NSW GOVERNMENT | Local Land Services Hunter

Hunter Regional Strategic Weed Management Plan 2017 - 2022

Developed in partnership with the Hunter Regional Weeds Committee

Published by Hunter Local Land Services

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Acknowledgement of Country

Hunter Local Land Services would like to pay respect to and acknowledge the traditional Aboriginal custodians of the land within the Hunter and Manning Great Lakes region on which we undertake our operations. We also pay our respect to the Aboriginal Elders of the Hunter and Manning Great Lakes region both past and present and to our future Elders. We extend our respect to all Aboriginal and Torres Strait Islander people living within the Hunter and Manning Great Lakes region.

Acknowledgement of Contributors

The Hunter Regional Strategic Weed Management Plan (the plan) was developed by the Hunter Regional Weeds Committee on behalf of the Hunter Local Land Services Board for endorsement by the Board. The Hunter Local Land Services Board wishes to acknowledge the work of the committee and regional support staff and in particular the Hunter Weeds Technical Team and its working groups in developing this plan. The Board would also like to thank the Technical Sub Committee of the State Weeds Committee for their support in weed risk prioritisation and the State Weeds Committee, Office of Environment and Heritage and NSW Department of Primary Industries for their guidance in the development of this plan.

We also wish to acknowledge that some text within this plan was drawn from a range of publications including the Mid North Coast Regional Weed Management System 2010, the Hunter Central Coast Regional Weed Strategy 2010, the Hunter Local Land Services Strategic Plan and from NSW DPI draft Invasive Species Plan, NSW Biosecurity Strategy 2013 – 2021 and the *Biosecurity Act 2015* Discussion Paper: Weeds. Development of this plan was supported through NSW Weeds Action Program funding from the NSW Government.

Hunter Local Land Services Board Chair's Foreword

Ms Lindy Hyam

Chair Hunter Local Land Services

On behalf of the Hunter Local Land Services Board I am pleased to present the first Hunter Regional Strategic Weed Management Plan. I acknowledge the work of the Regional Weeds Committee in developing this plan in a collaborative manner with stakeholders from the community, agricultural industries and public land managers. The plan builds on the good work of previous committees across the Hunter and Mid Hunter.

Weeds are the number one priority for rural landholders, they impact the economy, environment and the community across the Hunter. This plan will set the direction for weed management across the region and provide a coordinated approach to dealing with weeds. The plan will provide support for landholders to control their weeds through better information on control methods, coordinated activity and supporting a flexible approach to achieving good outcomes for weeds.

Weed management is about how people respond to weeds and how they take responsibility for their part in management. The committee has ensured that all people involved in weed management are able to have their say, so that a balanced approach can be found. The committee has an ongoing role in driving forward implementation of the strategy.

We thank those that have been involved in the development of the plan. We will continue to seek your input as the plan is implemented.

Regional Weeds Committee Chair's Foreword

Mr Daryl Dutton

Chair Hunter Regional Weed Committee

On behalf of the Hunter Regional Weeds Committee and weeds staff and stakeholders around the region, I am pleased to present this plan.

The plan sets our strategic direction for the next five years and identifies the highest risk weeds, on which we must concentrate our efforts. This will reduce the impact on productivity, the environment and our communities. It is an important step in implementing the reform of weed management within the Hunter and provides the platform for ongoing collaboration between stakeholders in weed management.

The plan addresses weeds on all tenures, including private and public land. The inclusion of public land is a significant development in regional weeds management. Public land managers now have the same responsibilities as private land managers. Stakeholders with interest and expertise in the management of weeds have been active participants in the development of the plan. The management of weeds is a shared responsibility between the government, landholders and the community. We must all play our part in weed management into the future.

The plan will drive action to increase the knowledge and skills of stakeholders in weed management. It will drive coordination and collaboration across the region, and will make funding and resources go further. I look forward to this plan being implemented in the collaborative spirit in which it was developed.

I would like to thank local government, public land managers and all the stakeholders on the Hunter Regional Weeds Committee for their participation in developing the plan - it has been a great example of a collaborative and shared responsibility approach. I would also like to thank the members of the Hunter Weeds Technical Team and Local Land Services staff and contractors for their time and expertise in preparing the plan.

Executive summary

Our vision

Biosecurity protects the economy, environment and community from the negative impacts of pests, diseases and weeds. As such, it is vital for the health, wellbeing and prosperity of the state. The Hunter Regional Strategic Weed Management Plan focuses on managing weeds to improve the region's biosecurity. Our vision is to protect the Hunter's environment, landscape, livelihood, cultural and lifestyle values from weeds by strengthening the sustainability of the natural environment, primary industries, and local communities in the region.

In line with new Commonwealth biosecurity measures, NSW has reformed its weed, pest and disease legislation. Together, the NSW Biosecurity Strategy 2013-2021 and *NSW Biosecurity Act 2015* (which repeals the *Noxious Weeds Act 1993*) provide a streamlined, clear framework for safeguarding primary industries, natural environments and communities from a range of pests, diseases and weeds. Community-wide shared responsibility for biosecurity and a tenure-neutral approach are crucial to realise the vision of a sustainable and prosperous future.

The Hunter Regional Strategic Weed Management Plan is a direct response to this strategic and legislative reform. It was prepared by the Hunter Regional Weeds Committee on behalf of the Hunter Local Land Services Board, with guidance from the State Weeds Committee and Local Land Services staff.

Working together

The plan outlines how government, industry and the community will share responsibility and work together to identify, minimise, respond to and manage weeds. It relates to all lands and waters (excluding marine) in the Hunter Local Land Services region of NSW, including Lord Howe Island. It focuses on managing weeds that impact:

- animal and plant industries, including agriculture, horticulture, forestry, aquaculture and recreational and commercial fishing in freshwater systems
- ecological communities and biodiversity, including natural urban and peri-urban environments
- human health, livelihood, lifestyle, cultural values, recreation and landscape amenity
- infrastructure and service industries, including energy, transport and water supplies.

The plan sets the vision and goals for weed management in the Hunter, and outlines strategies and actions to achieve outcomes based on principles of shared responsibility, sustainable landscapes, collaborative leadership and innovation.

Goal 1: People of the Hunter Local Land Services region are engaged and taking a shared responsibility for weed management and making informed decisions.

Actions focus on a whole of community approach to weed management, with an emphasis on:

- building community capacity
- building stronger partnerships
- fostering a shared responsibility
- promoting behavioural change.

Goal 2: Weed biosecurity contributes to the profitable, productive and sustainable use of land and water.

and

Goal 3: Weed biosecurity contributes to the improved condition and resilience of natural environments.

Actions focus on weed biosecurity to protect the environment, the community and sustainable economic growth. Actions for Goals 2 and 3 have been combined as weed management efforts provide multiple outcomes across natural environments and primary industries. The emphasis is on:

- preventing new weeds from entering the region
- eradicating or containing the spread of new weeds that do establish
- managing widespread weeds where the benefits are greatest.

Goal 4: Weed biosecurity is supported by a coordinated, collaborative and innovative approach to delivery of weed biosecurity.

Actions focus on consistent and contemporary approaches to implementing this plan, with emphasis on:

- providing good governance and leadership to support a collaborative approach
- supporting and delivering the weed biosecurity reforms for NSW
- implementing risk based systems across all tenancies in a co-ordinated manner
- supporting innovation by embracing continuous learning, information systems, research and technology.

Sharing responsibility

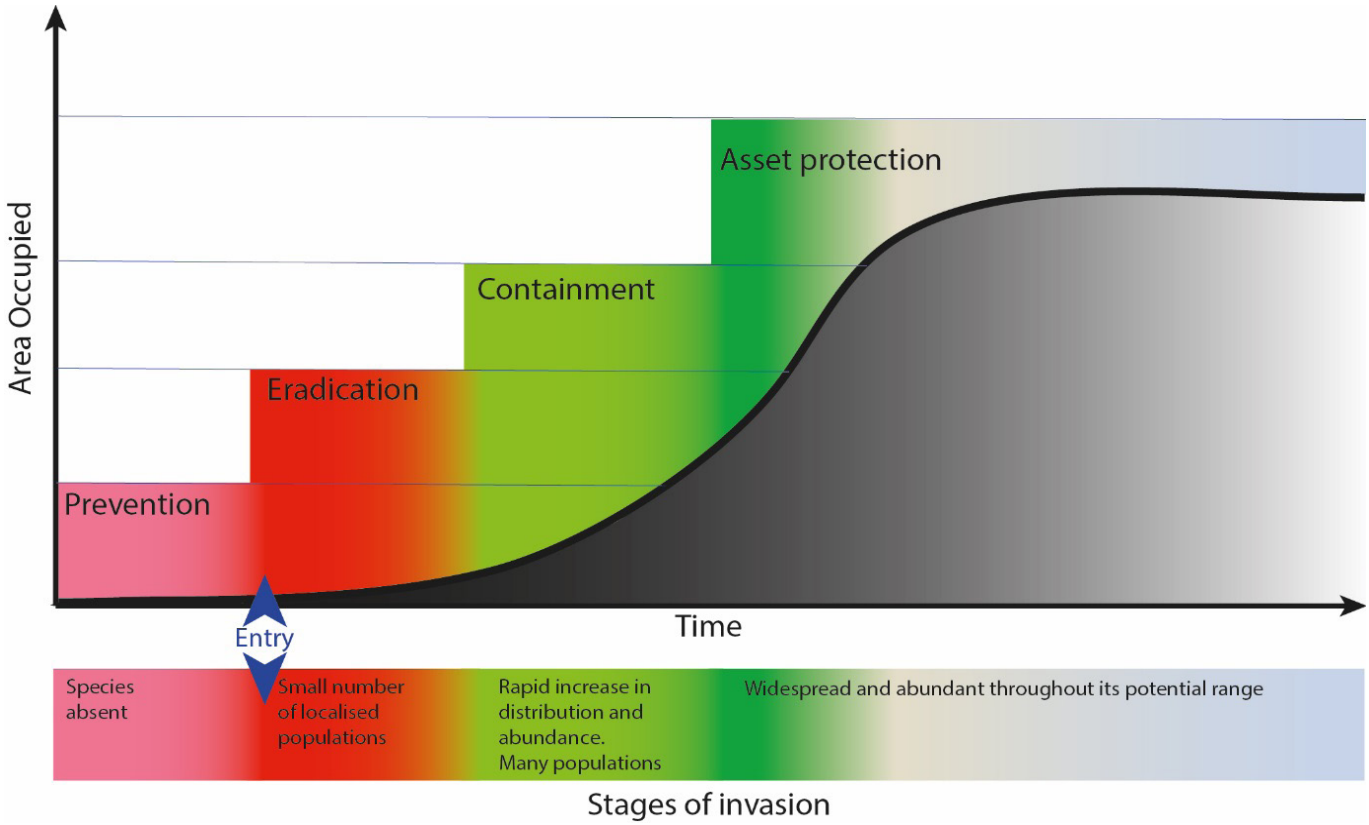
The plan provides a sound basis for a cooperative and co-ordinated approach to managing weeds in the Hunter region. It defines what "shared responsibility" means for the region's communities and stakeholders, and how they might work together to identify, minimise, respond to and manage high risk weeds at a landscape scale, both now and into the future.

The *Biosecurity Act 2015* is tenure neutral, as it applies equally to all land in the region, whether public or private. The Act contains a range of new regulatory tools and a General Biosecurity Duty that support this tenure neutral approach to managing weed biosecurity risk. These tools include Prohibited Matter, Biosecurity Zones, Mandatory Measures and Control Orders; the plan outlines how they might be applied.

The plan outlines how land managers might meet requirements under the General Biosecurity Duty: *the responsibility of any person who has any dealing with weeds (biosecurity matter), whether they have an infestation on their land, are selling a potentially invasive species, dumping garden rubbish, or supplying contaminated fodder or the like must prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable).*

Weed priorities

An expert panel used available knowledge and an internationally-recognised risk-assessment process to identify the Hunter's high-priority weed species. Weed prioritisation is guided by the principle that *managing weeds earlier rather than later is more cost effective*. The Hunter's weed management objectives support this principle and prioritises outcomes which can be achieved in the early stages of the invasion process.



The plan identifies regional priority weeds, including management objectives and "outcomes to demonstrate compliance with the General Biosecurity Duty", which, for those weeds, clearly define community expectations for land managers to meet their General Biosecurity Duty. The plan also identifies state level and other priority weeds to provide further focus to weed management in the region.

Building on the past

The Hunter Regional Weeds Committee (RWC) was established as a local community advisory group under the *Local Land Services Act 2013*. Development of this plan was its initial focus. The role of the committee will now shift to overseeing the plan's implementation.

The Committee provides strategic planning and coordination of weed management activity at a regional level. It works closely with the State Weeds Committee (SWC), whose charter is to ensure a consistent, coordinated and strategic approach to weed management across the state of NSW.

A range of stakeholders have played an important role in weed management planning in the region over many years. This plan builds on past efforts and has gained immeasurably from the accumulated experience and expert local knowledge of committee members and their networks. The Hunter RWC includes representatives from Local Government and County Councils, NSW DPI, State Government agencies managing state owned lands (Office of Environment and Heritage, National Parks and Wildlife Service, Forestry Corporation of NSW, Roads and Maritime Services and Department of Industry – Lands), Australian Rail Track Corporation, NSW Farmers, Landcare, Aboriginal land managers, environmental interests, rural landholders, the nursery industry, the mining industry, Department of Defence and Hunter Local Land Services.

Implementation

The plan will guide investment in weed management across the region and provide a consistent basis for regional weed planning and implementation. The Regional Weeds Committee will play an important role in overseeing and coordinating implementation of the plan. Stakeholders will implement the plan's objectives within a framework of:

- shared responsibility for weed management
- consistent tenure neutral and prioritised weed management planning, investment and control across the region
- strategic communication, capacity building and engaging partners, stakeholders and the broader community
- coordinated and integrated information management guiding adaptive management and research
- performance measurement that focuses on shared responsibility, sustainable landscapes and collaborative leadership and innovation
- robust monitoring, reporting, evaluation and improvement.

Identifying local stakeholder roles, responsibilities and partnerships is integral to developing these measures efficiently and effectively.

1. Intent of plan

1.1 Introduction

The Hunter Regional Strategic Weed Management Plan provides a framework for regional weed management. The plan supports regional implementation of the *NSW Biosecurity Act 2015* by articulating community expectations in relation to effective weed management and facilitating a coordinated approach to weed management in the region. The plan (and the legislation that underpins it) is based on the premise that biosecurity is everyone's responsibility. It supports development of this culture, guiding the community in effective and coordinated management of weeds and meeting relevant statutory obligations.

The plan relates to all lands and waters (excluding marine) in the Hunter Local Land Services region of NSW.

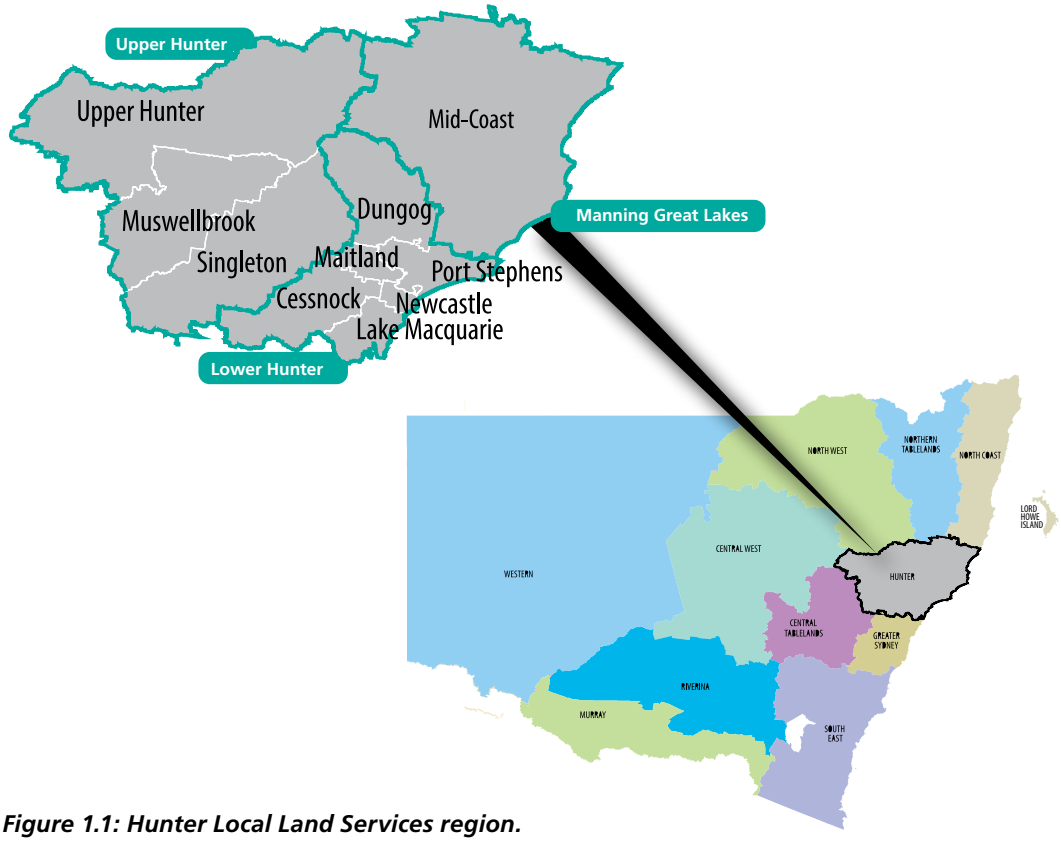


Figure 1.1: Hunter Local Land Services region.

This plan has builds on past planning efforts, and has gained immeasurably from the accumulated experience and expert local knowledge of Regional Weeds Committee members and their networks. It will guide resource allocation and investment in the region and provide a consistent basis for regional planning and delivery.

The Hunter Regional Strategic Weed Management Plan implements the NSW weed reforms, Biosecurity Strategy and Invasive Species Plan, in relation to weeds, for the Hunter region. It was prepared by the Hunter Regional Weed Committee on behalf of the Hunter Local Land Services Board, and covers weed risks that impact:

- animal and plant industries, including agriculture, horticulture, forestry, aquaculture, recreational and commercial fishing
- biodiversity of natural, urban and peri-urban environments (terrestrial and aquatic)
- human health, livelihood, lifestyle, recreation and landscape amenity
- infrastructure and service industries, including energy, transport and water supplies.

This plan sets out the vision, goals and objectives for weed management in the Hunter for the next five years and outlines the strategies and actions through which these goals will be achieved.

1.2 Vision, Goals and Objectives

This plan provides a sound basis for a co-operative and co-ordinated approach to weed management, The Vision for this plan is:

Government, industry and the people of the Hunter Local Land Services region working together to protect the environment, economy and community from the negative impacts of weeds.

The goals, objectives and outcomes for this plan align with those of the NSW Biosecurity Strategy 2013-2021 and the Hunter Local Land Services Local Strategic Plan 2016-2021, which provide the overarching policy framework. Our goals are:

1. People of the Hunter Local Land Services region are engaged and taking a shared responsibility for weed management and making informed decisions.
2. Weed biosecurity contributes to the profitable, productive and sustainable use of land and water.
3. Weed biosecurity contributes to the improved condition and resilience of natural environments.
4. Weed biosecurity is supported by a coordinated, collaborative and innovative approach to delivery of weed biosecurity.

The objectives of this plan, the outcomes we expect to see, and the strategies to achieve them, are shown in Table 1.1.

Table 1.1: Vision, Goals, Outcomes, Objectives and Strategies of the plan.

Vision	• Government, industry and the people of the Hunter region working together to protect the environment, economy and community from the negative impacts of weeds.		
Goals	• SHARED RESPONSIBILITY	• SUSTAINABLE LANDSCAPES	• COLLABORATIVE LEADERSHIP AND INNOVATION
	1. People of the Hunter Local Land Services region are engaged and taking a shared responsibility for weed management and making informed decisions.	**2.** Weed biosecurity contributes to the profitable, productive and sustainable use of land and water. **3.** Weed biosecurity contributes to the improved condition and resilience of natural environments.	**4.** Weed biosecurity is supported by a coordinated, collaborative and innovative approach to delivery of weed biosecurity.
Outcomes	• Community, industry and government are sharing responsibility for weed management and have a clear understanding of their roles and obligations. • People have the skills, knowledge, capacity and capability to deliver weed management activities.	• Weed management is integrated and coordinated across all tenures. • Weeds are monitored at landscape and industry scales and developing problems are proactively managed.	• Engagement, collaboration and involvement of local people in decision making is coordinated. • Relevant and timely information supports decision making by the Hunter Regional Weed Committee and the State Weeds Committee.

cont... **Outcomes**	• Strong supportive partnerships have improved weed management for all partners. • Awareness of weed management in the region has improved, with proactive and inclusive communication and engagement.	• Weed management is supporting landscape health and key assets important to biodiversity. • Primary industries are using leading weed management practices that contribute to increases in productivity, sustainability and market access with minimal impacts on natural resources. • Sensitive Aboriginal cultural heritage areas are protected. • Weed biosecurity threats are continually identified, assessed and prioritised across Hunter region environments and primary industry sectors. • Weed biosecurity emergencies and high risk pathways are well managed. • Impacts on high priority assets have been minimised through risk based weed management programs.	• Information, monitoring, performance evaluation and reporting systems, provide for benchmarking, continuous improvement, stakeholder feedback and innovation. • A strong evidence and knowledge base is supporting innovation and strengthening research. • Changes in weed behaviour under a changing climate are being understood and monitored.
Objectives	• Communicate a clear strategic vision and build support for a strong and integrated biosecurity system for the region. • Provide the foundation for all customers and stakeholders to work together, and to fully utilise knowledge and expertise across all groups. • Foster accountability for weed management in the region, at all levels.	• Improve effectiveness in prevention and response to new weed incursions. • Prevent, eradicate, control and manage the impacts of weeds. • Understand and have regard for the impacts of a changing climate on weed biosecurity.	• Provide a framework for more detailed planning, monitoring and reporting of weed management programs. • Provide guidance for weed management prioritisation, decision making and actions at a regional level. • Support consistent and coordinated regional weed management planning and local delivery. • Support leading practice in weed management through ongoing creation and sharing of knowledge and spatial information.

Strategies	• 1.1 Promote weed management and behavioural change in the community. • 1.2 Build stronger partnerships that support weed management. • 1.3 Enhance community-wide capacity in sharing responsibility for weed management.	• 2-3.1 Improve surveillance, reporting and tracing systems for weeds. • 2-3.2 Improve prevention, preparedness and response to weed emergencies. • 2-3.3 Eradicate or prevent the spread of new weeds. • 2-3.4 Contain and manage impacts of widespread weeds. • 2-3.5 Support and utilise developments in weed science and technology. • 2-3.6 Use results of research (for example, Weed Futures, Bioclim, ANUClim) to assess and respond to changing risks under a changing climate.	• 4.1 Provide governance and leadership that supports collaborative, effective and efficient weed management. • 4.2 Adopt adaptive, contemporary planning and processes. • 4.3 Develop a regional weed knowledge base and information system that supports state standards. • 4.4 Develop consistent systems for monitoring, evaluating and reporting on the effectiveness of weed management.

1.3 A more strategic approach to weed management

1.3.1 Drivers

Weeds are a major threat to Australia's natural environment. The impact of weeds on Australian agriculture alone are estimated to be $2.5 billion in lost production and $1.8 billion in control activities every year (NSW DPI, 2015). Impacts on biodiversity and natural environments are harder to quantify, but equally significant

As well as increasing costs of weed control, a range of developments are increasing the need to manage weeds more strategically and efficiently, such as:

- NSW weed management reform, identified in a *Review of Weeds Management in NSW* (Natural Resources Commission in 2014). This followed reform of Commonwealth biosecurity measures in 2012, alignment of state legislation, and measures for better cross-jurisdictional biosecurity management around the country.
- Globalisation is integrating the world economy with rapid growth in trade, tourism, passenger and cargo movements. This is increasing the risk of pest, disease and weed incursions.
- The global climate is more variable and less predictable, with more extreme weather events, increasing average temperatures and other changes expected. These changes are likely to favour the establishment, spread or shift of some weeds and limit the distribution and impact of others.
- The demand for food is continually increasing, with modelling indicating global food production will have to double between now and 2050 to keep up with that demand. We need to do everything we can to protect our capacity to produce food, with weeds being a major impact on productivity.
- Herbicide resistance is a growing problem, particularly with the development of resistant crops. There is also a trend towards growing organic produce in western countries, and concern about the impact of pesticides on health.
- Pressure to maintain profitability and increase efficiency are ongoing in government, industry and business sectors with an ageing population and an increasingly global economy. It is crucial that limited resources for weed biosecurity are used wisely, with constructive partnerships and clear decision-making processes established.

Technological developments are creating opportunities to improve the cost effectiveness of weed control and improve capacity to work more strategically at a landscape scale. Planning for weed management must consider the effectiveness and efficiency of control measures so that the cost is commensurate with the benefit.

The NSW Biosecurity Strategy 2013-2021 outlined the measures needed to align NSW with Commonwealth and other state biosecurity policies. This led to the development of the NSW *Biosecurity Act 2015,* which replaces 14 other pieces of legislation and establishes a clear framework for safeguarding primary industries, natural environments and communities from biosecurity threats.

The emphasis in the NSW Invasive Species Strategy and biosecurity legislation is on prevention of invasive species and early intervention in the incursion process (Figure 4.1). Early and strategic investment to prevent and eradicate invasive species provides more cost-effective and successful weed control outcomes.

1.3.2 Weed committees and development of this plan

The NSW weed reforms recommended that Local Land Services assume responsibility for forming a weeds committee in each region, to act as a Community Advisory Group and provide appropriate support for weed management and planning. The committee includes representatives from Hunter Local Land Services, NSW DPI, State Government agencies managing Crown Lands (including the Office of Environment and Heritage National Parks and Wildlife Service (OEH), Forestry Corporation, Roads and Maritime Services and the Department of Industry - Lands), Local Government - Cessnock, Dungog, Lake Macquarie, Maitland, MidCoast, Newcastle, Port Stephens, and the Upper Hunter County Council, NSW Farmers, Landcare, Aboriginal Land Councils, environmental interests, nursery industry and landholders including representatives from the mining, utilities and infrastructure sectors. Through this representation, the committee provides tenure neutral strategic planning and co-ordination of weed management activities at a regional level, and also provides a forum for community and stakeholders to raise issues and find solutions.

The State Weeds Committee (SWC) was established to provide a state-wide perspective in overseeing implementation of the weed management reforms: auditing, evaluating weed declarations, and providing state-level perspectives and governance. Their role includes developing service delivery standards for weed compliance, and commissioning audits. The Regional Weeds Committee refers weed policy issues to the State Weeds Committee and will support the State Weeds Committee in the development and implementation of performance standards.

This plan represents a partnership between the Regional Weeds Committee and its representative organisations, including state government agencies, local government, stakeholders, the community and Local Land Services. Working together, the committee developed this plan for the Hunter Local Land Services Board.

The relationship between Local Land Services, the Regional Weeds Committee, the State Weeds Committee, and other customers and stakeholders is shown in Figure 1.2. Government, industry, industry associations, research providers, universities, non-government organisations, individuals and the community, as a whole, all have a role to play in the management of weed biosecurity risks. Local control authorities play a particularly important role in weed management, including enforcing the *Biosecurity Act 2015* with respect to weeds.

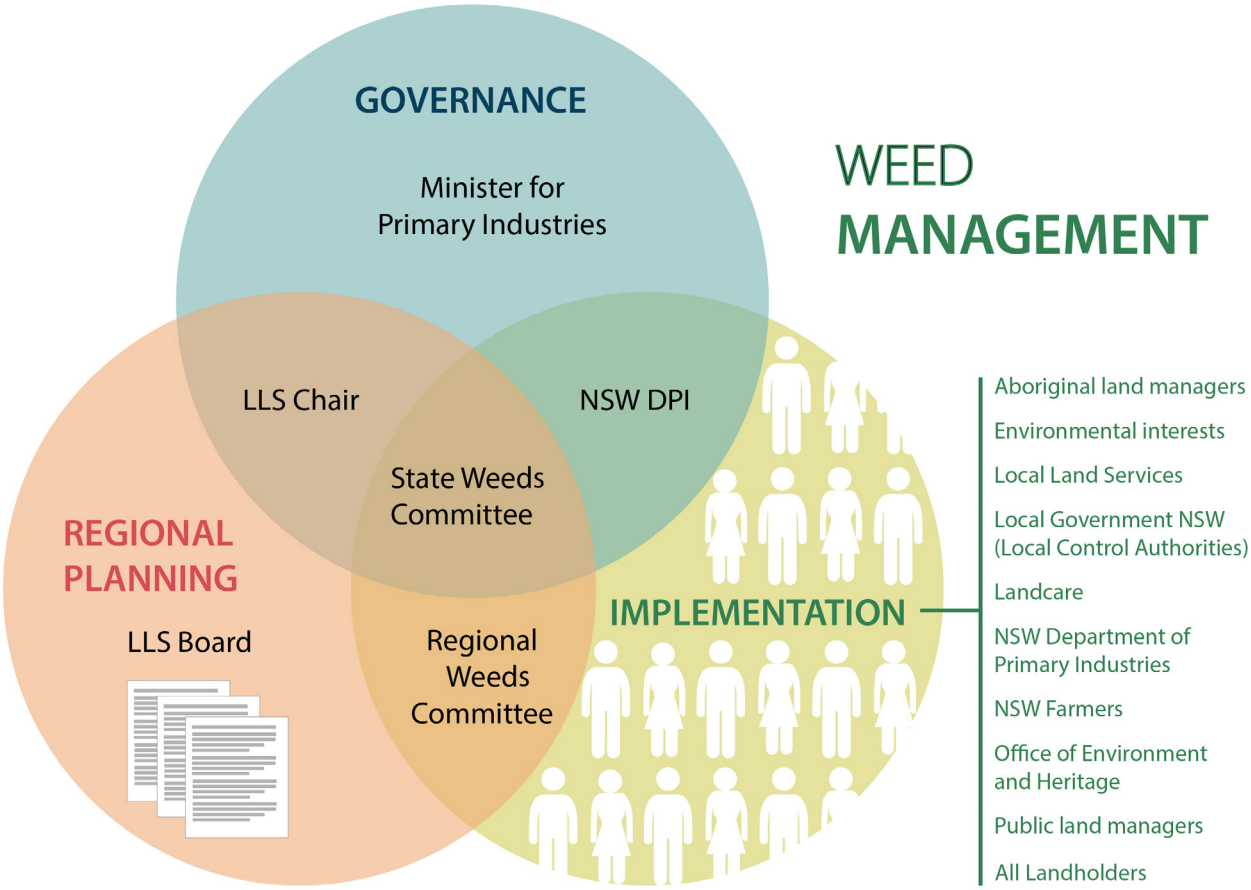


Figure 1.2: Roles in weed management.

Figure 1.3 shows the relationship between the Regional Weeds Committee, the Hunter Local Land Services Board and other Community Advisory Groups. Hunter Local Land Services provides executive support to the committee.

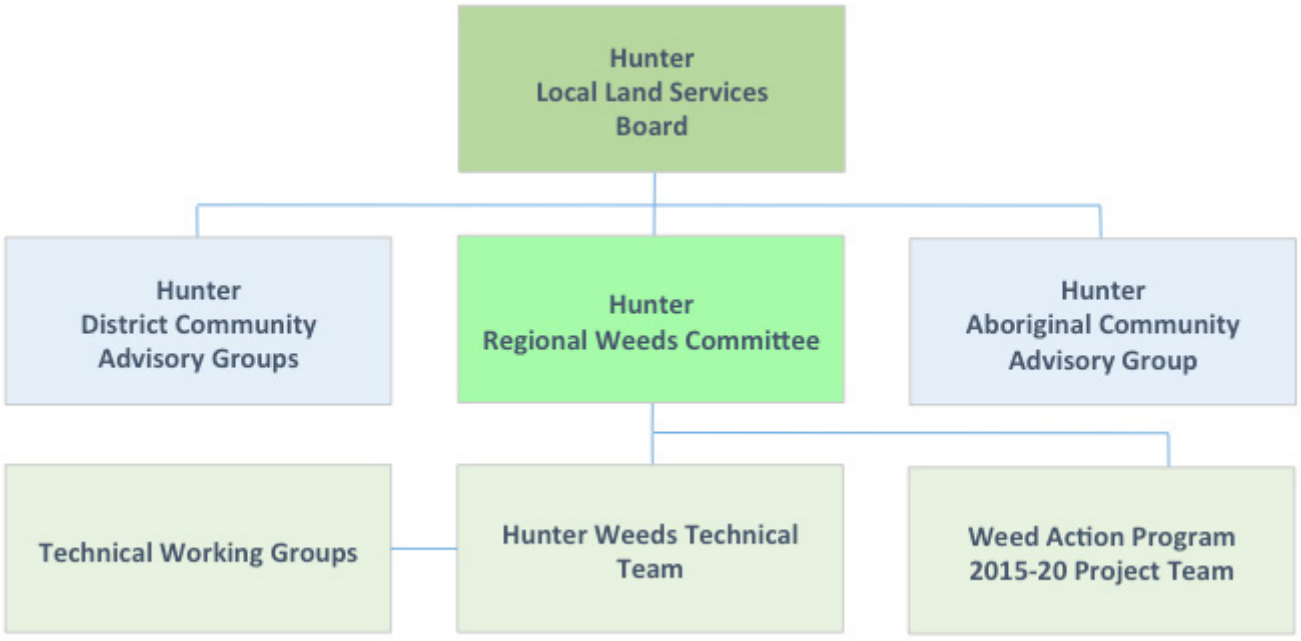


Figure 1.3: Regional Weeds Committee relationship to Hunter Local Land Services Board.

2. Policy framework

2.1 Overview of key plans and strategies

The Regional Weeds Committee considered a range of relevant plans and strategies in development of this plan, at national, state and local levels. These are shown in Figure 2.1.

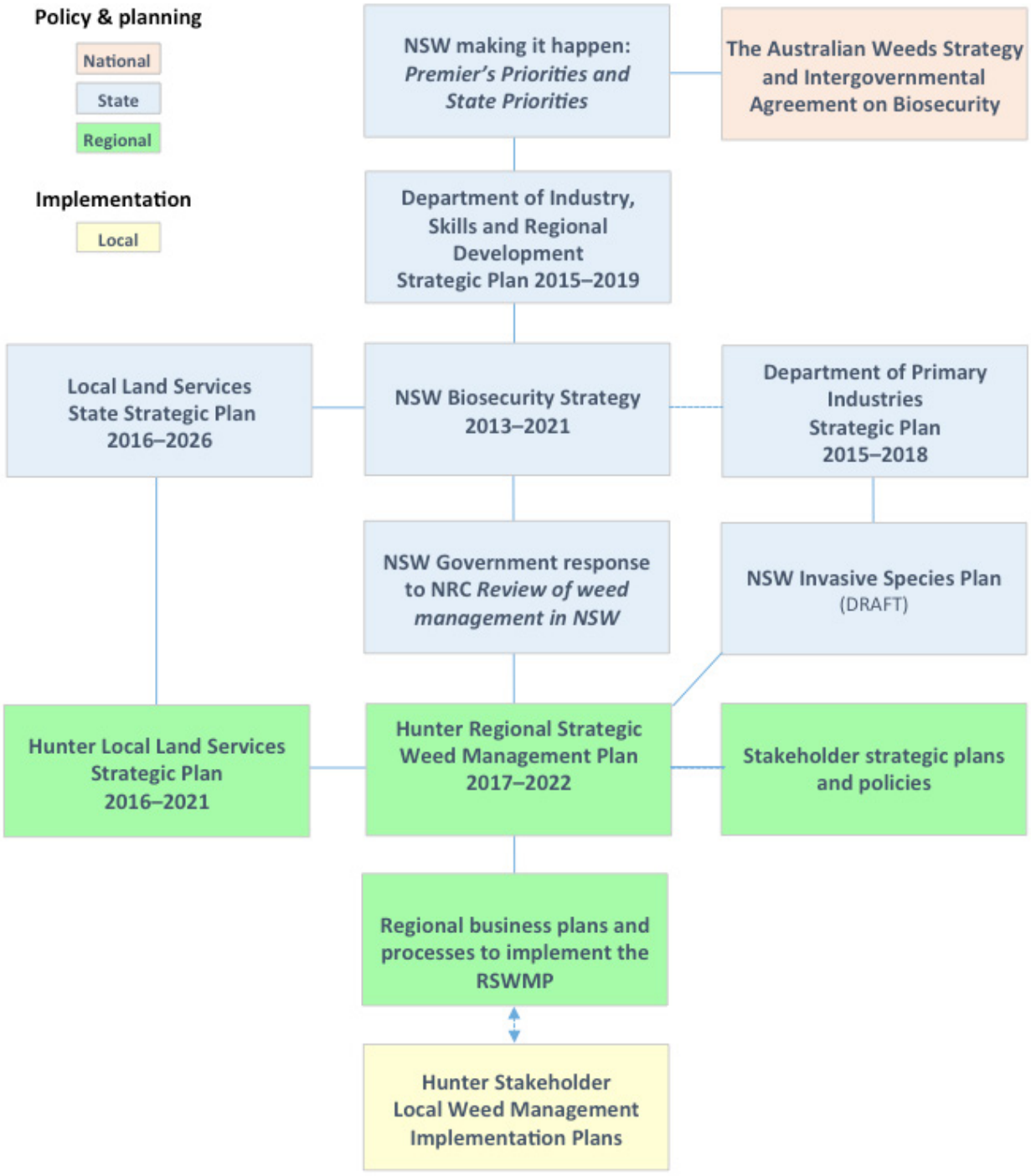


Figure 2.1: Overall planning framework for the Regional Strategic Weed Management Plan.

2.2 Guiding legislation

The NSW *Biosecurity Act 2015*, *Local Land Services Act 2013* and *Local Government Act 1993* are the key legislation directing implementation of this plan. The *Biosecurity Act 2015* takes effect with publication of the regulations in the NSW Government Gazette. This Act is administered by NSW DPI.

A range of other relevant state and national legislation will also influence how the plan is implemented. Key NSW legislation relevant to weed management that will continue to operate in tandem with the *NSW Biosecurity Act 2015* are the:

- *Local Government Act 1993*
- *Local Land Services Act 2013*
- *National Parks and Wildlife Act 1974*
- *Biodiversity Conservation Act 2016*
- *Forestry and National Park Estate Act 1998*
- The Crown Lands Management Bill 2016 has passed the NSW Parliament and the new act is likely to repeal the *Crown Lands Act 1989,* and certain other legislation early in 2018. Information about the new act is available from the Department of Industry - Lands website.

Biodiversity management in NSW is also being reformed, with the NSW Government implementing recommendations from the Independent Biodiversity Legislation Review Panel. This includes the new *Biodiversity Conservation Act 2016,* and Saving our Species (which will address the range of weeds in Schedule 4 of the *Biodiversity Conservation Act 2016* listed as Key Threatening Processes). The State Weeds Committee will liaise with Regional Weed Committees on the effect of any changes flowing from these reforms.

2.3 Biosecurity Act

The *Biosecurity Act 2015* has repealed the *Noxious Weeds Act 1993*, which has provided regulatory controls and powers to manage noxious weeds in NSW. The *Biosecurity Act 2015* streamlines and modernises the way weeds are managed in NSW as it:

- embeds the principle of shared responsibility for biosecurity risks (including weeds) across government, community and industry
- applies equally to all land in the state, regardless of whether it is publicly or privately owned
- is premised on the concept of risk, so that weed management investment and response is appropriate to the risk
- supports regional planning and management for weeds, as recommended by the *Review of Weeds Management in NSW.*

In keeping with its premise that biosecurity is a shared community responsibility, the Act introduces the legally enforceable concept of a General Biosecurity Duty.

2.3.1 General Biosecurity Duty

For weeds, the General Biosecurity Duty means that any person dealing with plant matter must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable).

"Dealing" has a broad definition in the Act and includes (but is not limited to) activities such as grazing, cropping, fodder production, horticulture, weed control, seed and other plant production, as well as carrying, sale and distribution of these products. In general if you deal with or carry plant matter as part of a commercial, professional, volunteer or recreational activity or lifestyle, it would be considered that you would know, or ought to know, the risks. Plant matter includes plants, parts of plants and seeds. Weeds are *not* limited to plants listed in the Appendices of this plan or to schedules in the Regulations of the *Biosecurity Act 2015* (any species that poses a biosecurity risk is subject to the GBD). This provides the Act with more flexibility to deal with both agricultural and environmental weeds, plants that may pose risks in particular contexts, and invasive species, which are not as yet present, but pose a risk.

2.3.2 Regulatory tools of the Act

The *Biosecurity Act 2015* includes a number of mechanisms (regulatory tools) that can be used to manage weeds in NSW. These are outlined in Table 2.1 below. The *Biosecurity Act 2015* and Regulations provide specific legal requirements for high risk activities and state level priority weeds. The state level priority weeds and associated legal requirements relevant to the region are included in Appendix 1, together with the high risk priority weeds from the regional prioritisation process.

Table 2.1: Tools of the Biosecurity Act 2015.

Prohibited Matter: biosecurity matter listed in Schedule 2, Part 1 of the *NSW Biosecurity Act 2015*, for the purpose of preventing entry of that matter into NSW or a part of NSW. Prohibited matter relevant to the region is listed in Appendix A1.1 of this plan. Prohibited matter includes weeds nationally targeted for eradication and presently not in NSW.
Control Order: establishes one or more control zones and related measures to prevent, eliminate, minimise or manage a biosecurity risk or impact. Control orders are for managing weeds under approved eradication programs and last for five years (or can be renewed for longer-term eradication programs). Weed Control Order 2017 (Part 6, Division 1), under the *NSW Biosecurity Act 2015*, will include weeds that are subject to a Control Order for the purpose of eradication. Further Control Orders will be proposed, as needed, to address subsequent eradication campaigns.
Biosecurity Zone: aims at containment of a species and provides for ongoing strategic management in a defined area of the state. A Biosecurity Zone specifies the measures that must be taken in the defined area to manage the weed. Species may also be subject to strategic responses tailored by the region, either within the zone or outside it.
Mandatory Measures Regulation: requires parties to take specific actions with respect to weeds or carriers of weeds. Mandatory Measures are defined in the regulations and include prohibition on certain dealings - including Weeds of National Significance (WoNS) (Division 8 Clause 33), Parthenium weed carriers - machinery and equipment (Division 8, Clause 35), and duty to notify of importation of plants into the state (Division 8, Clause 34). Mandatory Measures relevant to the region are listed in Appendix 1.
General Biosecurity Duty (GBD): the purpose of the GBD is to manage the spread and/or impact of all weeds that pose a biosecurity risk (2.3.1. above provides more detail). The GBD is in addition to any requirements included in a control order, biosecurity zone or other instrument made under the *Biosecurity Act 2015.* For priority weeds, outcomes to demonstrate compliance with the GBD are detailed in Appendix 1 of this plan.
Biosecurity Direction: an Authorised Officer may issue a Biosecurity Direction to a person or class of persons, if the officer reasonably believes it is necessary for any of the following: • to prevent, eliminate or minimise a biosecurity risk • to prevent, manage or control a biosecurity impact • to enforce any instrument under the *Biosecurity Act 2015.*
Biosecurity Undertaking: is a written undertaking by a person, accepted by an Authorised Officer. It must specify the measures a person has agreed to implement to remedy a contravention, likely contravention, or suspected contravention of the Act and when those measures must be implemented by. It is not an admission of guilt.
Emergency Order: may be issued to respond to a current or imminent biosecurity risk that may have a significant impact.

2.3.3 Enforcing the Biosecurity Act

NSW DPI administer the *Biosecurity Act 2015* and determine the weed species covered by regulatory tools, such as Prohibited Matter, Control Orders and Biosecurity Zones.

Local Control Authorities (Local Councils and County Councils) are responsible for enforcing weed legislation. This includes activities such as:

- conducting weed inspections on public and private property
- inspecting and controlling weeds in high risk pathways and sites
- providing education, training and resources for both the public and staff in relation to weed management
- administering and ensuring compliance with any of the above regulatory tools
- responding to breaches of the Act
- notifying and reporting on weed activities to the Biosecurity Information System (BIS).

Authorised Officers, under the *Biosecurity Act 2015,* are able to exercise all the functions specified in the Act to enforce the Act and its regulations, including the regulatory tools covered in Table 2.1. Authorised Officers are appointed by the Secretary of the Department of Industry or their delegate. Local Control Authority Weeds Officers will be appointed, as Authorised Officers under the *Biosecurity Act 2015,* by their Local Control Authority. That appointment will allow the Officers to exercise the functions of an Authorised Officer for weeds within the area of operation of their Local Control Authority.

The primary focus of this plan is to encourage and work with the community and landholders to achieve weed management objectives. Education, extension and use of biosecurity undertakings reinforce the concept of the General Biosecurity Duty and establish a cooperative approach to local and regional weed management.

Monitoring and compliance for weed management in the region will focus primarily on weeds listed in Appendix 1 to this plan. For these high risk weeds, prompt and responsible action is essential to avoid significant impacts on other landholders, industry and the environment.

Box 1.1: Agreed standards for weed management.

In terms of regulation, the Regional Strategic Weed Management Plan plays an important role in articulating the shared responsibility principle of the *Biosecurity Act 2015* (the Act) and communicating weed control obligations. Although the plan is not a regulatory document in the traditional sense, it provides information to enable people to effectively discharge their obligations under the Act, including their General Biosecurity Duty (GBD).

The GBD requires that all land managers and users ensure: *as far as is reasonably practicable, that the biosecurity risk is prevented, eliminated or minimised***.** It does not prescribe how these outcomes are achieved. For this reason, the plan does not include prescriptive measures for landholders and users to discharge their GBD. The plan focuses on the outcomes to be achieved, allowing for different measures to achieve the same outcome.

While not technically a Regulation, the plan links the key elements of Knowledge, Risk, Practicality and Outcomes for discharging the GBD.

3. Weed management in the region

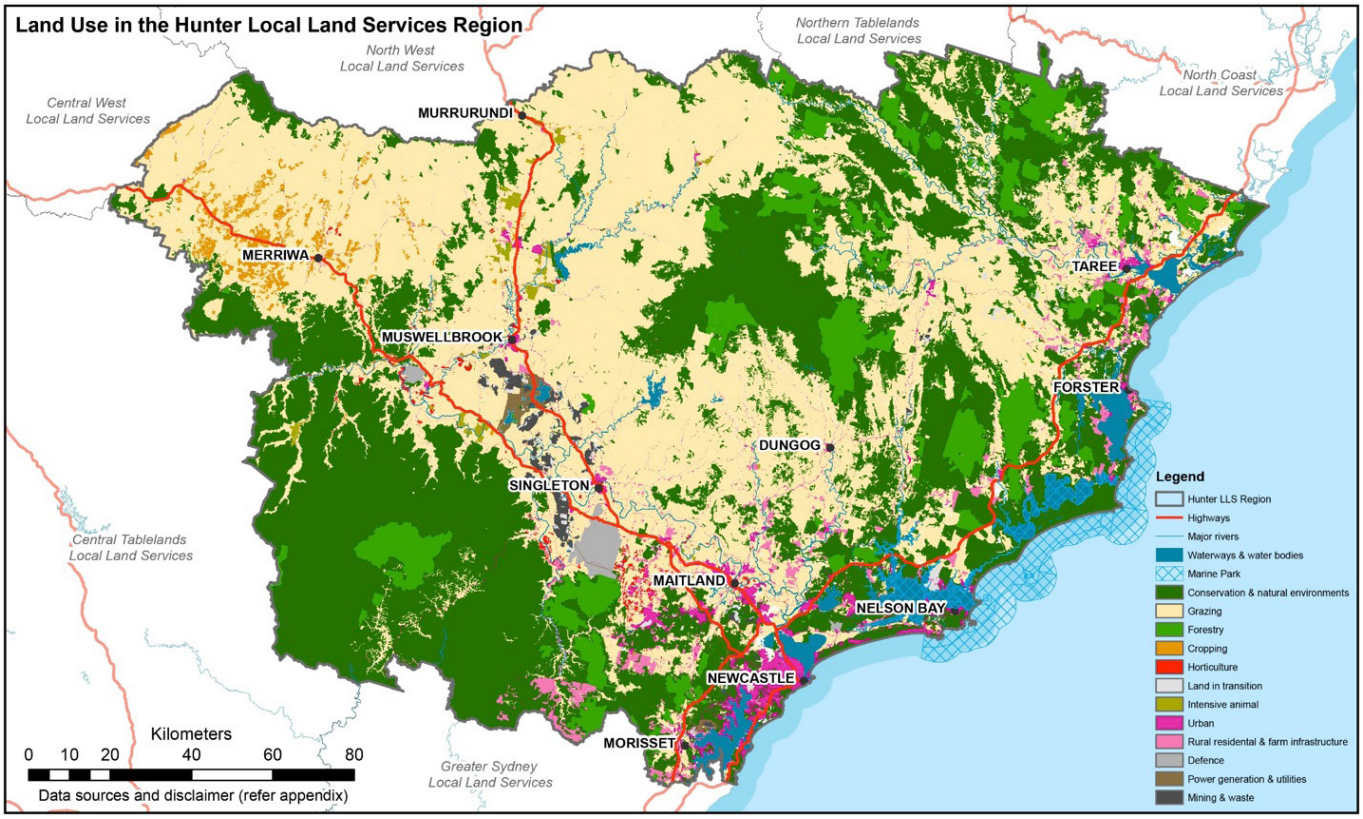
3.1 Overview

3.1.1 Description of the region

The Hunter Local Land Services region is home to 670,000 people and is located on the central east coast of NSW, to the east of the Great Dividing Range (Figure 3.1) (LLS2016). The Hunter region supports a distinct mixture of landscape, such as sandstone escarpment, Goulburn River gorges and rich alluvial floodplains, and beaches and coastal estuaries. It offers a diverse blend of livelihood and lifestyle values over an area of 33,000 square kilometres. Coal mining is an established feature of the region. Conservation and natural environments comprise more than 20 percent of the land area, with abundant surrounding National Parks and State Forests, including the Barrington Tops plateau mountains, Wollemi Heritage areas, Greater Blue Mountains and Crowdy Bay National Parks.

The Hunter region intersects with three biogeographical areas. This physical diversity is evident in the weed species that are present or have potential to occur in the region. The Hunter is a geological transition area between the Sydney Basin (to the south) and the New England Fold Belt (to the north). The climate of the Hunter is generally temperate; however, rainfall and temperature gradients occur with longitude, latitude and altitude.

Figure 3.1: Map of Land Use in the Hunter Local Land Services region



There are 10 Local Government Authorities (LGAs) in the region (Table 3.1).

LGA	Area HA	Area Km2	Population (2011 census)
CESSNOCK	196,473	1965	50,840
LAKE MACQUARIE	75,171	752	189,006
DUNGOG	224,903	2,249	8,318
MAITLAND	39,249	392	67,478
PORT STEPHENS	97,346	973	64,807
NEWCASTLE	21,504	215	148,535
MUSWELLBROOK	340,487	3,405	15,791
SINGLETON	489,349	4,893	22,694
UPPER HUNTER	806,883	8,069	13,754
MIDCOAST	1,005,300	10,053	90,504
Total	3,296,665	32,966	671,727

Table 3.1: LGAs in region

Landscape values

The Hunter Estuary and Myall Lakes systems are Ramsar listed as nationally and internationally significant wetland sites for migratory and resident shorebirds, while Port Stephens Great Lakes Marine Park has significant soft coral and sponge gardens, which provide important habitat for many marine species.

The major waterways are the Manning, Karuah, Wallamba, Myall, Hunter, Williams, Goulburn and Pages rivers and Wallis Lake, Myall Lakes, Port Stephens, and Lake Macquarie. Groundwater aquifers in the region support town water supplies and agriculture, as well as several groundwater-dependent ecosystems.

The region has a large, unique mix of vegetation - ranging from estuarine wetlands and mangrove forests, rainforests and freshwater wetlands, to open grasslands, woodlands and eucalypt forests. There are around 320 listed threatened species, populations and ecological communities in the region. The region contains the Greater Blue Mountains and Barrington Tops World Heritage Areas.

Cultural values

Our region has a rich cultural heritage and its landscapes and natural resources traditionally sustained a significant Aboriginal population. There are many important cultural sites and landscapes throughout the catchment that are of state, national and international significance, and these continue to be managed by local communities.

Livelihood values

The natural resources of the Hunter region have enabled the development of a wide range of industries, including tourism, agriculture, aquaculture and fisheries, coal mining, power generation, and recreation. Residential and commercial development dominates the coastal fringe.

Grazing of beef cattle is the major agricultural activity in terms of land use and economic value. Other major industries are poultry production, dairying, grazing of sheep, cropping, and intensive horticulture. The region is internationally known for its thoroughbred horse industry and vineyards. The estuaries and coastal waters support high value production of oysters and other fish and crustaceans.

3.1.2 Key impacts and risks of weeds

Weeds have a significant adverse impact on primary production, ecosystem biodiversity and the conservation values of the Hunter region, and across NSW. Weeds can reduce the quantity and quality of agricultural, horticultural and forestry products, which impacts both the industries and consumers.

Weeds affect the structure and function of terrestrial and aquatic ecosystems, degrading the ecosystem services provided, which support productive landscapes and native flora and fauna. Weeds pose a threat to the integrity of nationally and globally significant sites, including natural and cultural heritage sites. They can also have a detrimental effect on human and animal health, particularly children and young animals. Health problems arising from weeds include asthma, allergies, skin irritation and death of livestock.

There is an additional cost to the environment where weeds are concerned, such as negatively impacting biodiversity and the conservation of endangered species and communities, as well as refuge and corridor reduction. Weeds affect native seed banks, water flows and bodies, and are strongly affected by urbanization, travelling stock reserves, grazing and utilities.

Agriculture production in the Hunter region is valued at approximately $1.1 billion (Hunter Local Land Services 2016, based on figures from NSW Department of Industry, unpublished, using ABS data and the standard multiplier. Grazing of beef cattle is the major agricultural activity in terms of land use and economic value. Other major industries are poultry production, dairying, grazing of sheep, cropping and horticulture. The value estimate does not include the value of the wine industry or the horse breeding industry.

Approximately 17,713 square kilometres (54 per cent) of land in the Hunter is involved in primary production. (ABARES, ACLUMP data 2015 in Hunter Local Land Services 2016). There are currently around 3,500 agricultural businesses operating in the region.

Weeds are ranked as the most important issue for primary producers across the region (Hunter Research Foundation 2015).

3.1.3 Drivers, threats and risks

The physical characteristics of weeds allows them to be easily transported by a broad range of mechanisms over road, rail, waterways and airborne transmissions, which include contaminated grain, soil and gravel, garden products, stock movement, machinery movement, feral animals, climatic conditions and human activities. The majority of spread is a direct result of human activities.

There are many drivers of change and shocks that influence how we deliver weed biosecurity in the Hunter.

- Shock impacts from weed outbreaks
- Changing climate and extreme climatic events
- Changing population size, growth rate, density and distribution
- Land-use change, diversification and intensification
- Changes to farm ownership and enterprise
    - Farm subdivision for rural residential dwellings
    - Farm aggregation brought about by the purchase of land by corporations
    - Land management changes away from agriculture
- Market forces and the impact of new technologies
- Resource use change and the adequate supply and security of natural resources (e.g. water)
- Community values and expectations
- Changes in government policies
- Loss of corporate knowledge/experience due to lack of succession planning and career pathways

- Continuing commitment of stakeholders
- Lack of awareness, experience, knowledge and capacity of new landholders to address weed management
- Competing priorities for resources and funding across both the public and private sectors
- Natural disasters (e.g., floods, wildfire).

Climate change and increasing variability in climatic events is a particularly important consideration for weed management. Invasive weed species are usually generalists that are well placed to adapt to a changing environment. They can dominate ecological niches when native species are placed under stress. Therefore, climate change represents a potentially significant challenge to weed management in the Hunter region. Adaptation is likely to be required within the lifetime of this plan, to maintain efficient and effective management strategies.

The main drivers for climate change impacts on weeds include increased temperatures, changed rainfall, increased carbon dioxide levels, more extreme weather, and changed phenology (seasonal timing of plant growth and reproduction) (Scott et al, 2014). The actual climate-related implications for weed management are complex as they: impact at a species and ecosystem level; will affect invasive and native species; and will be a result of a suite of inter-related processes (for example changing climate, land-use, and fire regimes).

Considerations for the Hunter Region include:

- The suite of regional priority weeds is expected to change
- The response of weeds to climate change is expected to be faster than native species and crops (Scott et al, 2014)
- Natural disasters (such as fire, drought, storm events and flood) provide a greater opportunity for certain weeds due to landscape disturbance and seed dispersal
- Currently benign species (both native and non-native) may become more invasive and 'sleeper weeds' may become more active (Australian Government)
- Landscape connectivity is an important adaptation to the impacts of climate change but may also present opportunity for increased weed invasion (Scott et al 2014) or an option for managing species movement
- Herbicide effectiveness may vary due to changed climatic conditions and changed rainfall.

3.2 Recent strategic weed management

3.2.1 Past planning efforts

The Hunter Local Land Services region encompasses land previously managed under the Hunter Central Coast Regional Weed Strategy (HCCRWS) and the Mid North Coast Regional Weed Management System (MNCRWMS).

The HCCRWS was developed by the Hunter and Central Coast Regional Environment Management Strategy (HCCREMS) team, a collaborative program supported by the 14 regional Councils (at the time), with the input of regional stakeholders. These included the Regional Weed Management Professional Team (which comprised representatives from the Lower Hunter and Central Coast Councils and the Upper Hunter Weeds Authority), NSW DPI, and the HCRCMA (HCCREMS 2010).

The MNCRWMS was developed collaboratively by the Mid North Coast Regional Weeds Coordinating Committee in consultation with the six member Councils (at the time) and the Lord Howe Island Board and relevant stakeholders. The Weed Management System is underpinned by the Strategic Invasive Weeds Plan 2010-2015 (MNCRWCC 2010).

3.2.2 Current situation

The formation of the Hunter Region Weeds Committee with membership from both former regions has provided a platform for a continued collaborative, multi-stakeholder approach to weed management across the Hunter. The committee is guided by its Terms of Reference and provides a cross-tenure platform for reporting and exchange of innovations and technical advice. The composition of the committee ensures inclusion of public land managers in the coordinated, shared responsibility for weed control in the region.

The committee is responsible for the ongoing delivery of the regional weed surveillance program. The committee strongly advocates for early weed control interventions and continuity of control programs to realise the maximum benefits for the Hunter region.

3.2.3 Community involvement

This plan provides strategies to continue to build community awareness and capacity in weed management in the Hunter. Like all weed strategies, it recognises that weed biosecurity is most effective if all stakeholders share responsibility and support coordinated effort.

The community sectors involved in weed management in the Hunter include individual landholders, community groups, such as Landcare, rural industry and farmer groups, the Aboriginal community, non-government organisations, environmental businesses, and conservation interests. These sectors are represented on the Hunter Regional Weed Committee, and the members are tasked with engaging with their own networks regarding the role of the committee.

The region is fortunate to have a range of community sectors involved in weed management-related activities. Hunter Landcare is a very large and motivated network. Several local councils in the region support bush regeneration teams and/or run an environment levy program that support weed management and environmental projects. This is in addition to the council's weed control responsibilities. There is also a strong natural resource industry in the region, comprising of non-government organisations, weed control operators, bush regeneration contractors and environmental consultants.

Hunter Local Land Services has involved the Aboriginal community in this plan's development through the Aboriginal Community Advisory Group and direct contact with key land managers and other representatives.

The General Biosecurity Duty that underpins the NSW Biosecurity regulations and this plan, should encourage greater action by private landholders, public land managers and community members within the region.

4. Weed risk assessment and prioritisation

4.1 Weed management prioritisation

To ensure limited resources are used to their best effect, and that management of weeds is commensurate with the risk posed by each species, an objective and repeatable risk assessment was undertaken across the region. This section outlines the principles and assessment processes used to prioritise weed management.

The generalised Weed Invasion Curve (Figure 4.1) illustrates the invasion process for weeds from arrival to widespread establishment (after Chippendale (1991); Hobbs and Humphries (1995); and Environmental Weeds Working Group (2007)) and shows the effort and resources required to control a weed rise with time and area occupied. *Managing weeds earlier rather than later* is more effective. This principle is a foundation of the process used to develop the regional weed priority list in this plan (Appendix 1.1). The asset protection phase, shown in Figure 4.1 illustrates an important shift in the focus from controlling a weed species, to limiting the impact it may have on important assets.

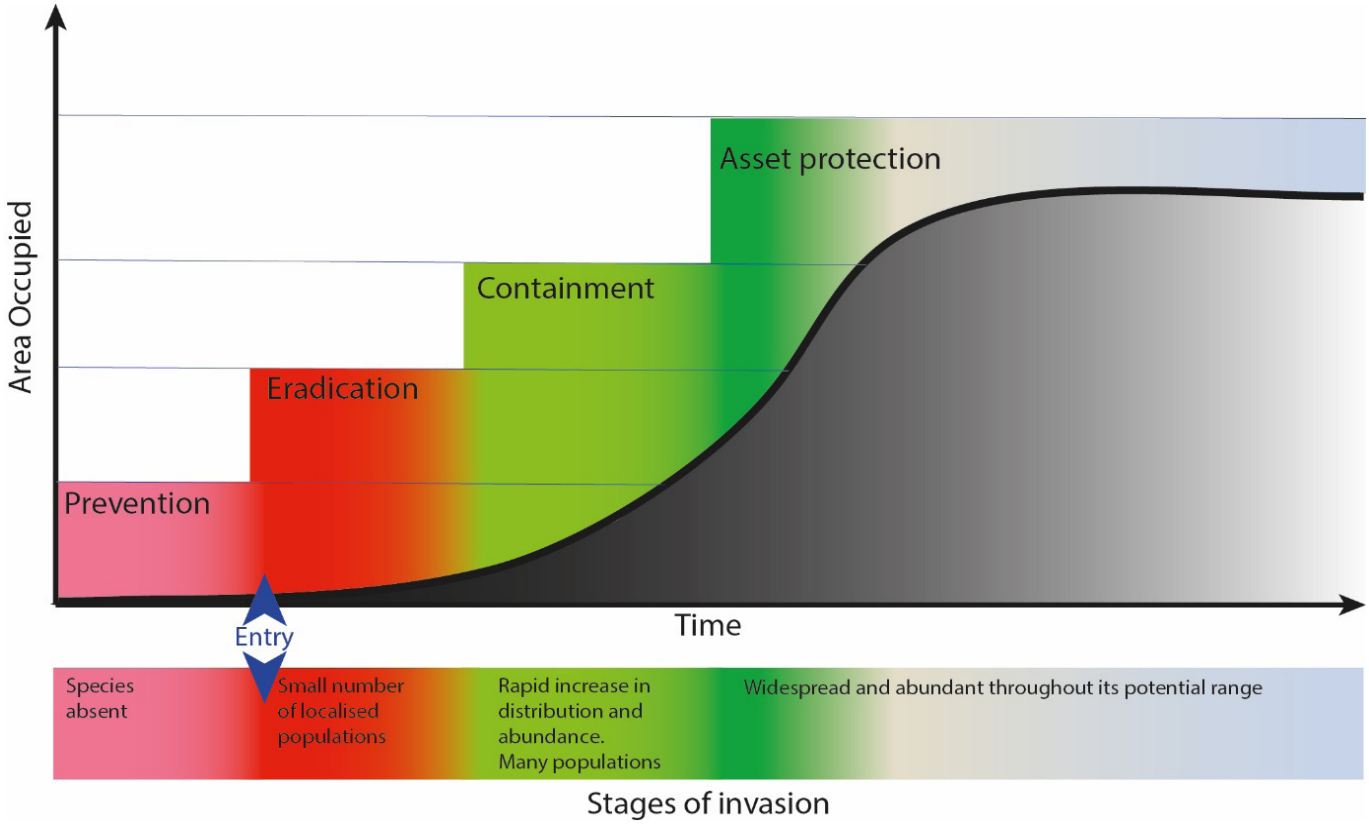


Figure 4.1: Weed invasion curve illustrating area infested and resources required for control over time, and the basis of management objectives.

4.1.2 NSW Weed Risk Management system

The NSW Weed Risk Management (WRM) system provides a standard, nationally accepted and transparent process to help make decisions about prioritising weed species and determining appropriate management responses. The Weed Risk Management system considers two components for prioritising weeds for management action:

1. A weed risk assessment.
2. An assessment of the feasibility of coordinated control.

Weed risk is determined through scoring a series of parameters (invasiveness, impacts, potential distribution) and likewise for feasibility of co-ordinated control (control costs, persistence, and current distribution). An assessment of these components provides a management objective that reflects the principles of effective weed management, and links with the objectives of the *Biosecurity Act 2015.*

4.2 Regional prioritisation process

A regional weed prioritisation process was undertaken using the NSW WRM system. This was carried out using an expert regional panel on behalf of the Hunter Regional Weeds Committee. The panel brought together practitioners with long term on-ground experience with high priority species, including local experts previously involved in the weed advisory committees.

Weed Risk Management system assessments were undertaken at the regional scale to ensure the outcomes reflected regional conditions. Where there was significant variation in weed risk or distribution in the region, the assessments were conducted at a sub-regional level, to determine containment zones or any other sub-regional response.

Quality assurance was undertaken by the Technical Subcommittee of the State Weeds Committee. The Technical Subcommittee reviewed the weed risk management assessments, management categorisation and objectives, and the outcomes to demonstrate compliance with the General Biosecurity Duty developed for the region. This ensured consistency and alignment with the Weed Risk Management system and the *Biosecurity Act 2015*. The Technical Subcommittee also provided guidance to regional weed committees on appropriate outcomes to demonstrate compliance with the General Biosecurity Duty. The management categories used in the assessment are summarised in Table 4.1.

Table 4.1: Regional weed management categories

Category	Objective	Characteristics of weeds in this category
Prevention	To prevent the weed species arriving and establishing in the region.	These species are not known to be present in the region. They have a high to very high weed risk (highly invasive and high threat) and have a high likelihood of arriving in the region due to potential distribution and/or an existing high risk pathway.
Eradication	To permanently remove the species and its propagules from the region. OR to destroy infestations to reduce the extent of the weed in the region with the aim of local eradication.	These species are present in the region to a limited extent only and the risk of re-invasion is either minimal or can be easily managed. They have a high to very high weed risk and high feasibility of coordinated control.
Containment	To prevent the ongoing spread of the species in all or part of the region.	These species have a limited distribution in the region. Regional containment strategies aim to prevent spread of the weed from an invaded part of the region (core infestation), and/or exclude the weed from an uninvaded part of the region (exclusion zone).
Asset Protection	To prevent the spread of weeds to key sites/assets of high economic, environmental and social value, or to reduce their impact on these sites if spread has already occurred.	These weed species are widespread and unlikely to be eradicated or contained within the wider regional context. Effort is focussed on reducing weed threats to protect priority high value assets.

4.2.1 Priority weed list for the region

The regional prioritisation process culminated in the identification of the priority high risk weeds and the development of the regional priority weed list for the region - Appendix 1 (A1.2) of this plan. This identifies outcomes to demonstrate compliance with the General Biosecurity Duty for listed species. State level priorities (Appendix 1 (A1.1)) were determined by the Department of Primary Industries. Management requirements for weeds, whether that be specific regulatory measures (state level priorities) or outcomes to demonstrate compliance with the General Biosecurity Duty (regional priority weeds), are also detailed in Appendix 1.

The outcomes applied to a particular weed will depend on factors such as the biology and ecology of the weed, the land use(s) in which it occurs, the size of the infestation, potential pathways for infestation and others. These factors have been considered when determining the suite of outcomes to demonstrate compliance with the General Biosecurity Duty and strategic responses. As with all components of this plan, these obligations apply to all private and public landholders in the region. Monitoring and compliance for weed management in the region will focus primarily on weeds listed in Appendix 1.

4.2.2 Additional regional weed lists

The community is also interested in management of widespread weeds because of their extent and impact in sub-regional locations. Appendix 2 outlines other priority weeds identified by the committee in consultation with the community. These are species for which a consistent and/or collaborative approach to management will provide the best outcome across the region. Weeds identified within Appendix 2 are also subject to the General Biosecurity Duty and may be a focus for local management plans and coordinated campaigns by the community and other stakeholders in the region.

Both the regional priority weed list (Appendix 1) and the additional regional weed lists (Appendix 2) may be amended, as necessary, in accordance with state-level reviews and the regional review process.

5. Actions

5.1 Overview

This section covers actions required to achieve our goals. In essence, Goal 1 addresses community capacity to discharge the General Biosecurity Duty; Goals 2 and 3 are focussed on weed management outcomes, while Goal 4 focuses on coordinating successful regional weed management.

Strategies, actions and associated regional measures of performance (see 5.3), are based on the best available information and science relevant to weed biosecurity. Strategies and actions for each goal are presented in Table 5.1 below.

Table 5.1: Goals, strategies and actions of the plan

Goal 1: People of the Hunter Local Land Services region are engaged and taking responsibility for weed management and making informed decisions	
STRATEGIES	ACTIONS
1.1 Promote weed management and behavioural changes in the community.	1.1.1 Develop and implement a strategic marketing and communication plan that promotes delivery of weed management in the Hunter. 1.1.2 Develop products promoting behavioural change and the profile of weed management in the Hunter, including promotional campaigns and events, sponsorship, media releases, social media, web sites, e-newsletters, brochures and other publications.
1.2. Build stronger partnerships that support weed management.	1.2.1 Develop partnerships that support tenure neutral weed management. 1.2.2 Foster networks, alliances and Aboriginal engagement that supports communities and stakeholders in weed management activities. 1.2.3 Develop and implement mechanisms to protect biodiversity and support management of weeds on non-productive land.
1.3 Enhance community-wide capacity in sharing responsibility for weed management.	1.3.1 Develop, promote and assist with interpretation of information outlining stakeholder roles, obligations and implications in weed management. 1.3.2 Enhance existing communication networks to increase effective dissemination of information and understanding of shared responsibility, and a whole of community approach to weed management. 1.3.3 Provide greater opportunities for education, training and community based programs that support behavioural change and increase community capacity to manage priority weeds.

Table 5.1: Goals, Strategies and Actions of the plan continued.

Goal 2: Weed biosecurity contributes to profitable, productive and sustainable use of land and water and Goal 3: Weed biosecurity contributes to the improved condition and resilience of natural environments	
STRATEGIES	ACTIONS
2-3.1 Improve surveillance, reporting and tracing systems for weeds.	2-3.1.1 Improve surveillance, reporting and tracing for weeds: • Widen implementation of early detection by encouraging partners to become involved in the High Risk Pathways and Sites inspection program and report via BIS • Develop tools, systems and services (e.g. drones) to allow for efficient weed mapping • Build community capacity to assist with surveillance and reporting • Undertake coordinated surveillance activities for high risk species. 2-3.1.2 Support state-wide processes in development of more efficient ways of demonstrating proof of freedom from weeds.
2-3.2 Improve prevention, preparedness and response to weed emergencies.	2-3.2.1 Improve cross-jurisdictional collaboration on consistent and effective approaches to preventing establishment of new weed species. 2-3.2.2 Manage high risk pathways, using strategic intentional surveillance, region-wide and consistent industry codes, education and enforcement mechanisms. 2-3.2.3 Improve prevention and response to weed biosecurity emergencies through improved identification processes, improved communication and reporting networks, and rapid responses to management of new high priority weeds.
2-3.3 Eradicate or prevent the spread of new weeds.	2-3.3.1 Develop standardised and consistent planning for: • Weeds listed in Appendix 1 to this plan • New weed incursions, including rapid response plans and associated cost sharing arrangements 2-3.3.2 Work with other jurisdictions to standardise weed biosecurity arrangements across regional and state borders. 2-3.3.3 Ensure management occurs for high priority weeds in alignment with relevant State, Regional or Sub-Regional objectives.
2-3.4 Contain and manage impacts of widespread weeds.	2-3.4.1 Develop and promote integrated land management practices and best practice weed management to minimise the spread and reduce the impacts of established weeds. 2-3.4.2 Support the ongoing development and coordination of new and existing cooperative programs for reducing or controlling the current extent of widespread weeds in priority sites. 2-3.4.3 Actively manage high priority and widespread weeds which threaten key sites/ assets in alignment with State, Regional or Sub-regional objectives. 2-3.4.4 Continue to contribute to new and existing state and national arrangements for managing established weeds.
2-3.5. Support weed research and implement developments in weed science and technology.	2-3.5.1 Document invasive weed species research priorities in collaboration with government, industry, research providers, the Aboriginal community, and the wider community and report these to the State Weeds Committee. 2-3.5.2 Strengthen research partnerships and actively participate in the development of new technologies and innovative approaches to weed management.
2-3.6 Assess and respond to changing weed risks associated with climate change.	2-3.6.1 Use predictive modelling (e.g., Weed Futures, BioClim, ANUclim) to identify the likely weed species and the environmental, social and economic values that will be vulnerable to invasive weeds under a changing climate. 2-3.6.2 Implement actions that promote resilience and minimise the risk of high risk invasive weeds under a changing climate.

Table 5.1: Goals, Strategies and Actions of the plan continued.

Goal 4: Weed biosecurity is supported by coordinated, collaborative and innovative approach to delivery of weeds biosecurity	
STRATEGIES	ACTIONS
4.1 Provide governance and leadership that supports collaborative, effective and efficient weed management.	4.1.1 Work in a collaborative partnership with all stakeholders to implement this plan. 4.1.2 Support the functions and business needs of the State Weeds Committee. 4.1.3 Support a coordinated regional approach to strategic and investment planning; monitoring, performance evaluation and reporting; weed risk assessment review; and weed emergency management preparation, response and recovery processes.
4.2 Adopt adaptive, effective and collaborative planning and processes.	4.2.1 Develop the components of the Regional Business Planning Framework that underpins the implementation of this plan. 4.2.2 Work with stakeholders to develop and update local implementation plans using best available standards, local knowledge, research and technology, as required. 4.2.3 Review and update existing Regional and Sub-Regional weed risk assessments where and when required. 4.2.4 Share information with other jurisdictions and regions on approach, progress and innovation with weed management.
4.3 Develop a regional invasive weed knowledge base and information system that supports state standards.	4.3.1 Support the continuing development of the Biosecurity Information System to collect standardised regional data (including weed mapping) capture, storage, record keeping and retrieval processes. 4.3.2 Encourage wider use of the Biosecurity Information System to improve weed distribution and impacts data and management information. 4.3.3 Ensure that weed information and research data are readily available to stakeholders for use in weed management and planning.
4.4 Develop consistent systems for monitoring, evaluating and reporting on the effectiveness of weed management.	4.4.1 Develop and implement indicators that assess the performance of this plan and progress towards achieving strategic outcomes. 4.4.2 Develop and implement standard local monitoring and reporting protocols that support region and state-wide needs. 4.4.3 Use the information collected from research, local MERI programs and the BIS to inform an adaptive management approach to Hunter weed management projects, plans, programs, policies and reforms.

6. Implementation

This chapter covers how the plan will be implemented, including governance. It includes guiding principles for weed management planning and implementation and roles and responsibilities for stakeholders and customers in implementing this plan.

6.1 Regional Weed Committee

Collaboration and building capacity of land managers is central to the successful implementation of this plan. By working collaboratively and engaging with all sectors – public, private, non-profit, individuals and community groups – effective and lasting solutions to shared problems can go beyond what any sector can achieve on its own. The Hunter Regional Weeds Committee and its member organisations will facilitate implementation of this plan, with executive support from Hunter Local Land Services and overarching guidance from the local Board.

In implementing the plan, the committee will work with Local Land Services to:

- advise the State Weeds Committee on weed priorities and other strategic matters in the region and seek their advice relating to weed listings, cross-jurisdictional and other matters
- liaise with neighbouring regional weed committees, especially with respect to any significant incursions and potential movement of priority weeds from one region to another
- promote weed policy, risk assessments, declarations, best practice and control outcomes to member organisations and the community
- oversee the implementation of the plan on a region-wide perspective, using committee expertise and best available knowledge, research and technology
- facilitate regional communication, education, training and awareness programs that promote plan outcomes
- promote effective coordination of weed management across agencies and tenure, including appropriate resource and information sharing between member organisations
- identify synergies from collaboration and opportunities for funding and priority project delivery
- identify information and research needs and appropriate collaborative actions
- oversee measurement and evaluation of weed control activities in the region to inform management actions and planning
- monitor, evaluate and report on outcomes of collaborative planning and delivery processes.

6.2 Guiding principles for implementation

The following principles will be used to guide weed management planning and implementation and are consistent with the weed reforms and leading practice:

- Effective stakeholder collaboration and shared responsibility are essential to effective weed management.
- Behavioural change and increasing community capacity are important to effective weed management.
- Prevention and early intervention are the most effective weed management tools.
- Causes of weed invasion and spread are managed wherever possible, not just the symptoms.
- The biology and ecological requirements of weeds, including mechanisms and pathways for spread, are considered in weed management.
- Innovation in weed control and management is encouraged.
- Regular monitoring, evaluation and improvement are incorporated in weed management programs.
- Weed management is an integral part of land management. Land management practices and their timing are critical to the prevention and reduction in the spread and impact of weeds.
- Weeds are managed in a strategic and coordinated manner across the landscape. Assessing and managing weed risk at a landscape and multi-species scale (where appropriate) can lead to significant efficiencies in use of resources and achievement of strategic outcomes.
- The best available science, expertise and tools are utilised in weed management decision making.

6.3 Processes supporting implementation

A range of plans and processes will support implementation of this plan, as outlined in Box 6.1. Hunter Local Land Services will work with the committee in the development of these processes in the region.

A key element of this plan is collaborative and coordinated weed management across tenures. This will require policies, processes and procedures for collaborative planning and action to enable member organisations and key stakeholders to translate this plan into local area priorities, actions, collaboration and partnerships that integrate weed management across both tenures and stakeholders.

Box 6.1 Business plans and processes that support delivery of the plan.

- Hunter Regional Weeds Committee coordination - to ensure clear stakeholder roles and responsibilities and good governance. May also cover delivery of business planning components, including the review and update of weed risk assessments, as required.
- Local implementation roles and responsibilities - to ensure clear roles and responsibilities and consistency in the delivery of local weed management.
- Processes for integrating regional delivery and projects - to ensure efficient and effective delivery.
- Compliance planning - to support an integrated and consistent approach to meeting regulatory obligations across the region.
- High risk weed incursion planning - to address surveillance and identification of new weed incursions and coordination of regional responses.
- Rapid response planning - to address procedures, responsibilities and actions for response to a new incursion.
- Local control authority planning - to ensure that compliance strategies, standards and service agreements are consistent with this plan and to provide a consistent policy and procedural framework for inspections and enforcement under the *Biosecurity Act 2015.*
- State Guidelines and best practice codes - to support consistency in approach and the capacity to inform state-wide reporting.
- Communication and marketing - to develop a strategic approach to communicating key messages and engaging partners, stakeholders and the broader community.
- Key performance indicator development - to support assessment of this plan's performance measures.
- Monitoring, evaluation, reporting and improvement coordination - to support consistent approaches that allow for reporting at local, regional and state scales.
- Research and development collaboration – to support a collaborative approach to addressing research needs in the region.
- Investment planning – to support an integrated approach to investment in priorities for weed management in the region.
- Procedures for review of weed listings in the plan. Responsibility for amendments to state determined priorities rest with NSW DPI and the State Weeds Committee. The committee will raise any identified issues with changes to listings for state-determined priorities via the State Weeds Committee, to ensure consistency and alignment.

Many of these plans and processes are already underway, but require Regional Weed Committee endorsement or further collaboration between partners.

6.4 Delivery partners

Delivery partners have an interest in delivery of priority actions. This interest spans from being involved in refining priority actions, to further developing processes to address actions, through to participating in the delivery and enforcement of the plan. Broad roles and responsibilities are determined, and responsibilities for specific actions will be agreed upon. As implementation progresses and opportunities for new partnerships emerge, new partners may also become involved.

Resourcing of weed management is unpredictable and will fluctuate, and partners also differ in their capacity to deliver weed management resources. Commitments from partners improve community confidence in action implementation. It is recognised that commitments and capacity may be contingent upon availability of resources at a given point in time.

6.4.1 Lead organisations

Lead organisations will take responsibility for the delivery of actions and performance measures within this plan and will manage and coordinate implementation of components of the plan and associated programs. This will ensure clear responsibilities for plan implementation and will be agreed upon in the development of relevant business plans and policies. Partners will take primary responsibility within their respective areas in the delivery of actions and performance measures. Other government agencies, industry and community will also play a role in implementing this plan to varying degrees.

6.4.2 Roles and responsibilities

A wide range of stakeholders and customers are involved in weed management in the region. This plan recognises the roles of all levels of government, industry, community and community organisations. This plan aims to consolidate these efforts through better coordination and communication between organisations and individuals in the region.

Commonwealth Government

The Commonwealth Government has a role in preventing new weed incursions at national borders (quarantine); in education, research and development; in funding, and national legislation. National agreements outline the roles and responsibilities of government and industry in responding to emergency plant, pest and disease incidents, and detail how those responses will be funded. These agreements include the Intergovernmental Agreement on Biosecurity, Emergency Plant Pest Response Deed and the National Environmental Biosecurity Response Agreement.

State Government

State Government leads the development of policies, strategies and legislation that promote a comprehensive and responsive weed biosecurity system across NSW. The NSW DPI is the lead agency for weed management within the NSW Government, with support from the Office of Environment and Heritage (OEH) in relation to environmental weed management.

Key roles and responsibilities for these two agencies include:

- administration of key legislation relating to priority weeds (*Biosecurity Act 2015* – DPI, and *Biodiversity Conservation Act 2016*– OEH)
- increasing awareness of weeds in industry, key stakeholders and the community
- leading and coordinating prevention, preparedness, response and recovery for weed emergencies
- developing non-regulatory approaches and incentives to underpin weed management
- coordinating diagnostic, surveillance, tracing and monitoring systems for priority species
- conducting weed research in priority areas and collaborating with universities and research providers on priority research initiatives and pest and weed identification
- coordinating the delivery of leading practice solutions for weed managers across the state.

NSW DPI leads and coordinates the prevention, preparedness, response and recovery for weed emergencies. This agency also develops and maintains regulatory mechanisms that support weed programs.

OEH and NPWS

The Office of Environment and Heritage is responsible for managing more than 850 national parks and reserves (see further below). OEH also leads state-wide initiatives to reduce the impacts of invasive species on biodiversity. The *Saving our Species* program provides for the conservation of threatened taxa across all land tenures under the *Biodiversity Conservation Act 2016*.

The National Parks and Wildlife Service (NPWS – part of OEH) is responsible for managing over 7 million hectares of land in NSW. As a public land manager, NPWS works with a range of stakeholders to proactively and strategically manage weeds. NPWS is guided by Regional Pest Management Strategies that identify weed management priorities and programs for implementation on all lands managed by NPWS. The strategies aim to minimise the adverse impacts of pests and weeds on biodiversity, protected areas and the community by identifying the highest priority programs and delivering measurable outcomes. The strategies also demonstrate NPWS's responsibilities in delivering the NSW Biosecurity Strategy 2013-2021.

Department of Industry - Lands

The Department of Industry - Lands is a business unit of the NSW Department of Industry and administers and manages Crown land, which makes up approximately half the state. It develops funds and implements invasive species management strategies on land under its direct control and supports activities undertaken by community groups, reserve trusts, lessees and others that manage land on its behalf, including Councils.

Department of Industry - Lands incorporates a multi-pronged risk-based approach to managing invasive species on Crown Land, including education, extension, project implementation, audit and compliance activities. Department of Industry - Lands is always keen to work in partnership with other stakeholders and agencies to ensure optimal outcomes in the management of invasive species on Crown Land.

Local Government

Local Government plays a significant role in biosecurity, particularly in weed management. It has an important role to play in engaging local communities, managing public lands and assisting with emergency management. Local Government also makes a significant investment in local and regional weed management. Weed control functions of local government are undertaken by **Local Control Authorities,** including local government and county councils (formed by adjoining councils to pool resources for weed control or other specified functions). Local Control Authorities have a significant role and responsibility for the implementation of this plan and for priority weed control including:

- enforcing legislated weed management obligations on private and public land
- delivering components of the NSW Weeds Action Program throughout the state
- conducting weed inspections on private and public land
- controlling weeds on lands managed by local government
- reporting and mapping weed incidence across the state
- input into weed strategy and policy
- providing education, training and resources for both the public and for staff.

Other managers of state owned land and linear reserves

Several organisations and government agencies manage state owned land allocated for specific purposes. These include travelling stock reserves (TSRs, managed by Local Land Services), state forest (Forestry Corporation of NSW, a state-owned corporation), state infrastructure such, as road and rail corridors (Roads and Maritime Services and Australian Rail Track Corp), corridors for energy infrastructure and Water NSW. All land managers play an important role in the

management of weeds in the region, including the development and implementation of management strategies and the education of the community and other stakeholders.

Aboriginal land managers (Local Aboriginal Land Councils)

Local Aboriginal communities have a similar role to other community organisations in managing weeds on their land, but have additional cultural factors which influence land management. Aboriginal traditional owners have obligations under traditional law and custom to care for Country. This may result in Aboriginal people having priorities, for weed management to address threats to cultural sites, indigenous plants and animals or other important cultural resources (OEH, 2016).

Throughout the region, there are many different types of land ownership and management by Aboriginal people. Indigenous Land Use Agreements help clarify obligations of public land managers where Native Title is recognised over the land they manage (OEH, 2016).

Industry

Industry roles in weed management include:

- implementing and developing industry standards, guidelines and codes of practice
- contributing to research programs in priority areas
- participation in biosecurity response agreements and cost-sharing arrangements
- managing weeds on land and water that is used for production
- managing risks when trading in potential or known weed species used for, or held by, nurseries, pet shops and aquaria (water weeds), collectors, agriculture, horticulture, aquaculture and biofuels, etc.
- preventing the establishment of weeds, through movement of goods, produce and equipment.

Community groups, volunteers and individuals

Community groups and volunteers play an important role in the management of weeds in the region. The Landcare network is one of the larger, more organised community partners involved in regional weed-related issues.

Community groups and volunteers support community engagement and assist in hands-on weed management. This includes leading volunteer groups that undertake weed removal and monitoring activities, bush regeneration, biodiversity conservation projects and rehabilitation of aquatic habitats on private and public lands. Building on this foundation to share in responsibilities for weed management, is essential.

Individual community members have an important role to play in helping to minimise the impacts of weeds in the region. The community provides much needed “eyes and ears” on the ground to detect and report new incursions and support eradication. The community also provides crucial support to the actions of responsible authorities, land managers and external funding programs. Likewise, programs that build resilience in the natural environment and help reduce the risks, from pests, diseases and weeds, rely on community participation.

Private land owners and occupiers have roles to play in the ongoing management of established weeds on their own land and in collaboration with their neighbours and the surrounding community. Along with others they have a General Biosecurity Duty under the *Biosecurity Act 2015*.

6.5 Investment

The development of the business planning components identified in section 6.3 should ultimately ensure that investment in Hunter weed management is effective, efficient and delivers desired outcomes. This plan supports investment planning that provides both short and long term outcomes that reflect achievement of our goals - shared responsibility, sustainable landscapes and coordinated and innovative delivery.

Stakeholders will, no doubt, continue to deliver their programs according to investor preferences. This plan will support the transitioning of existing investment in local weed management to achieve this plan's goals.

The Regional Weeds Committee will play a critical role in sourcing investment, brokering partnerships, and facilitating coordination of stakeholder investment to ensure that the region's weed biosecurity needs are met. The committee will provide advice on options for tailoring both new and existing stream of investment so that they best fit the region's new management approaches.

The committee will also facilitate exploration of opportunities for integrating the existing efforts of stakeholders, along with options for stakeholders to work in collaboration on new initiatives. This will be fundamental to implementing this plan's tenure neutral approach, and to meeting the region's General Biosecurity Duty. The proactive development of flexible, integrated and effective projects that meet the region's priorities will ensure that the region is "investment ready".

Clear definition of partner roles and responsibilities will be critical to ensuring that stakeholders can continue to satisfy their individual investors, while also delivering results that complement and add value to a greater set of outcomes (e.g., coordinated local control authority compliance, high risk incursion and rapid response planning will contribute to broader regional weed biosecurity). The committee has a critical role in this regard.

The committee will work with stakeholders to keep a watching brief on potential national, state and regional investment schemes and opportunities for collaboration and cross-regional approaches. Cross-regional networking will be critical to facilitating the leveraging of funding from other sectors.

6.6 Community engagement

This plan supports the development of long-term approaches to maintaining and improving community capacity to share responsibility for local weed management. Significant effort will be put into letting all land managers know about the plan, how weed management in the region has changed under the new biosecurity legislation, and the implications for how they manage weeds.

Stakeholders will continue to engage and work with communities on their weed management programs. Stakeholder approaches to engaging community will need to accommodate the changes in the weed management approach outlined in this plan.

The Regional Weed Committee will drive an inclusive approach to community engagement. A communication and marketing strategy will be developed to identify community and stakeholder engagement needs, their sphere of influence, their roles in weed management, and the best ways to approach and involve them in weed management. Clear and concise information products will be developed for specific sectors of the community (e.g., rural landholders, alternate lifestylers) and at local and sub-regional scales to assist the community in understanding their obligations. These information products will be developed after the plan is approved.

The plan supports targeted capacity building programs that focus on priority species. Communities differ in their capacity to be involved in weed management, and so programs will be tailored to meet local knowledge, skills, networks and resourcing needs. The Regional Weed Committee will also assist with the identification of the need for and coordination of capacity building programs in priority areas.

The Regional Weed Committee will also support stakeholder networks to understand and promote changes in weed management including the requirements of the General Biosecurity Duty, the tenure neutral approach, and the implications for their customers.

7. Measuring success and continuous improvement

Measuring and reporting on progress against key performance indicators (KPIs) is particularly important, as are practices that promote reflection and learning to inform decision making. This section covers how we intend to address and document to what extent goals have been achieved, as well as evaluating performance, and reviewing our activity and focus.

7.1 Measuring performance

In common with other agencies and businesses, Hunter Local Land Services has a responsibility to demonstrate, to its customers, investors and stakeholders, that its strategies are sound and effective. Underpinning all strategies, programs and systems will be a requirement to monitor, evaluate and report on performance.

The committee will work with Hunter Local Land Services to establish a monitoring, reporting, evaluation and improvement process (MERI) that is consistent with the Hunter Local Land Services and Natural Resource Commission standards. This MERI framework will facilitate the review of results against planned immediate, intermediate and long-term outcomes. It will also enable a systematic and objective assessment of the effectiveness and efficiency of actions, policies, projects and programs.

This plan depends on collaboration and sound partnerships for strategic weed planning, implementation and reporting. The development of measures to track the establishment of a workable collaborative approach is important to support tenure neutral implementation. The committee will also track resources secured and aligned for implementing the plan.

7.1.1 Performance indicators and reporting

Standardised MERI systems will be used to compile and report on the efforts and achievements of stakeholders in contributing to this plan. Achieving consistency will require the use of:

- key performance indicators (KPIs)
- standard local monitoring and reporting protocols that support region and state-wide needs
- evaluation by partners and the committee to guide improvement in weed management projects, programs and policies

Performance indicators will be developed to enable tracking of the progressive impacts of interventions and investment in priorities and will relate to the goals for this plan as outlined below.

Shared responsibility (Goal 1)

- Adoption of leading practice (by sector)
- Awareness and education programs delivered with uptake indicated by community involvement in weed control
- Community capacity and capability to undertake weed biosecurity (knowledge, skills, barriers addressed, networks, resources) increased

Sustainable landscapes (Goals 2 and 3)

- New incursions of high priority weeds avoided
- New incursions of high priority weeds eradicated or destroyed
- Spread of high priority weeds prevented
- Impacts of widespread weeds on high priority assets reduced
- Sources of weed invasion identified and managed
- Weed impacts on natural ecosystems reduced or avoided
- Weed risks or impacts to production / industries reduced (economic goal)

Collaborative leadership and innovation (Goal 4)

- Percentage of supporting plans and processes completed (see section 6.3)

Available metrics can be used in the short-term, based on existing knowledge, while we refine metrics to provide more accurate measures of progress. A wide range of metrics are in use by committee member organisations, stakeholders and through the Weeds Action Program 2015-2020, and other programs. These will take time to collate and assess. Agreed metrics will be considered by the committee, in consultation with the State Weeds Committee.

Review and reporting on performance against this plan will occur annually. A component of this review will be an evaluation of our regional contribution to the new biosecurity reforms and their influence on weed management in the Hunter.

The approach to MERI must meet the needs of customers, investors and stakeholders and facilitate reporting on investment outcomes at a range of scales – local, sub-regional, and regional. Standardised reporting should support:

- individual stakeholder needs for local level reporting
- state level reporting and reporting to investors
- annual reporting on implementation and progress of this plan and progress.

7.1.2 Information management

Data collection and management is crucial to the adoption of standardised approaches for the region, and for the implementation of MERI procedures.

The committee will work with Local Land Services to oversee the coordinated development of systems for:

- adopting standard regional data (including weed mapping) capture, storage, record keeping and retrieval protocols
- collecting, synthesising and storing data in a form useful for multiple stakeholders
- contributing weed data and management information to the Biosecurity Information System
- contributing to local, regional and state-wide weed information and knowledge platforms that support research capacity and capability
- ensuring that weed information and data are readily available to stakeholders for use in research, updating management plans and reporting.

The data and information collected will be integrated into state-wide data sets and be accessible through open government, wherever possible. It will contribute to whole-of-NSW reporting on the state and trend of asset conditions, including the State of the Environment report and reporting against objectives for the Invasive Species Plan.

7.1.3 Strengthening science and research capacity

Research plays an important role in evaluating and informing practice, supporting innovation and informing future directions. Engaging proactively with the research community is fundamental to improving the region's weed management planning and practice. Through links with the SWC, the regional Committee will contribute to and facilitate:

- engagement with weed science researchers, community, the Aboriginal community, government, and industry to identify current knowledge gaps and to document weed species research priorities
- stronger partnerships and active participation in industry, government and university collaboration for weeds research
- new and updated regional and sub-regional weed risk assessments
- development of new technologies and innovative approaches to the management of weed risks
- investigation of biological control programs for priority weeds
- a better understanding in the region of the impacts of a changing climate on weed behaviour and the interplay between natural systems and weeds
- incorporation of research findings into weed management decision-making (this is part of adaptive management).

7.2 Adaptive Management and continuous improvement

The Hunter Regional Weeds Committee will foster adaptive management and continual improvement in weed management. Adaptive management is used in changing environments, where optimal management procedures have not been determined. It is based on a continuous improvement cycle: "plan–do-learn". This is underpinned by monitoring, reporting and evaluation processes, and the subsequent improvement of planning and delivery, based on lessons learned.

Local Land Services applies learning at the following scales to drive continuous improvement:

- project (where learning focuses on improving project design and practices)
- program (where learning focuses on improving strategies, targets and assumptions)
- organisational (where learning focuses on improving governance and systems)

This approach is outlined in the Hunter Local Land Services Local Strategic Plan and will provide the basis of MERI for this plan.

7.3 Plan review

A mid-term review of this plan will be undertaken at year three (2020) and a full review will be undertaken nearing the end of the five-year term for this plan (2022). Weed risk assessments will be updated as needed, from time-to-time, and a particular focus at year three will be on evaluation and review of weed lists in this plan (Appendix 1 and 2).

8. Abbreviations

BIS	Biosecurity Information System
DPI	NSW Department of Primary Industries
GBD	General Biosecurity Duty
km	kilometre
LCA	Local Control Authority
LLS	Local Land Services
MERI	Monitoring, evaluation, reporting and improvement
OEH	The NSW Office of Environment and Heritage
NPWS	NSW National Parks and Wildlife Service
NRC	Natural Resources Commission
RSWMP	Regional Strategic Weed Management Plan
RWC	Regional Weeds Committee
SWC	State Weeds Committee
TSR	Travelling stock reserve
WAP	NSW Weed Action Program

9. Glossary

Aboriginal cultural heritage: Aboriginal cultural heritage consists of places and items that are of significance to Aboriginal people because of their traditions, observances, lore, customs, beliefs and history. It provides evidence of the lives and existence of Aboriginal people, before European settlement through to the present. Aboriginal cultural heritage is dynamic and may comprise of physical (tangible) or non-physical (intangible) elements.

Adaptive management: A management approach based on the science of learning by doing. It involves testing the response of a system, then applying this understanding to future decisions.

Asset protection: Preventing the spread of weed species to high value assets of economic, environmental and/or social value, or reducing the impact on the high value asset for weeds already present.

Best practice: A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. Also see leading practice.

Biodiversity: The variety of all life forms: the different species of plants, animals, fungi, bacteria and other micro-organisms, the genes they contain and the ecosystems (the variety of habitats, biotic communities and ecological processes) of which they form a part.

Biosecurity: Protecting the economy, environment and community from the negative impacts of pests, diseases and weeds.

Collaboration: Working together to develop an understanding of all issues and interests to work out alternatives and identify preferred solutions for joint decision making.

Containment: Preventing the spread of weed species beyond a predefined area and reducing the impact where it occurs.

Country: A term used by Aboriginal people to refer to the land to which they have a traditional attachment.

Customer: Any land manager within the state or region, irrespective of whether they are private or public land managers, ratepayers or non-ratepayers.

Emergency Management: Management related to preparedness, response and recovery for actual or imminent animal pest and disease and plant pest and disease emergencies, natural disasters and other emergencies impacting on primary production or animal health and safety.

Eradication: To permanently remove a weed species and its propagules from an area such that there is little or no likelihood of re-invasion occurring.

Governance: The framework of rules, structures, interactions and practices by which the Hunter Local Land Services Board exercises power, responsibility and decision making to ensure accountability, fairness, and transparency in relationship to the Hunter region's customers, stakeholders and investors.

General Biosecurity Duty: Under the *Biosecurity Act 2015* a General Biosecurity Duty (GBD) applies to all weed species that present a biosecurity risk. For weeds, the GBD means that any person dealing with plant matter, who knows or ought reasonably ought to know the biosecurity risk posed by that dealing, must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable). 'Dealing' has a broad definition in the act. Plant matter includes plants, parts of plants and seeds.

Habitat: A place suitable for survival and/or reproduction of a particular plant or animal.

Investor: Organisations and individuals who invest in Local Land Services and leverage outcomes from this investment.

Landscape: Any section of land or coast and its natural features, including rivers and other water bodies. Represents the overlay of the variety and arrangement of physical landforms (e.g., rivers, escarpment, rocky reefs), communities of people (e.g., Aboriginal, rural) and land uses (e.g., urban, conservation, agricultural).

Leading practice: Currently accepted best practice.

Prevention: To prevent a weed species arriving and establishing in an area.

Stakeholder: Organisations that collaborate and partner with Local Land Services directly to support customer service delivery.

Travelling stock reserve:

- route or camping place reserved for travelling stock route or camping place under the *Crown Lands Act 1989*
- reserve for travelling stock, water reserve, reserve for access or crossing (where the reserve is for the purpose of providing travelling stock with access to or a crossing of water, whether expressly notified for that purpose or not)
- stock watering place.

Weed: Plants (foreign to the region) that are unwanted in a given situation and which usually have detectable negative economic, environmental or social impacts.

Weed Action Program (WAP): NSW Government funding program supporting delivery of priority weed investment to local government, Local Land Services and local control authorities.

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MNCWCC (2010) Regional Weed Management System. Contains:

- Strategic Invasive Weeds Plan 2010-2015
- High Risk Sites & Pathways Management Plan
- Regional Inspection Program
- Weed Incursion Plan
- Rapid Response Plan
- Communications Strategy
- Weed Officer's Education Pathway Plan
- Monitoring, Evaluation, Reporting and Improvement Plan

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Appendix 1: Priority weeds for the Hunter Local Land Services Region

This appendix covers State level determined priority weed species (A1.1) as set by NSW DPI and regionally determined priorities (A1.2), as determined by the rigorous weed prioritisation and expert review process outlined in Section 4.2.

The *Biosecurity Act 2015* and regulations provide specific legal requirements for state level priority weeds (A1.1) and high risk activities. For each state level priority weed, the management objective, and specific requirements for its management (as stated in the *Biosecurity Act 2015* and regulations) is included. These specific requirements include Prohibited Matter, Biosecurity Zones, Control Orders and Mandatory Measures.

A1.2 identifies regionally prioritised weeds and outcomes to demonstrate compliance with the General Biosecurity Duty. Recommended measures for these weeds are provided in the NSW DPI web and mobile-based application WeedWise, as practical advice on achieving these outcomes.

A1.1 State level determined priority weeds

State Priority Weed Objective – PREVENTION: The following weeds are currently not found in the state, pose significant biosecurity risk and prevention is a reasonably practical objective.	
SPECIES	BIOSECURITY ACT REQUIREMENTS & STRATEGIC RESPONSE IN THE REGION
All species of vascular plant (*Tracheophyta*)	**Mandatory Measure (Division 8, Clause 34)** *Duty to notify of importation of plants into the State:* A person must not import into the State a species of vascular plant (Tracheophyta) if the species is not currently present in the State unless the person has, at least 20 working days before the plant is imported into the State, notified the species of plant and its proposed location within the State. The notification is to be given to the Secretary and is to be given in accordance with Part 6. A species of plant is taken not to be present in the State if the National Herbarium of New South Wales does not show it as being present in the State. Note. See http://plantnet.rbgsyd.nsw.gov.au/. **Regional Strategic Response:** Increased priority placed on the identification and mapping of unrecorded weed species, including the collection and submission of specimens to the Plant Information Network System of the Royal Botanic Gardens
Black knapweed – *Centaurea x moncktonii* Bridal veil creeper – *Asparagus declinatus* Gamba grass – *Andropogon gayanus* Kochia – *Bassia scoparia* (excluding subsp *trichophylla*). Koster's curse – *Clidemia hirta* Pond apple – *Annona glabra* Siam weed – *Chromolaena odorata* Spotted knapweed – *Centaurea stoebe* subsp. *micranthos*	Prohibited Matter (Part 4, Biosecurity Act, 2015): A person who deals with any biosecurity matter that is Prohibited Matter throughout the State is guilty of an offence. Regional Strategic Response: Implement quarantine and/or hygiene protocols Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options Have a collaborative rapid response protocol in place

State Priority Weed Objective – PREVENTION:

The following weeds are currently not found in the state, pose significant biosecurity risk and prevention is a reasonably practical objective.

SPECIES	BIOSECURITY ACT REQUIREMENTS & STRATEGIC RESPONSE IN THE REGION
Anchored water hyacinth – *Eichhornia azurea*	**Prohibited Matter** *(Part 4, Biosecurity Act, 2015):* A person who deals with any biosecurity matter that is Prohibited Matter throughout the State is guilty of an offence. **Regional Strategic Response:** • Implement quarantine and/or hygiene protocols • Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options • Trigger rapid response protocol
Broomrape – *Orobanche spp.* (all species except the native *O. cernua* var. *australiana* and *O. minor)*	
Eurasion water milfoil – *Myriophyllum spicatum*	
Frogbit / Spongeplant – *Limnobium spp.* (all species)	
Hawkweed – *Hieracium spp* (all species)	
Hydrocotyl/Water pennywort – *Hydrocotyle ranunculoides*	
Karoo acacia – *Vachellia karroo* (syn. *Acacia karroo)*	
Lagarosiphon – *Lagarosiphon major*	
Mexican feather grass – *Nassella tenuissima* (syn. *Stipa tenuissima)*	
Miconia – *Miconia* spp. (all species)	
Mikania vine – *Mikania micrantha*	
Mimosa – *Mimosa pigra*	
Prickly acacia – *Vachellia nilotica* (syn. *Acacia nilotica)*	
Rubber vine – *Cryptostegia grandiflora*	
Water caltrop – *Trapa* spp. (all species)	
Water soldier – *Stratiotes aloides*	
Witchweed – *Striga* spp. (except the native *S. parviflora)*	
Yellow burrhead – *Limnocharis flava*	

State Priority Weed Objective – ERADICATION: The following weeds are present in limited distribution and abundance in some parts of the state. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.	
SPECIES	BIOSECURITY ACT REQUIREMENTS & STRATEGIC RESPONSE IN THE REGION
Boneseed – *Chrysanthemoides monilifera* subspecies *monilifera*	**Biosecurity (Boneseed) Control Order 2017:** 1. Pursuant to sections 62(1)(a) and 67 of the Act, the control zone to which control measures are required to be implemented under this Control Order is the whole of New South Wales. 2. The control zone is called the **Boneseed Control Zone**. Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Boneseed Control Zone on which there is Boneseed must; and a. notify the local control authority for the area if the Boneseed is part of a new infestation on the land: b. immediately destroy all Boneseed on the land; c. ensure that subsequent generations of Boneseed are destroyed; and d. the land is kept free of Boneseed. e. The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Boneseed in the Boneseed Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Boneseed on the land or in or on the carrier, must: a. ensure that Boneseed (including any seed and propagules) is not moved from the land; and b. immediately notify the local control authority for the area: c. The person who deals with a carrier of Boneseed does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell.

Parkinsonia – *Parkinsonia aculeata*	**Biosecurity (Parkinsonia) Control Order 2017:** 4. Pursuant to sections 62(1)(a) and 67 of the Act, the control zone to which control measures are required to be implemented under this Control Order is the whole of New South Wales. 5. The control zone is called the **Parkinsonia Control Zone**. Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Parkinsonia Control Zone on which there is Parkinsonia must: a. notify the local control authority for the area if the Parkinsonia is part of a new infestation of Parkinsonia on the land; and b. immediately destroy all Parkinsonia on the land; and c. ensure that subsequent generations of Parkinsonia are destroyed; and d. the land is kept free of Parkinsonia. e. The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Parkinsonia in the Parkinsonia Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Parkinsonia on the land or in or on the carrier, must: a. ensure that Parkinsonia (including any seed and propagules) is not moved from the land; and b. immediately notify the local control authority: c. The person who deals with a carrier of Parkinsonia does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell.
Parthenium weed – *Parthenium hysterophorus*	**Prohibited Matter (Part 4, Biosecurity Act, 2015):** A person who deals with any biosecurity matter that is Prohibited Matter throughout the State is guilty of an offence. **Mandatory Measure (Division 8, Clause 35, Biosecurity Regulation, 2017) - Parthenium weed carriers, machinery and equipment** 1. This clause applies to the following equipment: a. grain harvesters (including the comb or front) b. comb trailers (including the comb or front) c. bins used for holding grain during harvest operations d. augers or similar equipment used for moving grain e. vehicles used for transporting grain harvesters f. vehicles used as support vehicles with grain harvesters and that have been driven in paddocks during harvest operations g. mineral exploration drilling rigs and vehicles used for transporting those rigs 2. A person must not import into the State from Queensland any equipment to which this clause applies

Tropical soda apple – *Solanum viarum*	**Biosecurity (Tropical soda apple) Control Order 2017:** 1. Pursuant to sections 62(1)(a) and 67 of the Act, the control zone to which control measures are required to be implemented under this Control Order is the whole of New South Wales. 2. The control zone is called the **Tropical Soda Apple Control Zone.** Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Tropical Soda Apple Control Zone on which there is Tropical Soda Apple must: a. notify the local control authority for the area if the Tropical Soda Apple is part of a new infestation of Tropical Soda Apple on the land; and b. destroy all Tropical Soda Apple on the land, including fruit; and c. ensure that subsequent generations of Tropical Soda Apple are destroyed; and d. that the land is kept free of Tropical Soda Apple. e. The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Tropical Soda Apple in the Tropical Soda Apple Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Tropical Soda Apple on the land or in or on the carrier, must: a. ensure that Tropical Soda Apple (including any seed and propagules) is not moved from the land; and b. immediately notify the local control authority for the area: c. The person who deals with a carrier of Tropical Soda Apple does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. **Regional Strategic Response:** • Develop a region-wide coordinated campaign for collaborative management • Detailed surveillance and mapping to locate all infestations. • High level analysis of pathways to identify potential introduction areas and preventative options. • Implement quarantine and/or hygiene protocols. • Monitor progress towards eradication.

State Priority Weed Objective – CONTAINMENT: These weeds are widely distributed in some parts of the state. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.	
LAND AREA WHERE REQUIREMENTS APPLY	RELEVANT LEGISLATION & STRATEGIC RESPONSE
Alligator weed – *Alternanthera philoxeroides*	
A Biosecurity Zone, to be known as the Alligator weed biosecurity zone, is established for all land within the state except land in the following regions: a. Greater Sydney, b. Hunter (but only in respect of land in the local government area of City of Lake Macquarie, City of Maitland, City of Newcastle or Port Stephens).	**Biosecurity Regulation 2017 - Part 5, Division 2 (Alligator weed biosecurity zone)** An owner or occupier of land in the Alligator weed biosecurity zone on which there is the weed Alternanthera philoxeroides (Alligator Weed) must: a. if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6, and b. eradicate the weed or if that is not practicable destroy as much of the weed as is practicable and suppress the spread of any remaining weed. **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell. **Regional Strategic Response:** *Outside the Biosecurity Zone:* • Develop a region-wide coordinated campaign for collaborative management • Identification of key sites/assets in the geographic area • Species managed in accordance with published weed management plans *Within the Biosecurity Zone:* • Detailed surveillance and mapping to locate all infestations. • High level pathways analysis to identify potential introduction areas and preventative options. • Implement quarantine and/or hygiene protocols. • Monitor progress towards eradication.

Bitou bush – *Chrysanthemoides monilifera* subsp. *rotundata*	
A Biosecurity Zone, to be known as the Bitou bush biosecurity zone, is established for all land within the State except land within 10 kilometres of the mean high water mark of the Pacific Ocean between Cape Byron in the north and Point Perpendicular in the South	**Biosecurity Regulation 2017 - Part 5, Division 3 (Bitou bush biosecurity zone)** An owner or occupier of land in the Bitou bush biosecurity zone on which there is the weed *Chrysanthemoides monilifera subsp. rotunda* (Bitou bush) must: a. if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6, and b. eradicate the weed or if that is not practicable destroy as much of the weed as is practicable and suppress the spread of any remaining weed. **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell. **Regional Strategic Response:** Species managed in accordance with published weed management plan. *Outside the Biosecurity Zone:* • Develop a region-wide coordinated campaign for collaborative management • Identification of key sites/assets in the geographic area • Species managed in accordance with published weed management plans *Within the Biosecurity Zone:* • Detailed surveillance and mapping to locate all infestations. • High level pathways analysis to identify potential introduction areas and preventative options. • Implement quarantine and/or hygiene protocols. • Monitor progress towards eradication.

Water hyacinth – *Eichhornia crassipes*	
A Biosecurity Zone, to be known as the Water Hyacinth Biosecurity Zone, is established for all land within the State except land in the following regions: a. Greater Sydney or North Coast, b. North West (but only land in the region that is in the local government area of Moree Plains), c. Hunter (but only land in that region that is in the local government area of City of Cessnock, City of Lake Macquarie, MidCoast, City of Maitland, City of Newcastle and Port Stephens), d. South East (but only land in that region that is in the local government area of Eurobodalla, Kiama, City of Shellharbour, City of Shoalhaven or City of Wollongong).	**Biosecurity Regulation 2017 - Part 5, Division 4 (Water hyacinth biosecurity zone)** An owner or occupier of land in the Water hyacinth biosecurity zone on which there is the weed *Eichhornia crassipes* (Water hyacinth) must: a. if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6, and b. eradicate the weed or if that is not practicable destroy as much of the weed as is practicable and suppress the spread of any remaining weed. **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell. **Regional Strategic Response:** *Outside the Biosecurity Zone:* • Develop a region-wide coordinated campaign for collaborative management • Identification of key sites/assets in the geographic area • Species managed in accordance with published weed management plan *Within the Biosecurity Zone:* • Detailed surveillance and mapping to locate all infestations. • High level pathways analysis to identify potential introduction areas and preventative options. • Implement quarantine and/or hygiene protocols. • Monitor progress towards eradication.

State Priority Weed Objective – ASSET PROTECTION: These weeds are widely distributed in some areas of the State. As Weeds of National Significance, their spread should be minimised to protect priority assets.	
SPECIES	RELEVANT LEGISLATION & STRATEGIC RESPONSE
African boxthorn – *Lycium ferocissimum*	**Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell. **Regional Strategic Response:** • Develop region-wide coordinated campaigns for collaborative management • Identification of regional containment zones where required • Identification of key sites/assets in the geographic area • Species managed in accordance with published weed management plan
Asparagus weeds – *Asparagus aethiopicus,* *A. africanus, A. asparagoides* including western cape form, *A. plumosus, A. scandens*	
Athel pine – *Tamarix aphylla*	
Bellyache bush – ***J**atropha gossypifolia*	
Blackberry – ***R**ubus fruticosus* agg. (Blackberry exempt the varietals Chester Thornless, Dirksen Thornless, Loch Ness, Silvan, Black Satin, Murrindindi, Smooth Stem, Thorfree and Chehalem)	
Cabomba – *Cabomba caroliniana*	
Cape broom – *Genista monspessulana*	
Cat's claw creeper – *Dolichandra unguis- cati*	
Chilean needle grass – *Nassella neesiana*	
Fireweed – *Senecio madagascariensis*	
Flax leaf broom – *Genista linifolia*	
Gorse – *Ulex europaeus*	
Lantana – *Lantana camara*	
Madeira vine – *Anredera cordifolia*	
Mesquite – *Prosopis* spp.	
Olive hymenachne – *Hymenachne amplexicaulis*	
Opuntioid cacti – *Opuntia* spp., *Cylindropuntia* spp., *Austrocylindropuntia* spp. excluding O. ficus indica	
Sagittaria – *Sagittaria platyphylla*	
Salvinia – *Salvinia molesta*	
Scotch broom – *Cytisus scoparius* subsp. *scoparius*	
Serrated tussock – *Nassella trichotoma*	
Silver-leaf nightshade – *Solanum elaeagnifolium*	
Willows – *Salix spp.* (excludes *S.babylonica, S.x calodendron & S. x reichardtii)*	

A1.2 Regional priority weeds

Alphabetically listed by common name.

Regional Priority Weed Objective – PREVENTION: The following weeds are currently not found in the region, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.	
Arrowhead – *Sagittaria calycina*	
Chilean needle grass – *Nassella neesiana*	
Climbing asparagus – *Asparagus africanus*	
East Indian Hygrophila – *Hygrophila polysperma*	
Espartillo, Broad-kernel espartillo – *Amelichloa caudata (Achnatherum caudatum)*	
Espartillo, Narrow-kernel Espartillo – *Amelichloa brachychaeta (Achnatherum brachychaetum)*	
Giant devil's fig – *Solanum chrysotrichum*	
Horsetail – *Equisetum arvense*	
Kudzu – *Pueraria lobata*	
Leaf cactus – *Pereskia aculeata*	
Mahonia / Chinese holly – *Berberis lomariifolia* (formerly known as *Mahonia lomariifolia*)	
Olive hymenachne – *Hymenachne amplexicaulis**	
Serrated tussock – *Nassella trichotoma*	
Sicilian sea lavender – *Limonium hyblaeum*	
Sicklethorn – *Asparagus falcatus*	
Water star grass – *Heteranthera zosterifolia*	
OUTCOMES TO DEMONSTRATE COMPLIANCE WITH THE GBD	STRATEGIC RESPONSE IN THE REGION
• The plant or parts of the plant are not traded, carried, grown or released into the environment • The plant should be eradicated from the land and the land kept free of the plant. • Land managers mitigate the risk of new weeds being introduced to their land. • Local Control Authority is notified if the plant is found on the land. * **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell.	• Implement quarantine and/or hygiene protocols • Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options • Have a collaborative rapid response protocol in place • **New weed incursion response** Trigger rapid response protocol *Supporting documents:* Weed Action Plan

Regional Priority Weed Objective – ERADICATION:
The following weeds are present in limited distribution and abundance in some parts of the region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.
Cabomba – *Cabomba caroliniana**
Chinese knotweed – *Persicaria chinensis*
Chinese violet – *Asystasia gangetica* subsp. *micrantha*
Giant rats tail grass – *Sporobolus pyramidalis*
Glush weed – *Hygrophila costata*
Gorse – *Ulex europaeus**
Kidney-leaf mud plantain – *Heteranthera reniformis*
Mysore thorn – *Caesalpinia decapetala*
Senegal tea plant – *Gymnocoronis spilanthoides*
Silver-leaf nightshade – ***S**olanum elaeagnifolium**
Water lettuce – *Pistia stratiotes*
White blackberry / Mysore raspberry – *Rubus niveus*

OUTCOMES TO DEMONSTRATE COMPLIANCE WITH THE GBD	STRATEGIC RESPONSE IN THE REGION
• The plant is eradicated from the land and the land kept free of the plant. • Land managers mitigate the risk of new weeds being introduced to their land. • The plant or parts of the plant are not traded, carried, grown or released into the environment • Local Control Authority is notified if the plant is found on the land * **Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell.	• Destruction of all infestations, aiming at local eradication where feasible. • Detailed surveillance and mapping to locate all infestations. • High level pathways analysis to identify potential introduction areas and preventative options. • Implement quarantine and/or hygiene protocols. • Monitor progress towards eradication.

Regional Priority Weeds Objective – CONTAINMENT: These weeds are widely distributed in parts of the region.While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.		
LAND AREA WHERE REQUIREMENTS APPLY	OUTCOMES TO DEMONSTRATE COMPLIANCE WITH THE GBD	STRATEGIC RESPONSE IN THE REGION
Asparagus fern – *Asparagus scandens*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises: • Cessnock LGA • Lake Macquarie LGA	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment Land managers mitigate the risk of the plant being introduced to their land. *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Local Control Authority is notified if the plant is found on the land *Within Core infestation:* • Land managers reduce impacts from the plant on priority assets	*Within Exclusion zone:* • Establish agreed quarantine and/ or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options *Within Exclusion zone:* • Identification of key sites/assets in the geographic area • Develop region-wide coordinated campaigns for collaborative management • Species managed in accordance with published weed management plans
Broom asparagus – *Asparagus virgatus*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises: • Newcastle LGA • Lake Macquarie LGA	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment Land managers mitigate the risk of the plant being introduced to their land. *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Land managers prevent spread from their land • Local Control Authority is notified if the plant is found on the land *Within Core infestation:* • Land managers reduce impacts from the plant on priority assets	*Within Exclusion zone:* • Establish agreed quarantine and/ or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options *Within Core infestation:* • Identification of key sites/assets in the geographic area • Develop region-wide coordinated campaigns for collaborative management • Species managed in accordance with published weed management plans

Glory lily – *Gloriosa superba*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises the coastal fringe: • MidCoast LGA • Port Stephens LGA • Newcastle LGA • Lake Macquarie LGA	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment. Local Control Authority is notified if the plant is found on the land Land managers mitigate the risk of the plant being introduced to their land. *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. *Within Core infestation* • Land managers prevent spread from their land	*Within Exclusion zone:* • Establish agreed quarantine and/ or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options *Within Core infestation:* • Identification of key sites/assets in the geographic area • Develop region-wide coordinated campaigns for collaborative management • Species managed in accordance with published weed management plans
Groundsel bush –*Baccharis halimifolia*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises: • Newcastle LGA • Lake Macquarie LGA • MidCoast LGA	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant should be eradicated from the land and the land kept free of the plant. • Notify the Local Control Authority if found. *Within Core infestation:* • Land managers mitigate the risk of new weeds being introduced to their land.	*Within Exclusion zone:* • Monitor change in current distribution to ensure containment of spread.

Long-leaf willow primrose – *Ludwigia longifolia*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises: • Newcastle LGA • Lake Macquarie LGA • Port Stephens LGA • MidCoast LGA	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Land managers mitigate the risk of the plant being introduced to their land. *Within Core infestation:* • Land managers reduce impacts from the plant on priority assets	*Within Exclusion zone:* • Establish agreed quarantine and/ or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options *Within Core infestation* • Identification of key sites/assets in the geographic area • Identification of regional containment zones where required • Develop region-wide coordinated campaigns for collaborative management • Species managed in accordance with published weed management plans
Ludwigia – *Ludwigia peruviana*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises: • Port Stephens LGA • Lake Macquarie LGA	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Notify the Local Control Authority if found. *Within Core infestation:* • Land managers mitigate the risk of new weeds being introduced to their land.	*Within Exclusion zone:* • Species managed in accordance with published weed management plan Control of infestations in close proximity to key production sites/ assets, aiming for a significant reduction in weed density. *Within Core infestation* • Destruction of all infestations aiming at local eradication where feasible

Ox-eye daisy – *Leucanthemum vulgare*		
An *exclusion zone* is established for all lands in the region, except the *core infestation area* which comprises: Barrington Tops Plateau	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Land managers mitigate the risk of the plant being introduced to their land. *Within Core infestation:* • Land managers reduce impacts from the plant on priority assets • Land managers prevent spread from their land.	

Pampas grass – *Cortaderia sp.*		
An *exclusion zone* is established for Upper Hunter LCA The core infestation area comprises: • Port Stephens LGA • Maitland LGA • Cessnock LGA • Lake Macquarie LGA • Newcastle LGA • MidCoast LGA	*Whole of region:* • The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Land managers mitigate the risk of the plant being introduced to their land. *Within Core infestation:* • Land managers reduce impacts from the plant on priority assets • Land managers prevent spread from their land where feasible.	*Within Exclusion zone:* • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options *Within Core infestation* • Identification of key sites/assets in the geographic area • Identification of regional containment zones where required • Develop region-wide coordinated campaigns for collaborative management to reduce weed density • pecies managed in accordance with published weed management plans

Sea spurge – *Euphorbia paralias*		
An *exclusion zone* is established for all lands in the region, except the core infestation area which comprises: Yaccaba Peninsula, Hawks Nest	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Land managers mitigate the risk of the plant being introduced to their land. *Within Core infestation:* • Land managers reduce impacts from the plant on priority assets • Land managers prevent spread from their land.	*Within Exclusion zone:* • Surveillance and mapping to locate all infestations and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. *Within Core infestation:* • Species managed in accordance with published weed management plans

Scotch/English broom – *Cytisus scoparius subspecies scoparius*		
An *exclusion zone* is established for all lands in the region, except the core infestation area which comprises: • Upper Hunter (Barrington Tops)	*Whole of region:* The plant or parts of the plant are not traded, carried, grown or released into the environment *Within Exclusion zone:* • The plant is eradicated from the land and the land is kept free of the plant. • Land managers mitigate the risk of the plant being introduced to their land. *Within Core infestation* • Land managers reduce impacts from the plant on priority assets	*Within Exclusion zone:* • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options *Within Core infestation* • Identification of key sites/assets in the geographic area • Identification of regional containment zones where required • Develop region-wide coordinated campaigns for collaborative management • Species managed in accordance with published weed management plans

Regional Priority Weeds objective – ASSET PROTECTION: These weeds are widely distributed in some areas of the region. Their spread should be minimised to protect priority assets.		
LAND AREA WHERE REQUIREMENTS APPLY	OUTCOMES TO DEMONSTRATE COMPLIANCE WITH THE GBD	STRATEGIC RESPONSE IN THE REGION
African olive - *Olea europaea subsp. cuspidata*		
Whole of region	• The plant or parts of the plant are not traded, carried, grown or released into the environment • Land managers mitigate the risk of the plant being introduced to their land. • Land managers reduce impacts from the plant on priority asset • Land managers prevent spread from their land where feasible.	• Establish agreed quarantine and/ or hygiene protocols. • Surveillance and mapping to locate all infested properties. • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options. • Identification of key sites/assets in the geographic area • Develop region-wide coordinated campaigns for collaborative management. • Species managed in accordance with published weed management plans.

Regional Priority Weeds objective – ASSET PROTECTION:	
These weeds are widely distributed in some areas of the region. Their spread should be minimised to protect priority assets.	
Blackberry – *Rubus fruticosus spp. agg.* (excludes exempt commercial cultivars, as defined by NSW DPI)	
Cats claw creeper – *Dolichandra unguis-cati**	
Coolatai grass – *Hyparrhenia hirta*	
Giant Parramatta grass – *Sporobolus fertilis*	
Giant rattlepod – *Crotalaria lunata*	
Green cestrum – *Cestrum parqui*	
Honey locust – *Gleditsia triacanthos*	
Mother-of-millions – *Bryophyllum sp.*	
Paterson's curse – *Echium plantagineum*	
Sagittaria – *Sagittaria platyphylla**	
Salvinia – *Salvinia molesta and S. minima**	
Tiger pear – *Opuntia aurantiaca**	
OUTCOMES TO DEMONSTRATE COMPLIANCE WITH THE GBD	STRATEGIC RESPONSE IN THE REGION
• The plant or parts of the plant are not traded, carried, grown or released into the environment • Land managers reduce impacts from the plant on priority assets • Land managers mitigate the risk of the plant being introduced to their land. • Land managers prevent spread from their land, where feasible. *** Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell.	• Identification of key sites/assets in the geographic area • Control of infestations in close proximity to key production sites/assets, aiming for a significant reduction in weed density. • High level analysis of pathways to identify potential introduction areas and preventative options • Establish agreed quarantine and/or hygiene protocols. • Species managed in accordance with published weed management plans

Appendix 2: Other regional weed lists

A2.1 Additional Species of Concern

Species that are of concern to the Hunter community or are a high priority for a number of current programs, though not feasible to contain or eradicate.

Regional Strategic Responses may include:

- Develop species management plans to assist land managers to manage the weeds effectively and efficiently
- work within existing widespread weed programs for strategic asset protection
- prioritise the application of the GBD to assist with management of these species
- work with industry and community to develop voluntary restrictions on sale and trade.

*** Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017):** A person must not, import into the State or sell.

Common name	Scientific name	Weed of community concern for:
African boxthorn	*Lycium ferocissimum*	Agricultural outcomes
African lovegrass	*Eragrostis curvula*	Agricultural outcomes
Balloon vine	*Cardiospermum grandiflorum*	Environmental outcomes
Bitou bush	*Chrysanthemoides monilifera subsp rotunda*	Environmental outcomes
Blue heliotrope	*Heliotropium amplexicaule*	Agricultural outcomes
Blue periwinkle	*Vinca major*	Environmental outcomes
Brazilian button flower	*Centratherum punctatum*	Weed of community concern and requires further investigation.
Bridal creeper*	*Asparagus asparagoides*	Environmental outcomes
Broad-leaf pepper tree	*Schinus terebinthifolius*	Agricultural and environmental outcomes
Camphor laurel	*Cinnamomum camphora*	Agricultural and environmental outcomes
Chinese celtis	*Celtis sinensis*	Agricultural and environmental outcomes
Chinese tallow	*Triadica sebifera*	Environmental outcomes
Cockspur coral tree	*Erythrina crista-galli*	Environmental outcomes
Cotoneaster	*Cotoneaster spp.*	Environmental outcomes
Crofton weed	*Ageratina adenophora*	Agricultural and environmental outcomes
Fireweed*	*Senecio madagascariensis*	Agricultural outcomes
Galenia	*Galenia pubescens*	Agricultural outcomes. Widespread Upper Hunter. Vector roads. Toxic to stock (Weedwise).

Giant reed	*Arundo donax*	Agricultural and environmental outcomes
Ground asparagus*	*Asparagus aethiopicus*	Environmental outcomes
Hudson pear*	*Cylindropuntia rosea*	Agricultural outcomes
Johnson grass	*Sorghum halepense*	Agricultural outcomes
Lantana*	*Lantana spp.*	Agricultural and environmental outcomes
Ming asparagus fern / Pompom asparagus	*Asparagus macowanii var. zuluensis (syn. A. retrofractus)*	Environmental outcomes
Mistflower	*Ageratina riparia*	Agricultural outcomes
Moth vine	*Araujia sericifera*	Environmental outcomes
Nodding thistle	*Carduus nutans*	Agricultural outcomes
Noogoora burr	*Xanthium occidentale, syn. x. pungens, x. strumarium*	Agricultural outcomes
Prickly pear*	*Opuntia sp.*	Agricultural outcomes
Rhus tree	*Toxicodendron succedaneum*	Public health safety.
StJohns wort	*Hypericum perforatum*	Agricultural outcomes
Sweet briar	*Rosa rubiginosa*	Agricultural outcomes
Tree of heaven	*Ailanthus altissima*	Environmental outcomes
Water hyacinth*	*Eichhornia crassipes*	Environmental outcomes
Water poppy	*Hydrocleys nymphoides*	Environmental outcomes
Yellow bells	*Tecoma stans*	Environmental outcomes

Appendix 3: Weed look-up table

Common Name	Scientific Name	Appendix	State/Regional Priority
African boxthorn	*Lycium ferocissimum*	1.1, 2.1	State Priority Weed Objective – ASSET PROTECTION, Additional Species of Concern
African lovegrass	*Eragrostis curvula*	2.1	Additional Species of Concern
African olive	*Olea europaea subsp. cuspidata*	1.2	Regional Priority Weed Objective – ASSET PROTECTION
All species of vascular plant Tracheophyta	*Tracheophyta*	1.1	State Priority Weed Objective – PREVENTION
Alligator weed	*Alternanthera philoxeroides*	1.1	State Priority Weed Objective – CONTAINMENT
Anchored water hyacinth	*Eichhornia azurea*	1.1	State Priority Weed Objective – PREVENTION
Arrowhead	*Sagittaria calycina*	1.2	Regional Priority Weed Objective – PREVENTION
Asparagus fern	*Asparagus scandens*	1.2	Regional Priority Weed Objective – CONTAINMENT
Asparagus (Broom)	*Asparagus virgatus*	1.2	Regional Priority Weed Objective – CONTAINMENT
Asparagus weeds	*Asparagus aethiopicus,* *A. africanus, A. asparagoides including western cape form, A. plumosus, A. scandens*	1.1	State Priority Weed Objective – ASSET PROTECTION
Athel pine	*Tamarix aphylla*	1.1	State Priority Weed Objective – ASSET PROTECTION
Balloon vine	*Cardiospermum grandiflorum*	2.1	Additional Species of Concern
Bellyache bush	*Jatropha gossypifolia*	1.1	State Priority Weed Objective – ASSET PROTECTION
Bitou bush	*Chrysanthemoides monilifera*	1.1, 2.1	State Priority Weed Objective – CONTAINMENT
Black knapweed	*Centaurea xmoncktonii*	1.1	State Priority Weed Objective – PREVENTION
Blackberry	*Rubus fruticosus spp. agg. (excludes exempt commercial cultivars, as defined by NSW DPI)*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective – ASSET PROTECTION
Blue heliotrope	*Heliotropium amplexicaule*	2.1	Additional Species of Concern
Blue periwinkle	*Vinca major*	2.1	Additional Species of Concern
Boneseed	*Chrysanthemoides monilifera subspecies monilifera*	1.1	State Priority Weed Objective – ERADICATION
Brazilian button flower	*Centratherum punctatum*	2.1	Additional Species of Concern
Bridal creeper	*Asparagus asparagoides*	2.1	Additional Species of Concern

Bridal veil creeper	*Asparagus declinatus*	1.1	State Priority Weed Objective – PREVENTION
Broad-leaf pepper tree	*Schinus terebinthifolius*	2.1	Additional Species of Concern
Broomrape	*Orobanche spp. (all species except the native O. cernua var. Australiana and O. minor)*	1.1	State Priority Weed Objective – PREVENTION
Cabomba	*Cabomba caroliniana*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective – ERADICATION
Camphor laurel	*Cinnamomum camphora*	2.1	Additional Species of Concern
Cape broom	*Genista monspessulana*	1.1	State Priority Weed Objective – ASSET PROTECTION
Cats claw creeper	*Dolichandra unguis*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective – ASSET PROTECTION
Chilean needle grass	*Nassella neesiana*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective - PREVENTION
Chinese celtis	*Celtis sinensis*	2.1	Additional Species of Concern
Chinese knotweed	*Persicaria chinensis*	1.2	Regional Priority Weed Objective – ERADICATION
Chinese tallow	*Triadica sebifera*	2.1	Additional Species of Concern
Chinese violet	*Asystasia gangetica subsp. micrantha*	1.2	Regional Priority Weed Objective – ERADICATION
Climbing asparagus	*Asparagus africanus*	1.2	Regional Priority Weed Objective – PREVENTION
Cockspur coral tree	*Erythrina crista-galli*	2.1	Additional Species of Concern
Coolatai grass	*Hyparrhenia hirta*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Cotoneaster	*Cotoneaster spp.*	2.1	Additional Species of Concern
Crofton weed	*Ageratina adenophora*	2.1	Additional Species of Concern
East Indian hygrophila	*Hygrophila polysperma*	1.2	Regional Priority Weed Objective – PREVENTION
Espartillo, Broad kernel	*Espartillo Amelichloa caudata (Achnatherum caudatum)*	1.2	Regional Priority Weed Objective – PREVENTION
Espartillo, Narrow kernel	*Espartillo Amelichloa brachychaeta (Achnatherum brachychaetum)*	1.2	Regional Priority Weed Objective – PREVENTION
Fireweed	*Senecio madagascariensis*	1.1, 2.1	State Priority Weed Objective – ASSET PROTECTION, Additional Species of Concern
Frogbit / Spongeplant	*Limnobium spp. (all species)*	1.1	State Priority Weed Objective – PREVENTION
Galenia	*Galenia pubescens*	2.1	Additional Species of Concern
Gamba grass	*Andropogon gayanus*	1.1	State Priority Weed Objective – PREVENTION

Giant Devil's Fig	*Solanum chrysotrichum*	1.2	Regional Priority Weed Objective – PREVENTION
Giant Parramatta grass	*Sporobolus fertilis*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Giant rats tail grass	*Sporobolus pyramidalis*	1.2	Regional Priority Weed Objective – ERADICATION
Giant rattlepod	*Crotalaria lunata*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Giant reed	*Arundo donax*	2.1	Additional Species of Concern
Glory lily	*Gloriosa superba*	1.2	Regional Priority Weed Objective – CONTAINMENT
Glush weed	*Hygrophila costata*	1.2	Regional Priority Weed Objective – ERADICATION
Gorse	*Ulex europaeus*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective – ERADICATION
Green cestrum	*Cestrum parqui*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Ground asparagus	*Asparagus aethiopicus*	2.1	Additional Species of Concern
Groundsel bush	*Baccharis hamlimifolia*	1.2	Regional Priority Weed Objective – CONTAINMENT
Hawkweed	*Hieracium spp (all species)*	1.1	State Priority Weed Objective – PREVENTION
Honey locust	*Gleditsia triacanthos*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Horsetail	*Equisetum arvense*	1.2	Regional Priority Weed Objective – PREVENTION
Hudson pear	*Cylindropuntia rosea*	2.1	Additional Species of Concern
Hydrocotyl/Water pennywort	*Hydrocotyle ranunculoides*	1.1	State Priority Weed Objective – PREVENTION
Johnson grass	*Sorghum halepense*	2.1	Additional Species of Concern
Karoo acacia	*Vachellia karroo (syn. Acacia karroo)*	1.1	State Priority Weed Objective – PREVENTION
Kidney leaf mud plantain	*Heteranthera reniformis*	1.2	Regional Priority Weed Objective – ERADICATION
Kochia	*Bassia scoparia (excluding subsp trichophylla).*	1.1	State Priority Weed Objective – PREVENTION
Koster's curse	*Clidemia hirta*	1.1	State Priority Weed Objective – PREVENTION
Kudzu	*Pueraria lobata*	1.2	Regional Priority Weed Objective – PREVENTION
Lagarosiphon	*Lagarosiphon major*	1.1	State Priority Weed Objective – PREVENTION
Lantana	*Lantana spp.*	2.1	Additional Species of Concern
Lantana	*Lantana camara*	1.1	State Priority Weed Objective – ASSET PROTECTION
Leaf cactus	*Pereskia aculeata*	1.2	Regional Priority Weed Objective – PREVENTION
Long leaf Willow Primrose	*Ludwigia longifolia*	1.2	Regional Priority Weed Objective – CONTAINMENT
Ludwigia	*Ludwigia peruviana*	1.2	Regional Priority Weed Objective – CONTAINMENT

Madeira vine	*Anredera cordifolia*	1.1	State Priority Weed Objective – ASSET PROTECTION
Mahonia / Chinese holly	*Berberis lomariifolia (formerly known as Mahonia lomariifolia)*	1.2	Regional Priority Weed Objective – PREVENTION
Mesquite	*Prosopis spp.*	1.1	State Priority Weed Objective – ASSET PROTECTION
Mexican feather	*Grass Nassella tenuissima (syn. Stipa tenuissima)*	1.1	State Priority Weed Objective – PREVENTION
Miconia	*Miconia spp. (all species)*	1.1	State Priority Weed Objective – PREVENTION
Mikania vine	*Mikania micrantha*	1.1	State Priority Weed Objective – PREVENTION
Mimosa	*Mimosa pigra*	1.1	State Priority Weed Objective – PREVENTION
Ming asparagus fern / Pompom asparagus	*Asparagus macowanii var. zuluensis (syn. A. retrofractus)*	2.1	Additional Species of Concern
Mistflower	*Ageratina riparia*	2.1	Additional Species of Concern
Moth vine	*Araujia sericifera*	2.1	Additional Species of Concern
Mother of millions	*Bryophyllum sp.*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Mouse-ear hawkweed	*Hieracium pilosella*	1.1	State Priority Weed Objective – PREVENTION
Mysore thorn	*Caesalpinia decapetala*	1.2	Regional Priority Weed Objective – ERADICATION
Nodding thistle	*Carduus nutans*	2.1	Additional Species of Concern
Noogoora burr	*Xanthium occidentale, syn. x. pungens, x. strumarium*	2.1	Additional Species of Concern
Olive Hymenachne	*Hymenachne amplexicaulis*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective – PREVENTION
Orange hawkweed	*Hieracium aurantiacum*	1.1	State Priority Weed Objective – ERADICATION
Ox eye daisy	*Leucanthemum vulgare*	1.2	Regional Priority Weed Objective – CONTAINMENT
Pampas grass	*Cortaderia sp.*	1.2	Regional Priority Weed Objective - CONTAINMENT
Parkinsonia	*Parkinsonia aculeata*	1.1	State Priority Weed Objective – ERADICATION
Parthenium weed	*Parthenium hysterophorus*	1.1	State Priority Weed Objective – ERADICATION
Paterson's curse	*Echium plantagineum*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Pear	*Opuntia spp., Cylindropuntia spp., Austrocylindropuntia spp. excluding O. ficus indica*	1.1	State Priority Weed Objective – ASSET PROTECTION
Pond apple	*Annona glabra*	1.1	State Priority Weed Objective – PREVENTION
Prickly acacia	*Vachellia nilotica (syn. Acacia nilotica)*	1.1	State Priority Weed Objective – PREVENTION

Prickly pear	*Opuntia sp.*	2.1	Additional Species of Concern
Rhus tree	*Toxicodendron succedaneum*	2.1	Additional Species of Concern
Rubber Vine	*Cryptostegia grandiflora*	1.1	State Priority Weed Objective – PREVENTION
Sagittaria	*Sagittaria platyphylla*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective – ASSET PROTECTION
Salvinia	*Salvinia minima*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Salvinia	*Salvinia molesta*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective - ASSET PROTECTION
Scotch/English broom	*Cytisus scoparius subspecies scoparius*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective - CONTAINMENT
Sea spurge	*Euphorbia paralias*	1.2	Regional Priority Weed Objective – CONTAINMENT
Senegal tea plant	*Gymnocoronis spilanthoides*	1.2	Regional Priority Weed Objective – ERADICATION
Serrated tussock	*Nassella trichotoma*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed - PREVENTION
Siam weed	*Chromolaena odorata*	1.1	State Priority Weed Objective – PREVENTION
Sicilian sea lavender	*Limonium hyblaeum*	1.2	Regional Priority Weed Objective – PREVENTION
Sicklethorn	*Asparagus falcatus*	1.2	Regional Priority Weed Objective – PREVENTION
Silver leaf nightshade	*Solanum elaeagnifolium*	1.1, 1.2	State Priority Weed Objective – ASSET PROTECTION, Regional Priority Weed Objective - ERADICATION
Spotted knapweed	*Centaurea stoebe subsp. micranthos*	1.1	State Priority Weed Objective – PREVENTION
St Johns wort	*Hypericum perforatum*	2.1	Additional Species of Concern
Sweet briar	*Rosa rubiginosa*	2.1	Additional Species of Concern
Tiger pear	*Opuntia aurantiaca*	1.2	Regional Priority Weed Objective - ASSET PROTECTION
Tree of heaven	*Ailanthus altissima*	2.1	Additional Species of Concern
Tropical soda apple	*Solanum viarum*	1.1	State Priority Weed Objective – ERADICATION
Water caltrop	*Trapa spp. (all species)*	1.1	State Priority Weed Objective – PREVENTION
Water hyacinth	*Eichhornia crassipes*	1.1, 1.2	State Priority Weed Objective – CONTAINMENT
Water soldier	*Stratiotes aloides*	1.1	State Priority Weed Objective – PREVENTION
Water star grass	*Heteranthera zosterifolia*	1.2	Regional Priority Weed Objective – PREVENTION
Water lettuce	*Pistia stratiotes*	1.2	Regional Priority Weed Objective – ERADICATION
Water milfoil	*Myriophyllum spicatum*	1.1	State Priority Weed Objective – PREVENTION
Water poppy	*Hydrocleys nymphoides*	2.1	Additional Species of Concern

White blackberry / Mysore raspberry	*Rubus niveus*	1.2	Regional Priority Weed Objective – ERADICATION
Willows	*Salix spp. (excludes S.babylonica, S.X calodendron & S. x reichardtii)*	1.1	State Priority Weed Objective – ASSET PROTECTION
Witchweed	*Striga spp. (except the native S. parviflora)*	1.1	State Priority Weed Objective – PREVENTION
Yellow bells	*Tecoma stans*	2.1	Additional Species of Concern
Yellow burrhead	*Limnocharis flava*	1.1	State Priority Weed Objective – PREVENTION

Regional Strategic Weed Management Plan 2017 - 2022

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