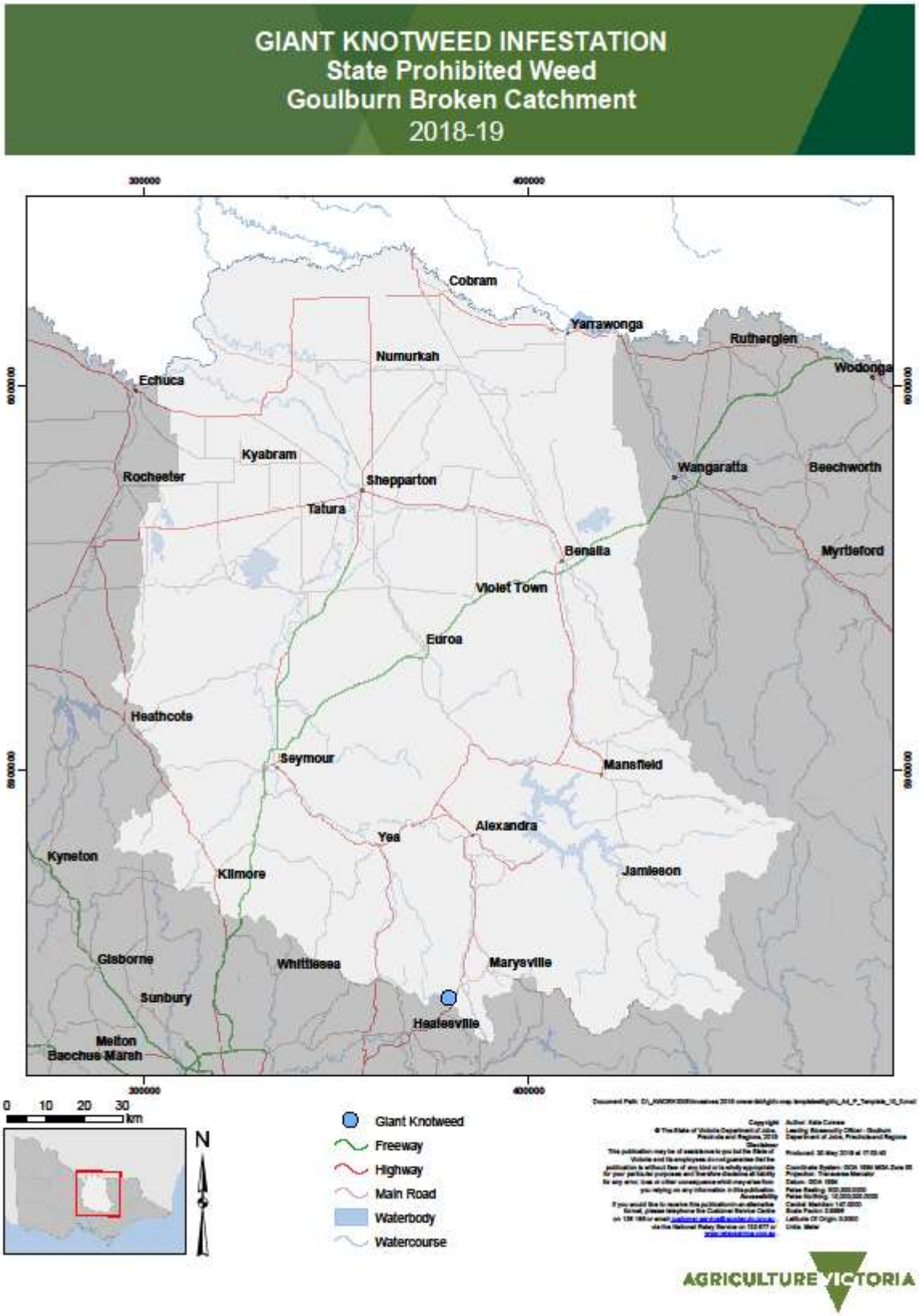

TWO LEAF CAPE TULIP INFESTATIONS
Regionally Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Rutherglen
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Wangaratta
Beechworth
Tatura
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30 km
N
Two leaf Cape tulip
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA

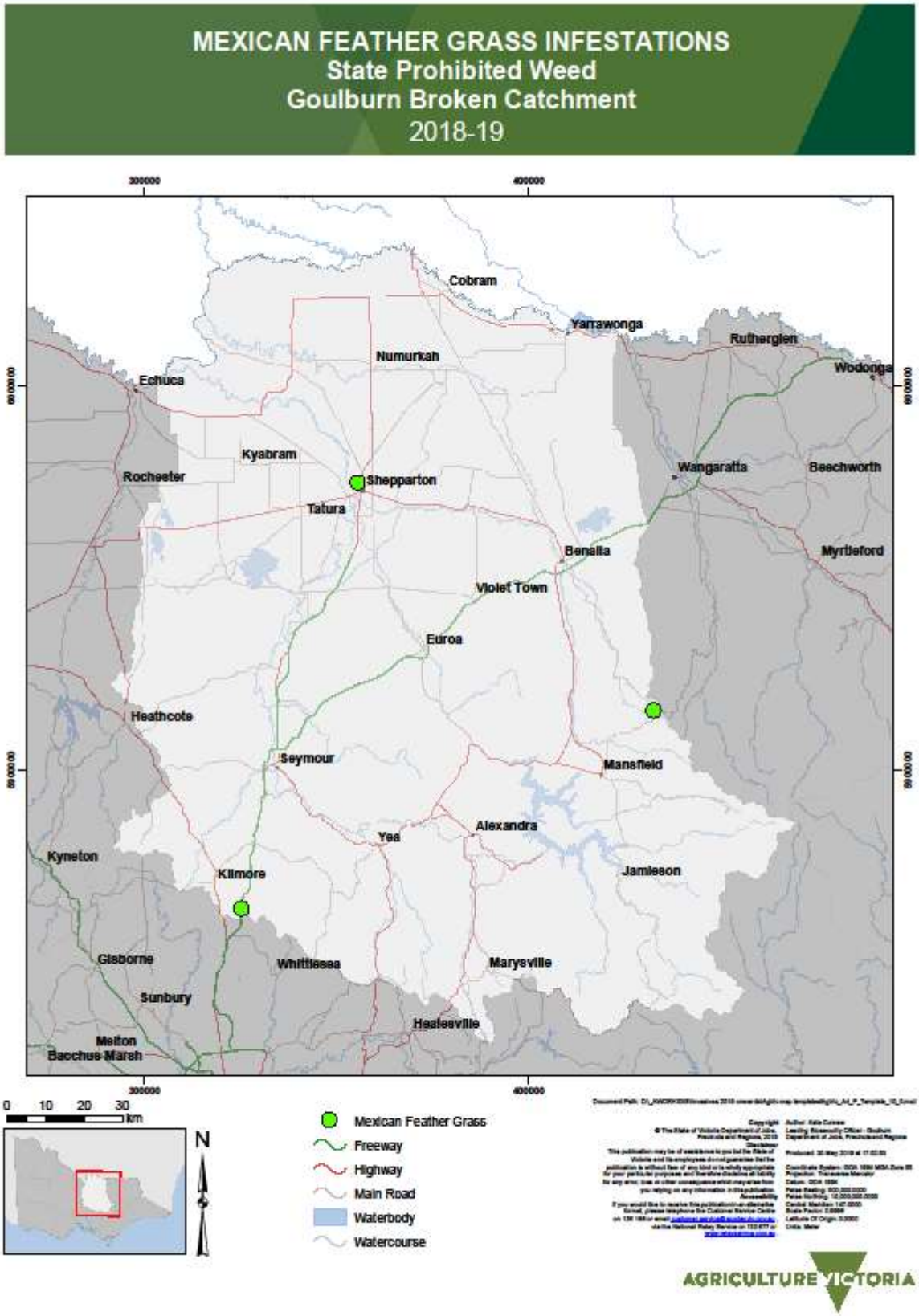

ARTICHOKE THISTLE INFESTATIONS
Regionally Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Tatura
Wangaratta
Beechworth
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Artichoke thistle
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA

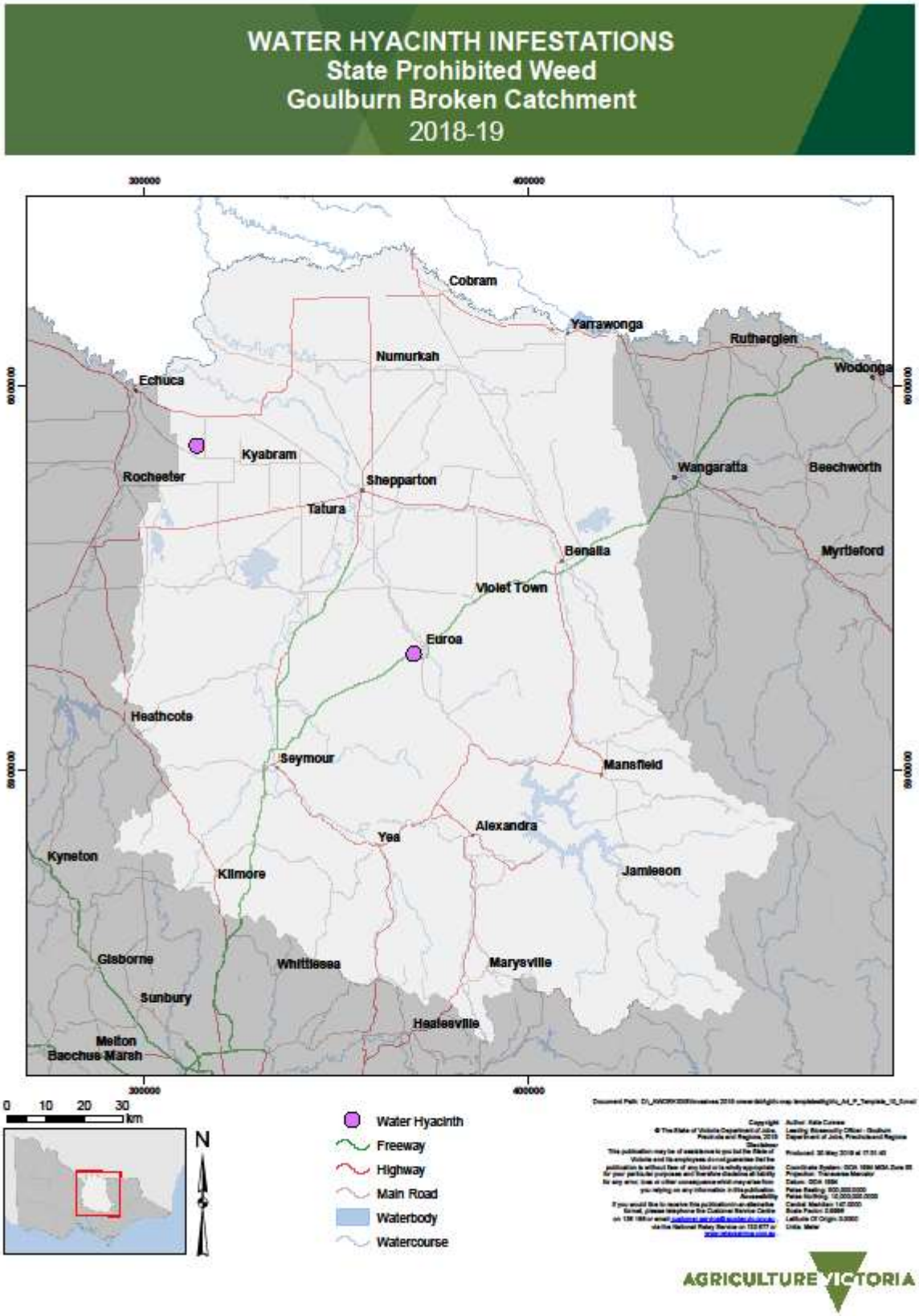

RAGWORT INFESTATIONS
Regionally Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Tatura
Wangaratta
Beechworth
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Ragwort
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA


SERRATED TUSSOCK INFESTATIONS
Regionally Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Tatura
Wangaratta
Beechworth
Myrtleford
Benalla
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Serrated tussock
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA


CAMEL THORN INFESTATIONS
State Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Tatura
Wangaratta
Beechworth
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Camel thorn
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA


GIANT KNOTWEED INFESTATION
State Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Tatura
Wangaratta
Beechworth
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Giant Knotweed
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA


MEXICAN FEATHER GRASS INFESTATIONS
State Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rochester
Shepparton
Tatura
Wangaratta
Beechworth
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Mexican Feather Grass
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA


WATER HYACINTH INFESTATIONS
State Prohibited Weed
Goulburn Broken Catchment
2018-19
300000
400000
6000000
5900000
Cobram
Yarrawonga
Ruthergien
Wodonga
Numurkah
Echuca
Kyabram
Rocheeter
Shepparton
Tatura
Wangaratta
Beechworth
Benalla
Myrtleford
Violet Town
Euroa
Heathcote
Seymour
Mansfield
Alexandra
Yea
Kyneton
Kilmore
Jamieson
Gisborne
Whittlesea
Marysville
Sunbury
Healesville
Melton
Bacchus Marsh
0 10 20 30
km
N
Water Hyacinth
Freeway
Highway
Main Road
Waterbody
Watercourse
AGRICULTURE VICTORIA