



Local Land
Services
North West

North West Regional Strategic Weed Management Plan 2017 - 2022



June 2017

Front cover photos clockwise from top;
 Alligator weed Peel River Somerton – Peter Dawson NWLLS
 Hudson pear at Cumborah – Claire Bergin NWLLS
 NWRWC members at Lightning Ridge - Peter Dawson NWLLS
 Mother of Millions – John Hosking NSW DPI

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North West Regional Strategic Weed Management Plan 2017-2022

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing June 2017. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Local Land Services or the user's independent adviser.

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Acknowledgement of Country

The North West Local Land Services region is situated in the traditional lands of the Kamilaroi Nations. The North West Local Board acknowledges and pays its respects to Elders, both past and present of these nations.

We acknowledge that the protection and promotion of Aboriginal culture, heritage, traditional land management practices and spiritual beliefs is an issue of great importance to the traditional owners of these lands and waters and is of benefit to the whole community. Stronger shared cultural values, will ensure a more reconciled and resilient community in the North West Local Land Services region.

Acknowledgement of contributors

This plan was developed by the North West Regional Weed Committee on behalf of the North West Local Land Services Board for endorsement by the board. The North West Local Land Services Board wishes to acknowledge the work of the committee and regional support staff 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 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 NSW DPI publications, including the draft NSW Invasive Species Plan 2015-22, 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.

The North West Regional Weed Committee would like to acknowledge the valuable input from its members in the preparation of this document and in particular NSW Weeds Action Program Regional Project Officer Heather Apps, North West Local Land Services Senior Lands Services Officer Peter Dawson and New England Weeds Authority.

NWLLS Chair's foreword

North West Local Land Services has been established to deliver efficient and effective integrated services associated with agricultural production, biosecurity, natural resource management and emergency management, with great importance based upon a regional delivery focus.

I would like to thank the members of the North West Regional Weed Committee, Council Weed Officers and other agency stakeholders who contributed to the development of this document with their expertise and time.

I look forward to working with the North West Regional Weeds Committee, partnering organisations and stakeholders in implementing this Plan and providing quality and meaningful outcomes across the North West.

Conrad Bolton



Chairperson
North West Local Land Services

NWRWC Chair's foreword

I am pleased to present the first North West Regional Strategic Weed Management Plan (RSWMP) on behalf of North West Local Land Services, member Councils and stakeholders of the North West Regional Weed Committee.

The plan sets our strategic direction in weed management and control for the next five years, building on the achievements of the previous Northern Inland Weeds Advisory Committee (NIWAC) whilst addressing the challenges of weed management and control into the future.

The estimated cost of weeds to NSW agriculture is \$1.4 billion annually, environmental and social costs could double this figure, thus demanding appropriate planning and strategic implementation of control programs.

The effective management of invasive weed species is crucial to maintaining the "triple bottom line" of social, economic and environmental sustainability. To achieve this, clear and practical methods of prioritizing weeds and their control are most critical to maximise short and long term benefits.

The Regional Strategic Weed Management plan prioritises weeds into various landscapes and details action plans. It is a document to be used by a wide cross section of the community responsible for land management.

The Plan has been developed through a strategic review of key national, state, regional operational plans and strategies.

These Plans include:

- NSW State Plan 2021
- *Local Land Services Act 2013*
- NSW Biosecurity Strategy 2013-2021
- *NSW Biosecurity Act 2015*
- Draft NSW Invasive Species Plan 2015 - 2022
- NWLLS Local Strategic Plan 2015 – 2020
- NWLLS Invasive Species Prioritisation and Implementation Framework 2015
- North West Regional Weed Committees' Weeds Action Business Plan 2015 - 2020
- NIWAC Regional Weed Strategy 2010 – 2015

The Plan aims to provide landholders and land managers with the knowledge and tools to make informed decisions in weed management and control, taking into account the limited resources and funds available.

Central to the success of this plan is the need to continue to build ownership by the whole community, taking a regional co-ordinated and co-operative approach with an appreciation by all stakeholders of their responsibilities and contributions to better manage weeds within the North West Local Land Services region.

Michael Whitney



Chairperson
North West Regional Weed Committee

Executive Summary

Our vision

The North West Region supports a diverse and distinct mixture of landscape, livelihood, cultural and lifestyle values. Strategic and coordinated regional weed management is critical to building the sustainability of the primary industries, natural environments and local communities in the North West region.

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 North West Regional Strategic Weed Management Plan focuses on managing weeds to improve the region's biosecurity. Our vision is to protect the North West'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 North West Regional Strategic Weed Management Plan is a direct response to this strategic and legislative reform. It was prepared by the North West Regional Weed Committee on behalf of the North West 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 North West Local Land Services region of NSW. 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 North West, and outlines strategies and actions to achieve outcomes based on principles of shared responsibility, sustainable landscapes, collaborative leadership and innovation.

Vision:

Government, industry and communities of the North West working together to protect the environment, economy and community from the negative impacts of weeds for the benefit of the region

Goal 1: Responsibility for weed biosecurity is shared by the North West community

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 supports profitable, productive and sustainable primary industries, and

Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments

Actions focus on weed biosecurity to protect the environment and foster sustainable economic growth. 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 on priority sites.

Goal 4: Weed biosecurity is supported by coordinated, collaborative and innovative leadership

Actions focus on a consistent approach 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 tenures in a co-ordinated manner
- using information and mapping systems, current research and adaptive management to improve effectiveness of weed control.

Sharing responsibility

The plan provides a sound basis for a co-operative and co-ordinated approach to managing weeds in the North West 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.

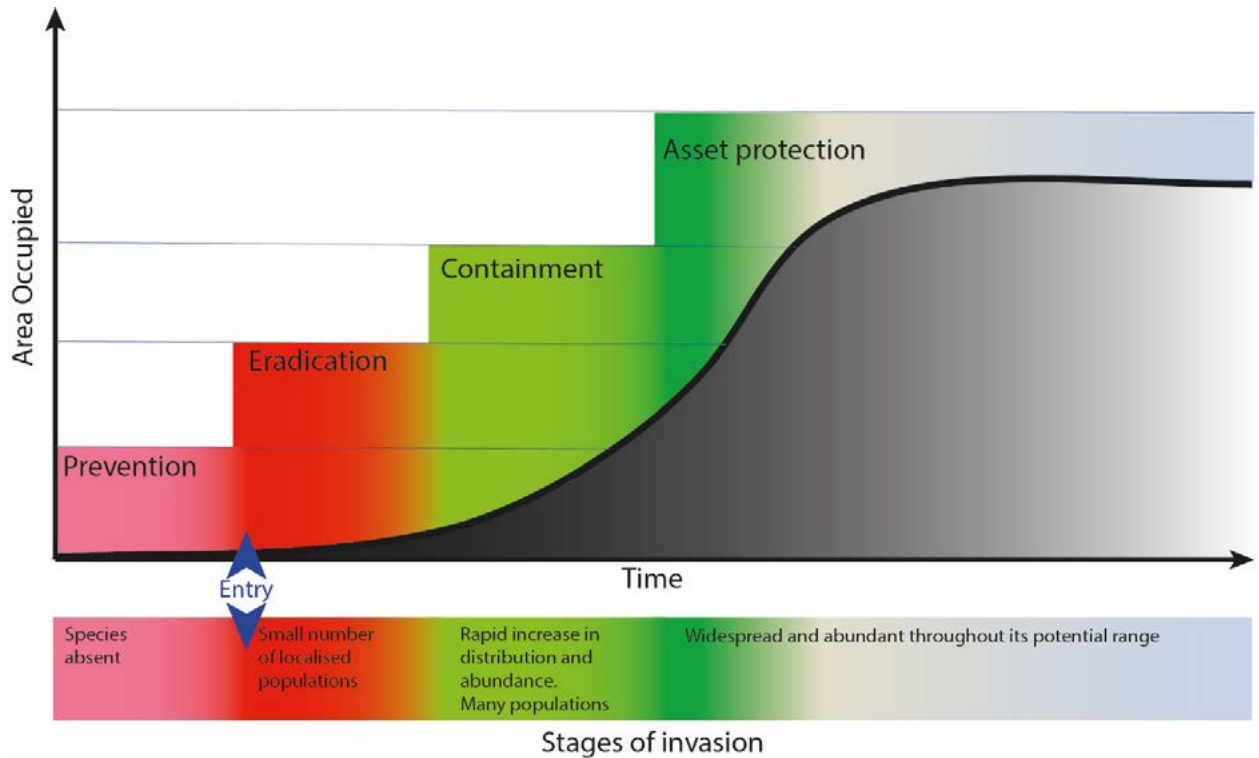
The *Biosecurity Act 2015* is tenure neutral, as it applies equally to all land in the region, whether public or private. The Act contains a range of new regulatory tools and a General Biosecurity Duty that support this tenure neutral approach to managing weed biosecurity risk. These tools include Prohibited Matter, Biosecurity Zones, Mandatory Measures and Control Orders and 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 best available knowledge and an internationally-recognised risk-assessment process to identify the North West’s high-priority weed species. Weed prioritisation is guided by the principle that *managing weeds earlier rather than later is more cost effective*. The North West’s weed management objectives support this principle and prioritises outcomes which can be achieved early stages of the invasion process.



Weed invasion curve

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 North West Regional Weed 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 co-ordination 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 North West regional weed committee includes representatives from Local Government and County Councils, NSW Department of Primary Industries, 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, John Holland (County Regional Rail Network), ARTC, NSW Farmers, Landcare, Aboriginal land managers, environmental interests, Utilities companies, Mining and minerals sector, Nature Conservation Council and North West 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 weed 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 and scope

This North West 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 North West Local Land services region of NSW (Figure 1.1)

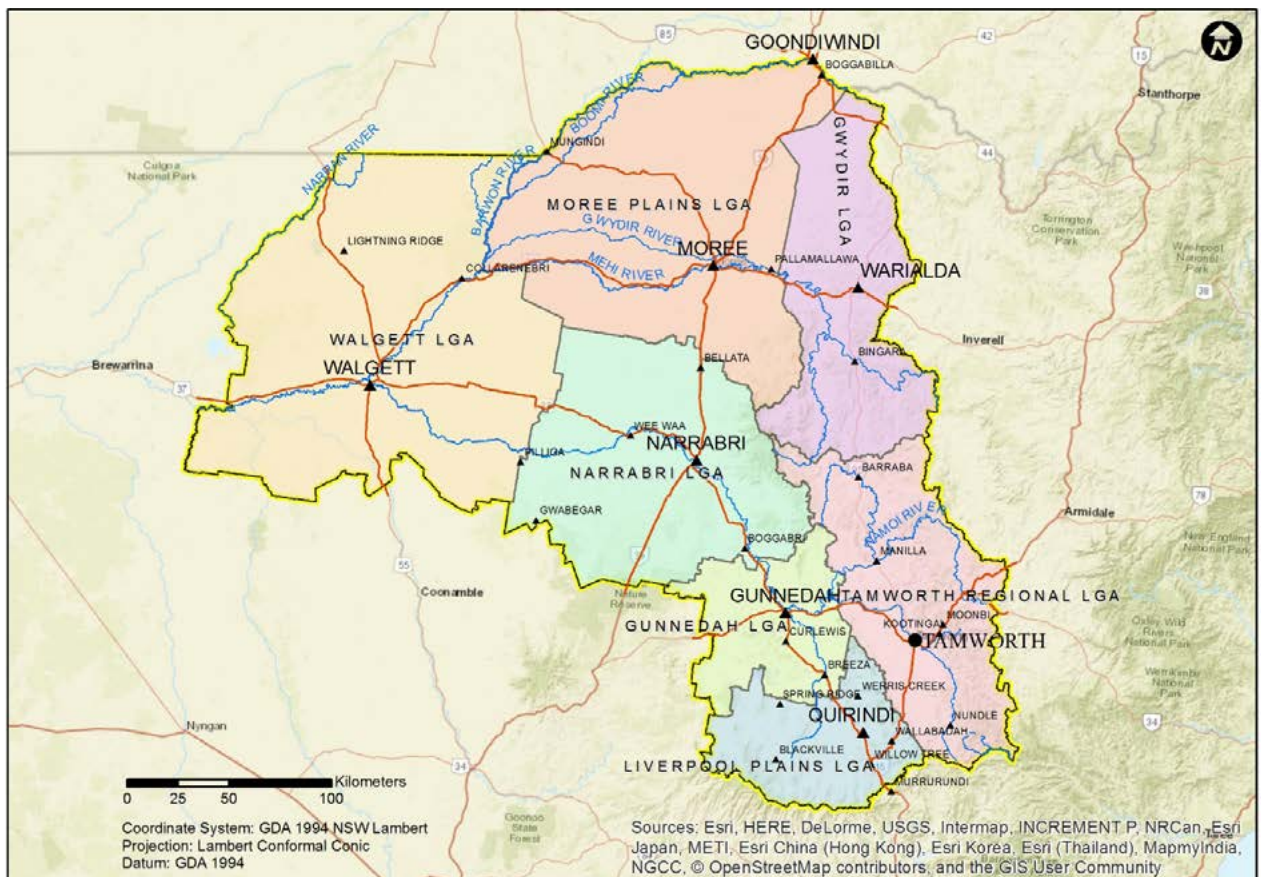


Figure 1.1: North West Local Land Services region.

This plan has built on past planning efforts, and has gained immeasurably from the accumulated experience and expert local knowledge of regional weed 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 North West Regional Strategic Weed Management Plan is a local strategic plan under the *Local Land Services Act 2013* and implements the NSW weed reforms, Biosecurity Strategy and Invasive Species Plan in relation to weeds for the North West region. It has been prepared by

the North West Regional Weed Committee on behalf of North West Local Land Services Board, and covers weed risks that impact:

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

Background information on the weed reforms and the committee is provided on page 12. This plan sets the vision, goals and objectives for weed management in the North West 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, Agricultural industries and the people of the North West working together to protect the environment, economy and community from the negative impacts of weeds for the benefit of all in the region.

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

Our Goals for the North West region are:

1. Responsibility for regional weed biosecurity is shared by the whole North West community
2. Weed biosecurity supports profitable, productive and sustainable primary industries
3. Weed biosecurity supports healthy, diverse and connected natural environments
4. Weed biosecurity is supported by coordinated, collaborative and innovative leadership.

The objectives of this plan, 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	<i>Government, industry and the people of the North West region working together to protect the environment, economy and community from the negative impacts of weeds.</i>		
Goals	Shared Responsibility	Sustainable Landscapes	Collaborative Leadership and Innovation
<p>Outcomes</p> <ul style="list-style-type: none"> • 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. • Strong supportive partnerships have improved weed management for all partners. • Awareness of weed management in the region has improved communication and engagement which is proactive and inclusive. 	<ul style="list-style-type: none"> • Weed management is integrated and coordinated across all tenures. • Weeds are monitored at landscape and industry scales and emerging problems are proactively managed. • 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 the North West region environments and primary industry sectors. • Weed biosecurity emergencies and high risk pathways are well managed and resourced. • Impacts on high priority assets have been minimised through risk based weed management programs 	<ul style="list-style-type: none"> • Engagement, collaboration and involvement of local people in decision making are coordinated. • Relevant and timely information supports decision making by the North West Regional Weeds Committee and the State Weeds Committee. • 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 behavior under a changing climate are being understood and monitored. 	<p>4. Weed biosecurity is supported by coordinated, collaborative and innovative leadership</p>

Vision	Government, industry and the people of the North West region working together to protect the environment, economy and community from the negative impacts of weeds.		
Objectives	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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	<p>1.1 Promote weed management and behavioral change in the community.</p> <p>1.2 Build stronger partnerships that support weed management.</p> <p>1.3 Enhance community-wide capacity in sharing responsibility for weed management.</p>	<p>2-3-1 Improve surveillance, reporting and tracing systems for weeds.</p> <p>2-3-2 Improve prevention, preparedness and response to weed emergencies.</p> <p>2-3-3 Eradicate or prevent the spread of new weeds.</p> <p>2-3-4 Contain and manage impacts of widespread weeds.</p> <p>2-3-5 Support and utilise developments in weed science and technology.</p> <p>2-3-6 Use results of research [for example, Weed Futures, Bioclim, ANUCLim] to assess and respond to changing risks under a changing climate.</p>	<p>4.1 Provide governance and leadership that supports collaborative, effective and efficient weed management.</p> <p>4.2 Adopt adaptive, contemporary planning and processes.</p> <p>4.3 Develop a regional weed knowledge base and information system that supports state standards.</p> <p>4.4 Develop consistent systems for monitoring, evaluating and reporting on the effectiveness of weed management.</p>

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:

- 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 weed committee in each region to act as a Community Advisory Group and provide appropriate support for weed management and planning. The North West committee includes representatives from North West Local Land Services, NSW Department of Primary Industries (DPI), state government agencies managing state owned lands (Office of Environment and Heritage (OEH), Forestry Corporation, Roads and Maritime Services and Department of Industry – Lands), local government and county councils, John Holland Rail, ARTC, NSW Farmers, Landcare, Aboriginal land managers, environmental interests, Utilities companies, Mining and minerals sector, Nature Conservation Council and North West Local Land Services. 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 weed 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 weed 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 North West Local Land Services Board.

The relationship between Local Land Services, the Regional Weed 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 1.3 shows the relationship between the regional weed committee, the North West Local Land Services Board and other Community Advisory Groups. North West Local Land Services provides executive support to the committee.

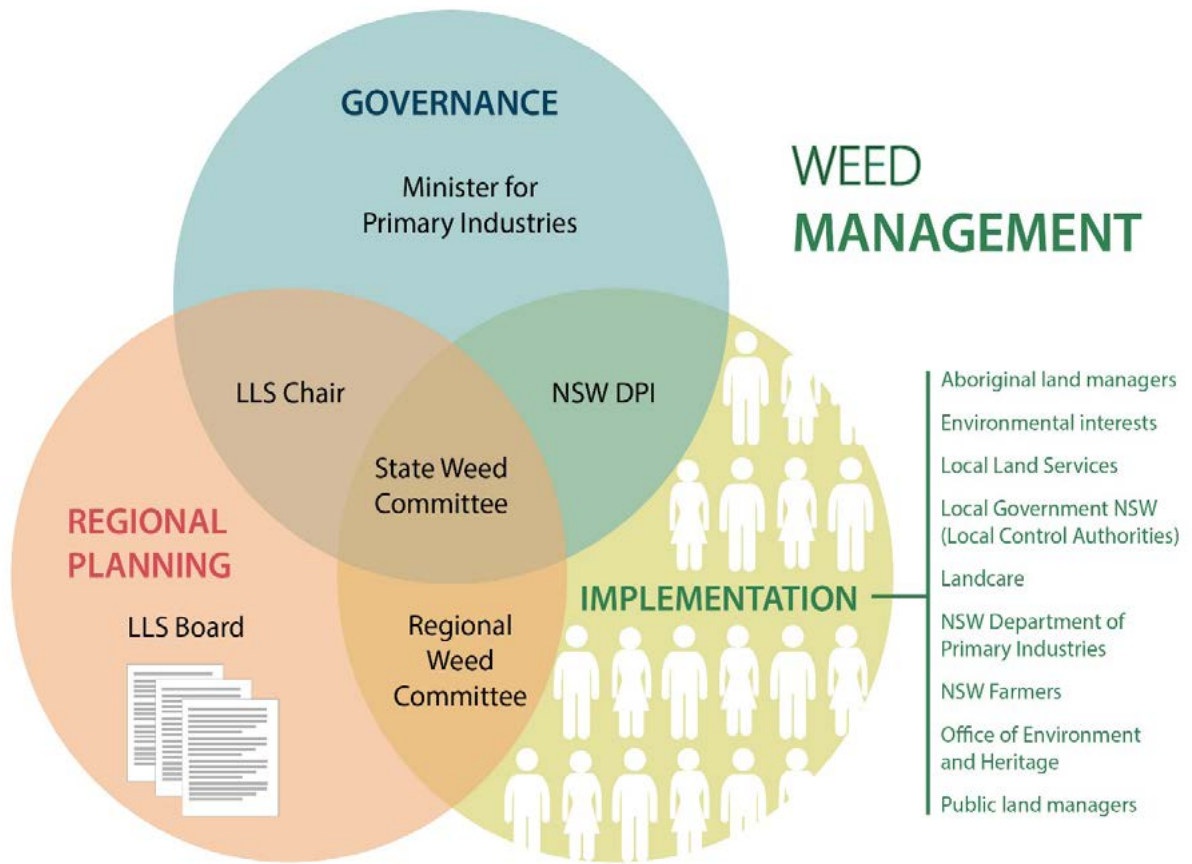


Figure 1.2: Roles in weed management.



Figure 1.3: Regional Weed Committee relationship to North West Local Land Services Board and other Community Advisory Groups.

2. Policy and Planning Framework

2.1 Overview of key plans and legislation

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

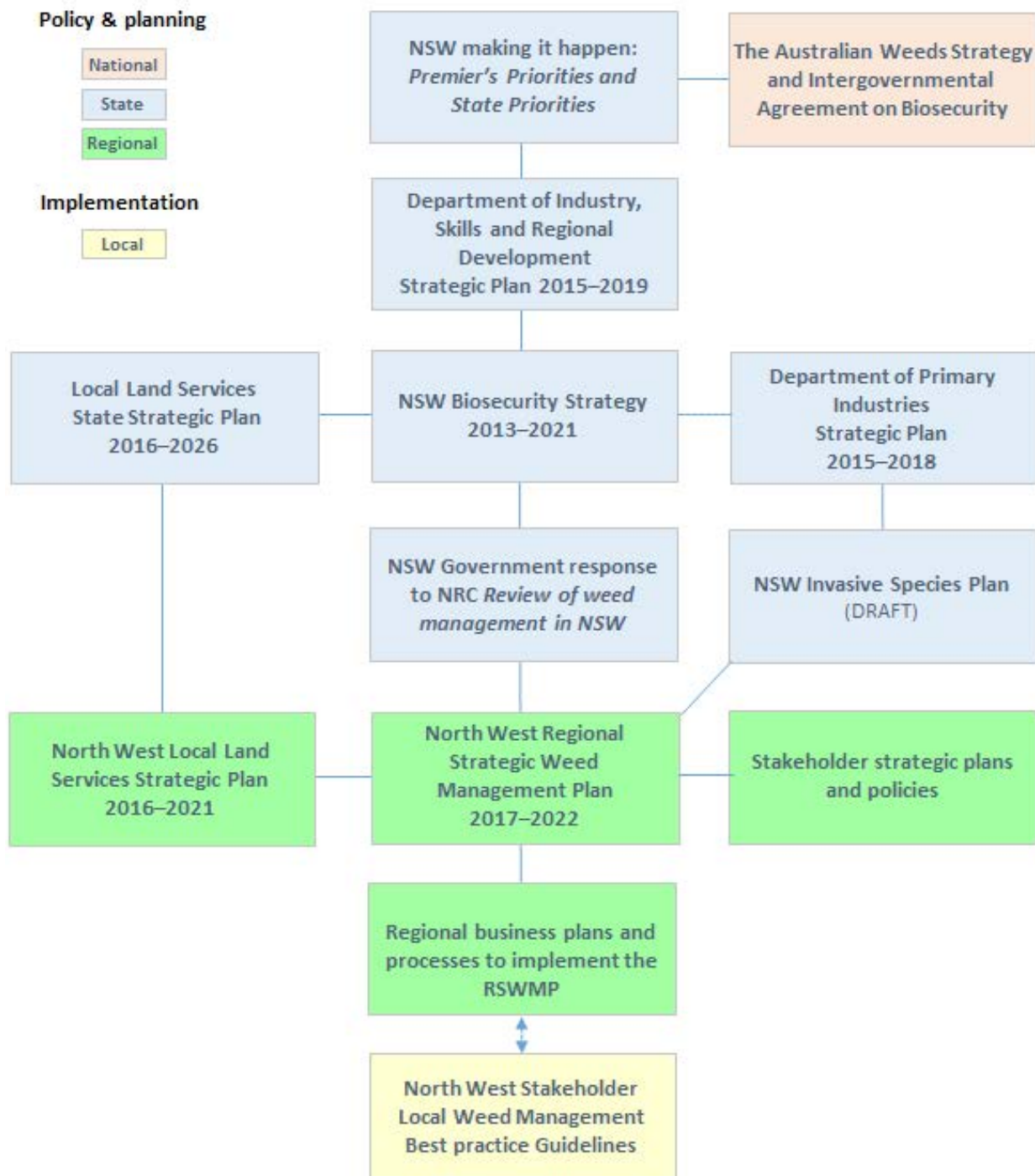


Figure 2.1: Overall planning framework for the Regional Strategic Weed Management Plan

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 Department of Primary Industries.

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 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*.

<p>Prohibited Matter: biosecurity matter listed in Schedule 2, Part 1 of the <i>NSW Biosecurity Act 2015</i> 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.</p>
<p>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 <i>NSW Biosecurity Act 2015</i> 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.</p>
<p>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. Outcomes to demonstrate compliance with the GBD may also apply to the species either within the zone or outside it.</p>
<p>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 29), Parthenium weed carriers - machinery and equipment (Division 8 Clause 31), and duty to notify of importation of plants into the state (Division 8 Clause 30). Mandatory measures relevant to the region are listed in Appendix 1.</p>
<p>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 <i>Biosecurity Act 2015</i>. For priority weeds, outcomes to demonstrate compliance with the GBD are detailed in Appendix 1 of this plan.</p>
<p>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:</p> <ul style="list-style-type: none"> • to prevent, eliminate or minimise a biosecurity risk • to prevent, manage or control a biosecurity impact • to enforce any instrument under the <i>Biosecurity Act 2015</i>
<p>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.</p>
<p>Emergency Order: may be issued to respond to a current or imminent biosecurity risk that may have a significant impact.</p>

2.3.3 Enforcing the Biosecurity Act

NSW Department of Primary Industries (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 such activities 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, and
- 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 Weed 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 2.1: 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.

The general biosecurity duty 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 general biosecurity duty. 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

The North West region covers an area of 8,249,624 hectares in north-western NSW. It includes the major population centres of Tamworth, Gunnedah, Moree and Narrabri and stretches from Nundle in the south-east to Boggabilla in the north-east and Lightning Ridge and Walgett in the west as shown in figure 3.1.

It is bounded by the Great Dividing Range in the east, the Liverpool Ranges and Warrumbungle Ranges in the south and the Queensland / NSW boarder in the north. Major tributaries are the Namoi, Peel, Mooki, Cockburn, Manilla and McDonald rivers in the Namoi Catchment and the Macintyre, Gwydir, Severn and Barwon rivers in the Gwydir Catchment.

The region is made up of seven local government areas, Gunnedah, Gwydir, Liverpool Plains, Moree Plains, Narrabri, Tamworth Regional and Walgett Shire Councils.

The 2011 census indicates that the population of the North West Local Land Services region is approximately 113,600 with most residents living within the Moree Plains, Narrabri, Gunnedah and Tamworth Local Government Areas.



Figure 3.1: North West Local Land Services Region

The region is diverse, ranging from small areas of tablelands in the east to the sweeping native grasslands and riverine floodplains in the west. The region has unique natural features including important wetlands protected under the Ramsar Convention and the Pilliga Scrub, a vast area of conservation significance. The region is home to rare and threatened wildlife, flora species and vegetation communities identified by NSW and Australian Government legislation.

The North West region contains a number of significant animal industries including sporting equine, cattle, poultry, sheep, wool and pig industries, as well as multiple large feedlots and abattoirs. The viability of these industries relies heavily on industry preparedness and management for emergency animal disease and invasive species.

The North West Local Land Services also manages approximately 162,000 hectares of travelling stock reserves which quantifies us as the region's largest land manager with nearly 8,000 neighbours. Historically, travelling stock reserves have been managed to provide pasture reserves for travelling stock or for times of drought. Over the years, the use of the reserves has developed to include public recreation, apiary sites and areas for the protection

and conservation of native flora and fauna and culturally significant sites for Aboriginal communities.

The North West region is a highly productive agricultural area with summer-dominant rainfall and a climate allowing for crop and pasture growth across most of the year as shown in figure 3.2.

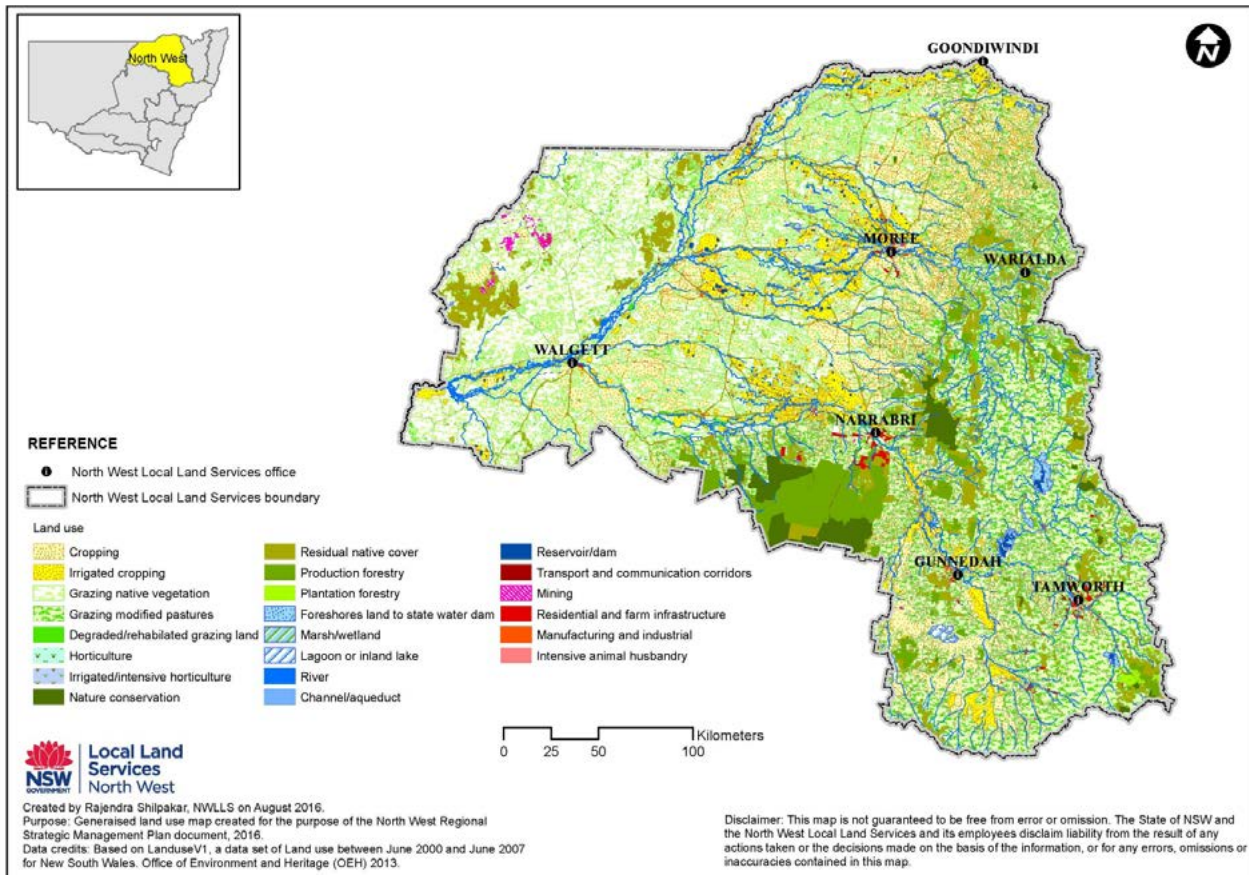
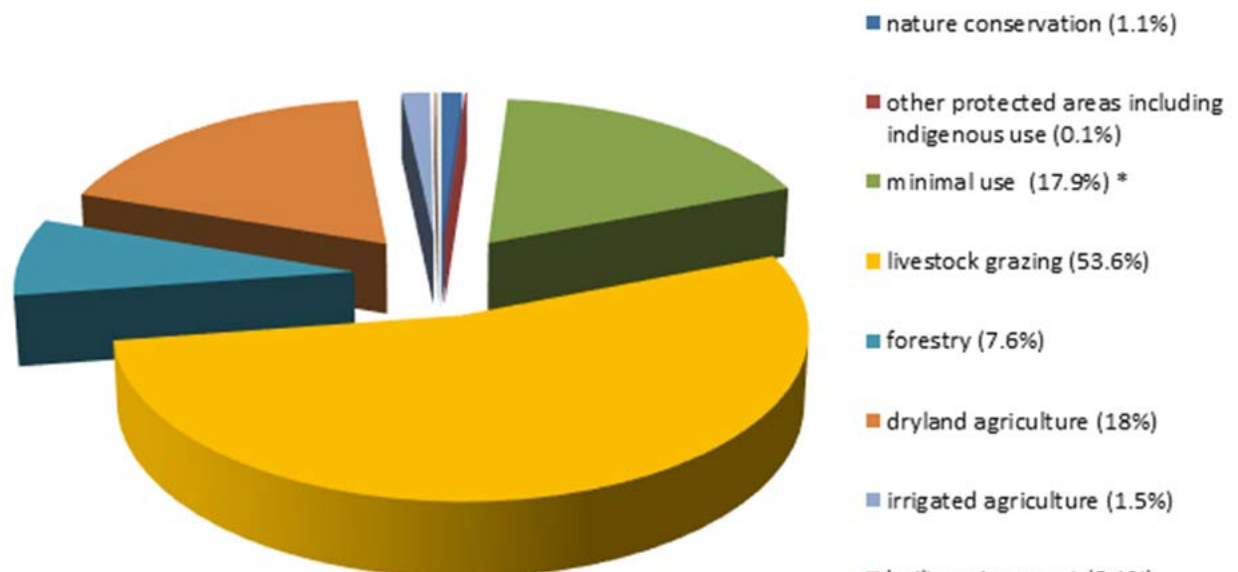


Figure 3.2: Land use patterns in the North West Local Land Services region.

Figure 3.3: Land use in the North West Local Land Services region.

*Minimal use: encompasses reserved crown land (stock routes, defence reserves and mine reserves) and vacant and institutional crown land. Also includes private land with open or closed native forest with unknown use (most likely remnant native cover).

Figure 3.3 summarises the land use patterns according to the Australian Natural Resources Atlas for the North West Local Land Services region. The majority is devoted to livestock grazing (53.6%) and dryland agriculture (18%), reinforcing the significance of the region's economy being based on agricultural pursuits and highlighting the importance to the area of weed management and control. Only a small portion of this land area (0.1%) is devoted to urban and residential use.

3.1 Key Impacts and Risks

The solutions to our natural resource management problems are generally well known and are being implemented to varying degrees. The challenge is to target our resources to programs with the greatest potential for improvement, and to make the most of the knowledge and experience of regional communities.

Economic, Environmental and Social Costs

The financial impact of weeds on agriculture alone is approximately \$2.5 billion¹ in lost production and \$1.8 billion in control activities every year.

They have a major impact on biodiversity conservation, endangered species and ecological communities through reducing species refuge sites and water flows, disturbing remnant vegetation and wildlife corridors and depleting native plant seed banks. Their presence contributes to management issues such as poor water quality, overgrazing and increased ground salinity, while impacting on heritage and cultural values.

Additionally weeds affect and are affected by a diverse array of man-made landscapes including stock reserves; roads; utility easements such as water, electricity and phone lines; fire control/breaks and general urbanisation of the landscape.

Human and Animal Health

Weeds can cause human and animal health problems. Numerous species are listed as toxic to grazing animals and in extreme cases death of livestock can occur.

Many common weeds such as Rye grass and Privet cause asthma and other respiratory problems, especially in children and people with existing ailments. Some weeds can cause skin irritation, and some, including garden escapes are poisonous.

Agriculture

Weeds reduce the quality and quantity of Australia's agricultural, horticultural and forestry products, affecting both industry and consumers. Weeds invade crops, smother pastures and can harm livestock. They aggressively compete for water, nutrients and sunlight.

The negative economic impacts of weeds are well documented and include:

- Competition with pastures leading to reduced stocking capacity and erosion
- Toxicity to stock
- Increased stock mustering costs
- Contamination of produce
- Increased management costs arising from the use of physical, mechanical and control methods
- Disruption of normal operation of farm machinery.

Urban and Peri-Urban Landscapes

Urban and peri-urban areas are expanding in the region, increasing control issues associated with multiple landowners. Disturbances due to landscape modifications, increased nutrients and changes in hydrology produce favourable environments for the introduction of many weed species. Increasingly, weed control is considered an essential maintenance component of road, rail and utility easements. Natural assets, such as open spaces are particularly vulnerable to weed invasions and the presence of weed species, threaten many indigenous and contemporary cultural sites.

Garden plant introductions are also the dominant source of new naturalised plants and weeds in Australia. Of the 2779 introduced plant species now known to be established in the Australian environment, 1831 (or 66%) are escaped garden plant species². Invasive garden plant species – both introduced and native species outside their natural range – are by far the largest source of environmental weeds (weeds which impact on natural biodiversity), comprising 72% of the 1765 listed environmental weeds.

Aquatic Environment

Many weeds disrupt the aquatic environment by covering water surfaces, reducing light penetration and decreasing dissolved oxygen, which lead to a decline in fish numbers and overall health of the system. They can impede stream flows, which may obstruct irrigation channels, increase sedimentation, alter hydrological regimes and, increase flooding frequencies.

Aquatic weeds can create a safety hazard, children mistaking floating vegetation carpets for solid ground. Aquatic weeds also interfere with recreational activities (such as swimming and canoeing), and reduce the aesthetic value of lakes and streams. Additionally, through displacing native vegetation, stream and riparian ecosystem function may be adversely affected, changing faunal habitats and, in extreme cases, threaten the status of nationally or internationally important wetlands.

2 Groves et al., 2005; Beeton et al., 2006).

Biodiversity

Australia is one of the most diverse countries on earth. It is home to more than one million species of plants and animals, many of which are found nowhere else in the world. Increasingly, many of Australia's natural environments are becoming degraded and fragmented, placing a risk on their long-term viability. Invasive weeds are considered among the most serious threats to the region's natural environment and agricultural production in the region.

Climate Change

As a result of the significant threat by weeds to the environment, agriculture and human health it is essential to understand the likely impact of climate change on weed abundance and distribution.

The likely effect of climate change on weeds and minimizing the impact of invasive species on biodiversity in future climates is a key objective of the National Biodiversity & Climate Change Action Plan.

The NWRWC, over the life of its RWSP will continue to monitor the research and effects of climate variability, and be adaptive to any such changes that may affect our environment and responsibility in regard to weed management and control in the North West region.

3.2 Key Risks to the Region

The North West region is facing a number of key challenges and threats including:

- Potential for biosecurity hazards to impact on the regional economy and communities, the environment and human health.
- Natural disasters including bushfires and floods
- Changing climatic conditions and droughts (rainfall, temperature, and extremes)
- Decrease in water quantity and quality
- Invasive species (feral animal and weed species)
- Degradation of natural landscape and ecosystem services
- Changing socio-economic profile (such as population movement in and out of region, long-term viability of small family farms)
- Land use challenges such as agriculture and mining and coal seam gas activities.

3.3 Recent Strategic Weed Management in the Region

The North West Regional Strategic Weed Management Plan was compiled under the direction of the North West Local Land Services Regional Weed Committee and has been developed with the following key considerations:

- Incorporating existing policies, plans and legislation relevant to weed management
- Complying with National and State NRM accreditation criteria
- Incorporating existing documents developed as part of the NIWAC Weeds Action Program 2010 – 2015 and updated versions through the NWRWC Weeds Action Program 2015-2020.

The following suite of documents together with those prepared in year two of WAP 1520 will be consolidated into the NWRWC WAP Management Directory 2017 -2021:

- NWRWC Weed Action Business Plan and Participant Agreement 2017 – 2021
- NWRWC Monitoring, Evaluation, Reporting and Improvement (MERI) Plan 2017 – 2021
- NWRWC Communications Strategy 2017 – 2021
- NWRWC Weed Incursion Plan 2017 – 2021
- NWRWC Rapid Response Plan 2017 – 2021
- NWRWC High Risk Pathways & Sites Management Plan 2017 – 2021
- NWRWC Regional Inspection Plan 2017 – 2021 and
- NWRWC Weed Officer’s Educational Pathway Plan 2017 – 2021.

These plans set out the strategies and mechanisms that consolidate the partnership between members to undertake and implement the NSW Weeds Action Program. This allows for the Control Authorities to meet their obligations under the draft NSW Invasive Species Plan, the NSW Weeds Action Program 2015 - 2020 and the *Biosecurity Act 2015*.

3.4 Community Involvement

For this Plan to succeed it is essential that all programs and related activities continue to be based on partnerships and collaboration with a wide range of landholders/managers, community and government stakeholders.

Best practice management will be promoted, including targeting specific local areas and encouraging landholders to work together in groups to undertake integrated control programs. Activities may include events to raise awareness, to empower and to up-skill e.g. field days/skills training days and engagement with local Landcare groups. Input will be sought with preparing co-ordinated local invasive weed management plans, technical support where applicable and assistance with on-ground control programs at local and regional levels.

Community involvement will include:

- Increasing the capacity and capability of the community in biosecurity activities by leading and facilitating targeted education and information programs
- Providing advice to industries and the general community about how they can meet their biosecurity obligations
- Developing programs to actively manage priority established invasive weeds
- Developing and promoting easy-to-use technologies for the reporting of invasive weeds to inform the Biosecurity Information System (BIS)
- Developing a Communication Strategy that delivers clear and consistent messages and communications to a wide range of internal and external stakeholders in relation to invasive weed species management.

4. Weed Risk - Assessment and Prioritisation

4.1 Weed management prioritisation

The North West Regional Weed Committee in consultation with technical experts has identified a number of invasive plants of particular concern in the region. The biosecurity impacts of these weeds varies across the region, so an objective and repeatable risk assessment was required, to ensure limited resources are used wisely and management requirements are appropriate to the risk. This section outlines the principles and assessment process used to prioritise weeds for management across the region.

Appendix 1 of this plan identifies state level priority weeds for the region and regional priority weeds to which “outcomes to discharge the General Biosecurity Duty” have been applied following a regional weed prioritisation process. Appendix 2 lists other priority weeds identified as a further focus for weed management in the region.

To ensure limited resources are used to 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 that 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 (A1.1)). 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.

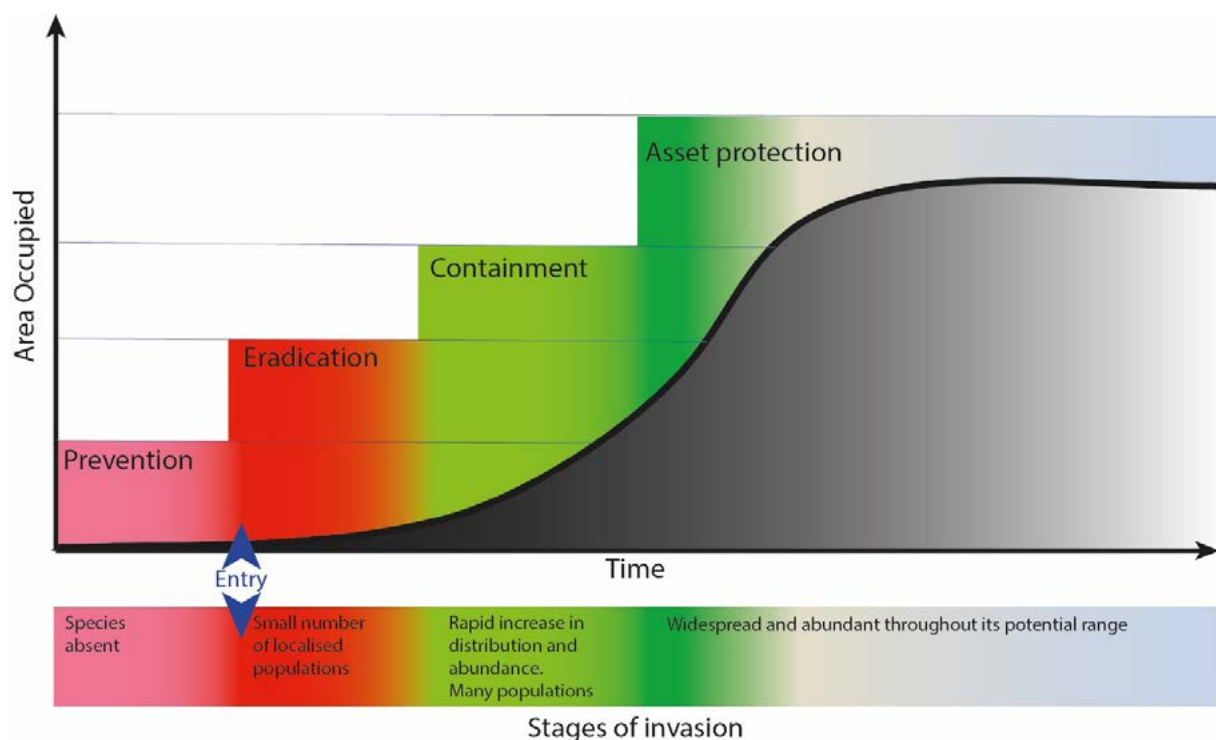


Figure 4.1: Weed invasion curve illustrating area infested and resources required for control over time, and the basis of management objectives.

4.1.1 Weed management principle

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), sequentially and shows that the effort and resources required to control a weed rise with time and area occupied. **Managing weeds earlier rather than later** is more cost-effective, and this principle is a foundation of the weed prioritisation process used in this plan. Consistent with the NSW Weed Risk Management system and the Invasive Species Plan weed management can be grouped into four management objectives as illustrated in Table 4.1 Regional weed management categories. Using the NSW Weed Risk Management system for prioritisation ensures that recognised weed management principles are incorporated in the prioritisation process.

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 North West Regional Weed 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 weed 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 Industry. 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 taken into account in 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 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: Responsibility for weed biosecurity is shared by the North West community	
Strategies	Actions
1.1 Promote weed management and behavioural changes in the community.	<p>1.1.1 Develop and implement a strategic marketing and communication plan that promotes delivery of weed management on the North West.</p> <p>1.1.2 Develop products promoting behavioural change and the profile of weed management in the North west, including promotional campaigns and events, sponsorship, media releases, social media, web sites, e-newsletters, brochures and other publications.</p>
1.2. Build stronger partnerships that support weed management	<p>1.2.1 Develop partnerships that support tenure neutral weed management.</p> <p>1.2.2 Foster networks, alliances and aboriginal engagement that support communities and stakeholders in weed management activities.</p> <p>1.2.3 Develop and implement mechanisms to protect biodiversity and support management of weeds on non-productive land.</p>
1.3 Enhance community-wide capacity in sharing responsibility for weed management	<p>1.3.1 Develop, promote and assist with interpretation of information outlining stakeholder roles, obligations and implications in weed management.</p> <p>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.</p> <p>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.</p>

Goal 2: Weed biosecurity supports profitable, productive and sustainable primary industries, and

Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments

Strategies	Actions
2-3.1 Improve surveillance, reporting and tracing systems for weeds	<p>2-3.1.1 Improve surveillance, reporting and tracing for weeds:</p> <ul style="list-style-type: none"> • 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. <p>2-3.1.2 Support state-wide processes in development of more efficient ways of demonstrating proof of freedom from weeds.</p>
2-3.2 Improve prevention, preparedness and response to weed emergencies	<p>2-3.2.1 Improve cross-jurisdictional collaboration on consistent and effective approaches to preventing establishment of new weed species.</p> <p>2-3.2.2 Manage high risk pathways, using strategic intentional surveillance, region-wide and consistent industry codes, education and enforcement mechanisms.</p> <p>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.</p>
2-3.3 Eradicate or prevent the spread of new weeds	<p>2-3.3.1 Develop standardised and consistent planning for:</p> <ul style="list-style-type: none"> • Weeds listed in Appendix 1 to this plan • New weed incursions, including rapid response plans and associated cost sharing arrangements <p>2-3.3.2 Work with other jurisdictions to standardise weed biosecurity arrangements across regional and state borders.</p> <p>2-3.3.3 Ensure management occurs for high priority weeds in alignment with relevant State, Regional or Sub-regional objectives.</p>
2-3.4 Contain and manage impacts of widespread weeds	<p>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,</p> <p>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.</p> <p>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.</p> <p>2-3.4.4 Continue to contribute to new and existing state and national arrangements for managing established weeds.</p>
2-3.5. Support weed research and implement developments in weed science and technology	<p>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.</p> <p>2-3.5.2 Strengthen research partnerships and actively participate in the development of new technologies and innovative approaches to weed management.</p>

Goal 2: Weed biosecurity supports profitable, productive and sustainable primary industries, and	
Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments	
Strategies	Actions
2-3.6 Assess and respond to changing weed risks associated with climate change	<p>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.</p> <p>2-3.6.2 Implement actions that promote resilience and minimise the risk of high risk invasive weeds under a changing climate.</p>

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

6 Implementation

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

6.1 Governance

This plan sits under the North West Local Land Services Local Strategic Plan and will be implemented in collaboration with key stakeholders, the community and North West Local Land Services. Collaboration and building capacity of land managers is central to plan implementation.

6.1.1 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 North West Regional Weed Committee and its member organisations will facilitate implementation of this plan with executive support from North West 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 co-ordination 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 co-ordinated 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. North West 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.

- North West Regional Weed 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 Department of Primary Industries (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 Department of Primary Industries leads and coordinates the prevention, preparedness, response and recovery for weed emergencies. This agency also develops and maintains regulatory mechanisms that support weed programs.

Office of Environment and Heritage and National Parks and Wildlife Service

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 major 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

A number of 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 John Holland Rail Pty Ltd), corridors for energy infrastructure and Water NSW. All land managers have 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 a number of 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 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 by enlisting support and providing on-ground weed control. This includes non-government organisations such as Landcare, Conservation Volunteers, Greening Australia and Bushcare. Activities undertaken by these groups include weed removal and monitoring activities, bush regeneration, biodiversity conservation projects and rehabilitation of aquatic habitats on private and public lands. Building on this foundation is essential in sharing responsibility for weed management.

The contribution made by these groups is significant. As an example, the Landcare network in the region includes regional Landcare networks, community groups and multiple individual members, all actively involved in weed management on private and public land.

Individual community members also 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” to detect and report new incursions and support eradication. Community participation also provides crucial support to the actions of responsible authorities, land managers and external funding programs. Private land owners and occupiers play an important role in the ongoing management of established weeds on their own land and in collaboration with their neighbours and the surrounding community.

6.5 Investment

Key regional plans such as the North West Local Land Services Transition Regional Natural Resource Management Plan, Annual Investment Plan and the North West Local Land Services Communications and Engagement Strategy will be implemented at an operational level and will sit under the North West Local Land Services Local Strategic Plan. North West Local Land Services have developed an Invasive Species Prioritisation and Implementation Framework to guide investment and deliver maximum return on investment for invasive weed species management.

The core principles that were used to develop the Annual Investment Plan reflect the desire to have resilient, productive communities by addressing social, economic and environmental needs:

1. Landscape and community resilience will be built through targeted action and will contribute to improved profitability.
2. Actions will contribute to maintaining market access for agricultural industries and enterprises.
3. Collaboration and partnerships are central to effective action.
4. The services and benefits from ecosystems will be promoted and protected.
5. Decisions must be responsive to climate variability.
6. Adaptive management will guide improvement and is based on best available information.

North West Weeds Action Program 2015 – 2020

The North West Weeds Action Program 2015 – 2020 (WAP 1520) funding addresses the diverse suite of weed species, both present and potential, taking into account the climatic conditions which lead to rapid growth of weed species and seasonal variability across the landscapes in the North West region, and sets in place a 5 year strategy to improve the management of invasive weed species.

WAP1520 funding is provided under an agreement between the NSW Department of Primary Industries and the lead organisation, the New England Weeds Authority. The agreement sets out the roles, functions and obligations of the parties in relation to the project.

Stakeholders receiving funding through the North West Weeds Action Program 2015 – 2020 include:

- North West Local Land Services
- Tamworth Regional Council
- Liverpool Plains Shire Council
- Gunnedah Shire Council
- Gwydir Shire Council
- Narrabri Shire Council
- Moree Plains Shire Council
- Walgett Shire Council (Delivered through Central West Weeds Action Program 2015 – 2020)

The local decision making process prioritises key regional delivery action decisions across the organisation through the development of the Annual Delivery Plan. Priorities are decided through a process of considering customer preferences, spatial data, policy and planning guidance, legislative requirements, knowledge products (including new scientific evidence-based research), decision-support tools, achievability, risk assessments, funding body

preferences and cost-benefit analysis. Priorities are also based on evaluations and feedback from previous Annual Delivery Plan achievements and customer feedback.

Final recommendations are made to the North West Board which recommends any changes and approves the Annual Delivery Plan. The decision-making process is reviewed and refined for each new Annual Delivery Plan, incorporating new evidence and knowledge, adaptive management, and the results of program evaluations completed in the previous year.

6.6 Community engagement and awareness

Collaboration and building capacity of land managers is central to the effectiveness of this Plan.

By working with people 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 Regional Weed Committee in partnership with relevant agencies will identify information and knowledge gaps in the North West community associated with the ability of the community to prevent or respond to new invasive weed incursions.

As part of the WAP 1520 mandatory documents, the North West Regional Weeds Committee Communication Strategy will outline the mechanisms to engage with and build capacity of the community in weed management.

The Committee will also assist in the delivery of the NSW Biosecurity Strategy and draft NSW Invasive Species Plans.

7. Measuring success and continuous improvement

Measuring and reporting on progress against key performance indicators 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, North West 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 North West Local Land Services to establish a monitoring, reporting, evaluation and improvement process (MERI) that is consistent with the North West 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
- 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 North West.

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 North West Regional Weed 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 North West 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 3 (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 3 will be on evaluation and review of weed lists in this plan (Appendix 1 and 2).

8. List of Acronyms

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

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 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 to.

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 North West Local Land Services Board exercises power, responsibility and decision making to ensure accountability, fairness, and transparency in relationship to the North West 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 General Biosecurity Duty means that any person dealing with plant matter who knows or ought reasonably 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), or
- 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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Appendix 1: State Level Determined Priority Weeds for the North West 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 website and mobile based application WeedWise, as practical advice on achieving these outcomes.

A1.1 State level determined priority weeds

State Priority Weed Objective – PREVENTION (Whole of State):

The following weeds are currently not found in some parts of the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

Species	Relevant Legislation & Strategic Response
All species of vascular plant (Tracheophyta)	<p>Mandatory Measure (Division 8, Clause 34) Duty to notify on importation of plants into the State:</p> <p>(1) 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.</p> <p>(2) The notification is to be given to the Secretary and is to be given in accordance with Part 6.</p> <p>(3) 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.</p> <p>Note. See http://plantnet.rbgsyd.nsw.gov.au/.</p>

State Priority Weed Objective – PREVENTION (Whole of State):

The following weeds are currently not found in some parts of the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

Species	Relevant Legislation & Strategic Response
Gamba grass - <i>Andropogon gayanus</i>	<p data-bbox="779 603 1921 667">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.</p> <p data-bbox="779 691 1142 722">Regional Strategic Response:</p> <ul data-bbox="779 730 1870 866" style="list-style-type: none"> • Implement quarantine and/or hygiene protocols • Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options • Trigger rapid response protocol
Pond apple - <i>Annona glabra</i>	
Bridal veil creeper - <i>Asparagus declinatus</i>	
Kochia - <i>Bassia scoparia</i> (excluding subsp. <i>trichophylla</i>)	
Spotted knapweed - <i>Centaurea stoebe</i> subsp. <i>australis</i>	
Black knapweed - <i>Centaurea xmoncktonii</i>	
Siam weed - <i>Chromolaena odorata</i>	
Koster's curse - <i>Clidemia hirta</i>	
Rubber vine - <i>Cryptostegia grandiflora</i>	
Anchored water hyacinth - <i>Eichhornia azurea</i>	
Hawkweed - <i>Hieracium</i> spp. (all species)	
Hydrocotyl/Water pennywort - <i>Hydrocotyle ranunculoides</i>	
Lagarosiphon - <i>Lagarosiphon major</i>	
Frogbit / Spongeplant - <i>Limnobium</i> spp. (all species)	
Yellow burrhead - <i>Limnocharis flava</i>	
Miconia - <i>Miconia</i> spp. (all species)	
Mikania vine - <i>Mikania micrantha</i>	

State Priority Weed Objective – PREVENTION (Whole of State):

The following weeds are currently not found in some parts of the state, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.

Species	Relevant Legislation & Strategic Response
Mimosa - <i>Mimosa pigra</i>	<p>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.</p> <p>Regional Strategic Response:</p> <ul style="list-style-type: none"> • Implement quarantine and/or hygiene protocols. • Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options. • Trigger rapid response protocol.
Eurasian water milfoil - <i>Myriophyllum spicatum</i>	
Mexican feather grass - <i>Nassella tenuissima</i> (syn. <i>Stipa tenuissima</i>)	
Broomrape - <i>Orobancha</i> spp. (all species except the native <i>O. cernua</i> var. <i>australiana</i> and <i>O. minor</i>)	
Water soldier – <i>Stratiotes aloides</i>	
Witchweed - <i>Striga</i> spp. (except the native <i>S. parviflora</i>)	
Water caltrop - <i>Trapa</i> spp. (all species)	
Karoo acacia - <i>Vachellia karroo</i> (syn. <i>Acacia karroo</i>)	
Prickly acacia - <i>Vachellia nilotica</i> (syn. <i>Acacia nilotica</i>)	
Parthenium weed <i>Parthenium hysterophorus</i>	<p>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.</p> <p>Mandatory Measure (Division 8, Clause 35, Biosecurity Regulation, 2017) - Parthenium weed carriers – machinery and equipment</p> <p>(1) This clause applies to the following equipment:</p> <ol style="list-style-type: none"> (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 <p>(2) A person must not import into the State from Queensland any equipment to which this clause applies.</p>

State Priority Weed Objective – ERADICATION (Whole of State):

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
Tropical soda apple - <i>Solanum viarum</i>	<p><u>Control Order – (Tropical Soda Apple Control Zone):</u></p> <p><u>1. Control measures for owners and occupiers of land</u></p> <p>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:</p> <p>(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:</p> <ul style="list-style-type: none"> i) as soon as practicable after becoming aware of the new infestation; ii) verbally or in writing; iii) giving the following: <ul style="list-style-type: none"> (1) the person’s full name and contact number; (2) the location of the Tropical Soda Apple, including the property identification code for the land (if this is known); and (3) any other information reasonably requested by the local control authority; 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. <p>(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.</p> <p><u>2. Control measures for persons dealing with carriers</u></p> <p>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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> i) as soon as practicable after becoming aware of the presence of Tropical Soda Apple; ii) verbally or in writing; iii) giving the following: <ul style="list-style-type: none"> (1) the person’s full name and contact number; (2) the location of the Tropical Soda Apple, including the property identification code for the land (if this is known); and iv) any other information reasonably requested by the local control authority. 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.

State Priority Weed Objective – ERADICATION (Whole of State):

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 - <i>Chrysanthemoides monilifera</i> subsp. <i>monilifera</i>	<p><u>Control Order – (Boneseed Control Zone):</u></p> <p><u>1. Control measures for owners and occupiers of land</u></p> <p>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:</p> <ul style="list-style-type: none">(a) notify the local control authority for the area if the Boneseed is part of a new infestation of Boneseed on the land:<ul style="list-style-type: none">i) as soon as practicable after becoming aware of the new infestation;ii) verbally or in writing;iii) giving the following:<ul style="list-style-type: none">(1) the person’s full name and contact number;(2) the location of the Boneseed, including the property identification code for the land (if this is known); and(3) any other information reasonably requested by the local control authority; and(b) destroy all Boneseed on the land, including fruit; and(c) ensure that subsequent generations of Boneseed are destroyed; and(d) that 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. <p><u>2. Control measures for persons dealing with carriers</u></p> <p>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:</p> <ul style="list-style-type: none">a) ensure that Boneseed (including any seed and propagules) is not moved from the land; andb) immediately notify the local control authority for the area:<ul style="list-style-type: none">i) as soon as practicable after becoming aware of the presence of Boneseed;ii) verbally or in writing;iii) giving the following:<ul style="list-style-type: none">(1) the person’s full name and contact number;(2) the location of the Boneseed, including the property identification code for the land (if this is known); andiv) any other information reasonably requested by the local control authority.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. <p>Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the State or sell.</p>

State Priority Weed Objective – ERADICATION (Whole of State):

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
Parkinsonia - <i>Parkinsonia aculeata</i>	<p>Control Order - (Parkinsonia Control Zone):</p> <p><u>1. Control measures for owners and occupiers of land</u></p> <p>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:</p> <ul style="list-style-type: none"> (a) notify the local control authority for the area if the Parkinsonia is part of a new infestation of Parkinsonia on the land: <ul style="list-style-type: none"> i) as soon as practicable after becoming aware of the new infestation; ii) verbally or in writing; iii) giving the following: <ul style="list-style-type: none"> (1) the person’s full name and contact number; (2) the location of the Parkinsonia, including the property identification code for the land (if this is known); and (3) any other information reasonably requested by the local control authority; 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. <p><u>2. Control measures for persons dealing with carriers</u></p> <p>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:</p> <ul style="list-style-type: none"> d) ensure that Parkinsonia (including any seed and propagules) is not moved from the land; and e) immediately notify the local control authority: <ul style="list-style-type: none"> i) as soon as practicable after becoming aware of the presence of Parkinsonia; ii) verbally or in writing; iii) giving the following: <ul style="list-style-type: none"> (1) the person’s full name and contact number; (2) the location of the Parkinsonia, including the property identification code for the land (if this is known); and iv) any other information reasonably requested by the local control authority. f) 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. <p>(Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the State or sell.</p>

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	Biosecurity Act requirements & Strategic Response in the region
<p>Alligator weed - <i>Alternanthera philoxeroides</i></p> <p>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:</p> <p>(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).</p>	<p>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 <i>Alternanthera philoxeroides</i> (Alligator Weed) must:</p> <p>(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.</p> <p>Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the State or sell.</p> <p>Regional Strategic Response:</p> <ul style="list-style-type: none">• develop a region-wide coordinated campaign for collaborative management;• detailed surveillance and mapping to locate all infestations;• high level analysis of pathways analysis to identify potential introduction areas and preventative options;• implement quarantine and/or hygiene protocols; and• monitor progress towards eradication.
<p>Bitou bush - <i>Chrysanthemoides monilifera</i> subsp. <i>rotunda</i></p> <p>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</p>	<p>Biosecurity Regulation 2016 - 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 <i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i> (Bitou Bush) must:</p> <p>(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.</p> <p>Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the State or sell.</p>

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**Biosecurity Act requirements & Strategic Response in the region****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 those regions 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, Mid-Coast, City of Maitland or 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 plans

State Priority Weed Objective – ASSET PROTECTION (Whole of State):

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	Biosecurity Act requirements & Strategic Response in the region
Madeira vine - <i>Anredera cordifolia</i>	Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the State or sell.
Asparagus weeds - <i>Asparagus aethiopicus</i> , <i>A. africanus</i> , <i>A. asparagoides</i> including the Western Cape form*, <i>A. plumosus</i> , and <i>A. scandens</i>	
Cat's claw creeper - <i>Dolichandra unguis-cati</i>	
Bellyache bush - <i>Jatropha gossypifolia</i>	
Lantana - <i>Lantana camara</i>	
African boxthorn - <i>Lycium ferocissimum</i>	
Chilean needle grass - <i>Nassella neesiana</i>	
Serrated tussock - <i>Nassella trichotoma</i>	
Opuntia - <i>Opuntia</i> spp., <i>Cylindropuntia</i> spp., <i>Austrocylindropuntia</i> spp. (excludes <i>O. ficus-indica</i>) (opuntoid cacti)	
Mesquite - <i>Prosopis</i> spp.	
Blackberry - <i>Rubus fruticosus</i> spp. agg. (except the varieties Chester Thornless, Dirksen Thornless, Loch Ness, Silvan, Black Satin, Murrindindi, Smooth Stem, Thornfree and Chehalem)	
Sagittaria - <i>Sagittaria platyphylla</i>	
Salvinia - <i>Salvinia molesta</i>	
Fireweed - <i>Senecio madagascariensis</i>	
Silver-leaf nightshade - <i>Solanum elaeagnifolium</i>	
Athel pine - <i>Tamarix aphylla</i>	

A1.2 North West Regional priority weeds

Regional Priority Weed Objective – PREVENTION (Whole of Region):

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.

Bellyache bush - <i>Jatropha gossypifolia</i>	Yellow bells - <i>Tecoma stans</i>
Cabomba ^B - <i>Cabomba</i> (all species except <i>C. furcata</i>)	Gorse B - <i>Ulex europaeus</i>
Senegal tea plant ^C - <i>Gymnocoronis spilanthoides</i>	Rhus tree - <i>Toxicodendron succedaneum</i> (syn. <i>Toxicodendron succedanea</i> , <i>Rhus succedanea</i>)
Hymenachne ^B - <i>Hymenachne amplexicaulis</i> and hybrids	Camel thorn - <i>Alhagi maurorum</i>
Mexican waterlily - <i>Nymphaea mexicana</i>	East Indian hygrophilia - <i>Hygrophila polysperma</i>
Chinese violet ^C - <i>Asystasia gangetica</i> ssp. <i>micrantha</i>	Long-leaf willow primrose, Long-leaf water primrose - <i>Ludwigia longifolia</i>
Blue hounds tongue ^C - <i>Cynoglossum creticum</i>	Peruvian primrose - <i>Ludwigia peruviana</i>
Aleman grass - <i>Echinochloa polystachya</i>	Cape tulip - <i>Moraea miniata</i> and <i>M flaccida</i>
Horsetail ^C - <i>Equisetum</i> spp.	Browntop bent - <i>Agrostis capillaris</i>
Kidneyleaf mud plantain - <i>Heteranthera reniformis</i>	Leafy elodea, Dense waterweed, Egeria - <i>Egeria densa</i>
Hygrophila - <i>Hygrophila costata</i>	Arrowhead - <i>Sagittaria calycina</i> subsp. <i>calycina</i>
Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
<ul style="list-style-type: none"> • The plant is eradicated from the land and the land is kept free of the plant. • Land managers should mitigate the risk of new weeds being introduced to their land. • Local Control Authority is aware if the plant has been found on the land. • The plant or parts of the plant are not traded, carried, grown or released into the environment <p>B & C The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • 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

Superscript letters B and C noted in table are listed as Weeds of National Significance

Regional Priority Weed Objective – ERADICATION (Whole of Region):

The following weeds are present in limited distribution and abundance in the region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Alligator weed - <i>Alternanthera philoxeroides</i>		
Whole of Region	<ul style="list-style-type: none"> Land managers should mitigate the risk of new weeds being introduced to their land. The plant or parts of the plant are not traded, carried, grown, carried or released into the environment. <p>Biosecurity Regulation 2017 - Part 5, Division 2 (Biosecurity Zone) An owner or occupier of land in the alligator weed biosecurity zone on which there is the weed <i>Alternanthera philoxeroides</i> (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.</p> <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> Establish agreed quarantine and/or hygiene protocols. New weed incursions trigger rapid response protocol. High level analysis of pathways to identify potential introduction areas and preventative options.

Regional Priority Weed Objective – ERADICATION (Whole of Region):

The following weeds are present in limited distribution and abundance in the region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Hudson pear - <i>Cylindropuntia pallida</i> & <i>tunicata</i> Spp		
Whole of Region, excluding Core infestations within Walgett shire	<p>The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • The plant is eradicated from the land and the land is kept free of the plant. • Land managers should mitigate the risk of new weeds being introduced to their land. <p>Within Core infestation</p> <p>Land managers reduce impacts from the plant on priority assets</p> <ul style="list-style-type: none"> • Core infestations should be contained and reduced in extent. • All outlier infestations should be continuously suppressed and destroyed. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • The plant should be fully and continuously suppressed and destroyed • 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 <p>Within Core infestation</p> <ul style="list-style-type: none"> • The land should be managed in accordance with published best practice guidelines • Destruction of all outlier infestations, aiming at local eradication where feasible (extirpation). • Monitor change in current distribution to ensure containment of spread • Identification of key sites/assets in the geographic area • Identification of regional containment zones where required • Develop region-wide coordinated campaigns for collaborative management

Regional Priority Weed Objective – ERADICATION (Whole of Region):

The following weeds are present in limited distribution and abundance in the region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
<i>Sagittaria - Sagittaria platyphylla</i>		
Whole of Region	<ul style="list-style-type: none"> • The plant is eradicated from the land and the land is kept free of the plant. • The plant or parts of the plant are not traded, carried, grown or released into the environment. • Land managers should mitigate the risk of new weeds being introduced to their land. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • New weed incursions trigger rapid response protocol. • Destruction of all infestations, aiming at local eradication where feasible (extirpation) • Monitor change in distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options
<i>Salvinia - Salvinia molesta</i>		
Whole of Region	<ul style="list-style-type: none"> • The plant or parts of the plant are not traded, carried, grown or released into the environment. • The plant is eradicated from the land and the land is kept free of the plant. • Land managers should mitigate the risk of new weeds being introduced to their land. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • New weed incursions trigger rapid response protocol. • Destruction of all infestations, aiming at local eradication where feasible (extirpation) • Monitor change in distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options

Regional Priority Weed Objective – ERADICATION (Whole of Region):

The following weeds are present in limited distribution and abundance in the region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
<i>Water lettuce - Pistia stratiotes</i>		
Whole of Region	<ul style="list-style-type: none"> • The plant or parts of the plant are not traded, carried, grown or released into the environment • The plant is eradicated from the land and the land is kept free of the plant. • Land managers should mitigate the risk of new weeds being introduced to their land. 	<ul style="list-style-type: none"> • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • New weed incursions trigger rapid response protocol. • Destruction of all infestations, aiming at local eradication where feasible (extirpation) • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options

Regional Priority Weeds objective – CONTAINMENT: *These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.*

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Blackberry - <i>Rubus fruticosus</i> spp. agg		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising the:</p> <ul style="list-style-type: none"> • Gwydir Shire Council; • Liverpool Plains Shire Council; and • Tamworth Regional Council. 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment.</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • Land managers should prevent spread from their land. • Land managers mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> • Land managers reduce impacts from the plant on priority assets. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • 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 <p>Within Core infestation</p> <ul style="list-style-type: none"> • 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
Chilean needle grass - <i>Nassella neesiana</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising lands within the Tamworth Regional Council</p>	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment.</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • Land managers should prevent spread from their land. • Land managers mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> • Land managers reduce impacts from the plant on priority assets. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • 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 <p>Within Core infestation</p> <ul style="list-style-type: none"> • 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 – CONTAINMENT: <i>These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.</i>		
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Harrisia Cactus - <i>Harrisia martini</i> and <i>H. tortuosa</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising the:</p> <ul style="list-style-type: none"> Gwydir Shire Council and Moree Plains Shire Council 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> 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. <p>Within Core infestation</p> <ul style="list-style-type: none"> Land managers should reduce impacts from the plant on priority assets <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> 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 <p>Within Core infestation</p> <ul style="list-style-type: none"> 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
Honey Locust - <i>Gleditsia triacanthos</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising the:</p> <ul style="list-style-type: none"> Gunnedah Shire Council Narrabri Shire Council and Tamworth Regional Council 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> The plant is eradicated from the land and the land is kept free of the plant. Land managers should mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> Land managers should reduce impacts from the plant on priority assets 	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> 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 <p>Within Core infestation</p> <ul style="list-style-type: none"> 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 – CONTAINMENT: *These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.*

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Mesquite - <i>Prosopis spp.</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising lands within the:</p> <ul style="list-style-type: none"> Walgett Shire Council 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> The plant is eradicated from the land and the land is kept free of the plant. Land managers should mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> Land managers should reduce impacts from the plant on priority assets <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> Establish agreed quarantine and/or hygiene protocols. Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. The plant should be fully and continuously suppressed and destroyed Monitor change in current distribution to ensure containment of spread. High level analysis of pathways to identify potential introduction areas and preventative options <p>Within Core infestation</p> <ul style="list-style-type: none"> 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
Montpellier / Cape broome - <i>Genista monspessulana</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising all Local Government Areas East of the Newell Highway</p>	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> The plant is eradicated from the land and the land is kept free of the plant. Land managers should prevent spread from their land. Land managers should mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> Land managers should reduce impacts from the plant on priority assets <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> Establish agreed quarantine and/or hygiene protocols. Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. The plant should be fully and continuously suppressed and destroyed Monitor change in current distribution to ensure containment of spread. High level analysis of pathways to identify potential introduction areas and preventative options <p>Within Core infestation</p> <ul style="list-style-type: none"> 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 – CONTAINMENT: *These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.*

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Scotch broom - <i>Cytisus scoparius</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising all Local Government Areas lands East of the Newell Highway</p>	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant. Land managers should prevent spread from their land. Land managers should mitigate the risk of the plant being introduced to their land.</p> <p>Within Core infestation Land managers should reduce impacts from the plant on priority assets The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>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. The plant should be fully and continuously suppressed and destroyed Monitor change in current distribution to ensure containment of spread. High level analysis of pathways to identify potential introduction areas and preventative options</p> <p>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</p>
Serrated tussock - <i>Nassella trichotoma</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising all Local Government Areas lands East of the Newell Highway</p>	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant. Land managers should prevent spread from their land. Land managers should mitigate the risk of the plant being introduced to their land.</p> <p>Within Core infestation Land managers should reduce impacts from the plant on priority assets The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>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. The plant should be fully and continuously suppressed and destroyed Monitor change in current distribution to ensure containment of spread. High level analysis of pathways to identify potential introduction areas and preventative options</p> <p>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</p>

Regional Priority Weeds objective – CONTAINMENT: *These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.*

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
<i>St John's wort - Hypericum perforatum</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising the:</p> <ul style="list-style-type: none"> • Gunnedah Shire Council • Gwydir Shire Council • Liverpool Plains Shire Council and • Tamworth Regional Council 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • Land managers should prevent spread from their land and the land is kept free of the plant. • Land managers should mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> • Land managers should reduce impacts from the plant on priority assets 	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • The plant should be fully and continuously suppressed and destroyed • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options <p>Within Core infestation</p> <ul style="list-style-type: none"> • 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
<i>Green cestrum - Cestrum parqui</i>		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising the:</p> <ul style="list-style-type: none"> • Gunnedah Shire Council • Gwydir Shire Council • Narrabri Shire Council and • Tamworth Regional Council 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • The plant is eradicated from the land and the land is kept free of the plant. • Land managers should prevent spread from their land. • Land managers should mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> • Land managers should reduce impacts from the plant on priority assets 	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • Establish agreed quarantine and/or hygiene protocols. • Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives. • The plant should be fully and continuously suppressed and destroyed • Monitor change in current distribution to ensure containment of spread. • High level analysis of pathways to identify potential introduction areas and preventative options <p>Within Core infestation</p> <ul style="list-style-type: none"> • 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 – CONTAINMENT: *These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed these weeds is reasonably practicable.*

Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Water hyacinth - <i>Eichhornia crassipes</i> ;		
<p>An exclusion zone is established for all lands in the region, except the core infestation area comprising lands within the:</p> <ul style="list-style-type: none"> • Moree plains Shire Council 	<p>Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Biosecurity Regulation 2017 - Part 5, Division 4 (Biosecurity Zone) An owner or occupier of land in the Water Hyacinth Biosecurity Zone on which there is the weed <i>Eichhornia crassipes</i> (Water Hyacinth) must:</p> <p>(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</p> <p>(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.</p> <p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • The plant is eradicated from the land and the land is kept free of the plant. • Land managers should prevent spread from their land. • Land managers should mitigate the risk of the plant being introduced to their land. <p>Within Core infestation</p> <ul style="list-style-type: none"> • Land managers should reduce impacts from the plant on priority assets <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<p>Within Exclusion zone:</p> <ul style="list-style-type: none"> • 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 <p>Within Core infestation</p> <ul style="list-style-type: none"> • 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 • The land should be managed in accordance a regional best practice guide to protect assets.

Regional Priority Weeds objective – ASSET PROTECTION: These weeds are widely distributed in the region. Their spread should be minimised to protect priority assets.

Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
<i>African boxthorn - Lycium ferocissimum</i>	
<ul style="list-style-type: none"> • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers should prevent seed and propagules spreading from their land. • Land managers reduce the impacts of the plant on priority assets. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Promote best practice principles to landholders, including a range of control techniques for integrated weed management; maintain competitive vegetation/crops/pastures, hygiene and property management plans. • Identify key sites/assets in the geographic area. • The land should be managed in accordance a regional best practice guide to protect assets.
<i>African olive - Olea europaea subsp. Cuspidate</i>	
<ul style="list-style-type: none"> • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers should prevent spread from their land. • Land managers reduce the impacts of the plant on priority assets. • Plant should not be bought, sold, propagated, grown, knowingly distributed, carried or released into the environment 	<ul style="list-style-type: none"> • Promote best practice principles to landholders, including a range of control techniques for integrated weed management. - identify key sites/ assets in the geographic area including TEC's and EEC's. • The land should be managed in accordance a regional best practice guide to allow asset protection.
<i>Black willow - Salix nigra</i>	
<ul style="list-style-type: none"> • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers should prevent seed and propagules spreading from their land. • Land managers should prevent spread from their land. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Identify key sites/assets in the geographic area. • The land should be managed in accordance a regional best practice guide to protect assets.
<i>Silver leaf nightshade - Solanum elaeagnifolium</i>	
<ul style="list-style-type: none"> • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers should prevent seed and propagules spreading from their land. • Land managers reduce the impacts of the plant on priority assets. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Promote best practice principles to landholders, including a range of control techniques for integrated weed management; maintain competitive vegetation/crops/pastures, hygiene and property management plans. • Identify key sites/assets in the geographic area. • The land should be managed in accordance a regional best practice guide to protect assets.



Regional Priority Weeds objective – ASSET PROTECTION: These weeds are widely distributed in the region. Their spread should be minimised to protect priority assets.	
Outcomes to demonstrate compliance with the GBD	Strategic Response in the North West region
Madeira Vine <i>Anredera cordifolia</i>	
<ul style="list-style-type: none"> • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers reduce the impacts of the plant on priority assets. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Promote best practice principles to landholders, including a range of control techniques for integrated weed management. <ul style="list-style-type: none"> - identify key sites/ assets in the geographic area. • The land should be managed in accordance a regional best practice guide to protect assets.
Mother of millions - <i>Bryophyllum delagoense</i>	
<ul style="list-style-type: none"> • Plant should not be bought, sold, propagated, grown, knowingly distributed, carried or released into the environment • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers should prevent seed and propagules spreading from their land. 	<ul style="list-style-type: none"> • Identify key sites/assets in the geographic area. • The land should be managed in accordance a regional best practice guide to protect assets.
Rope pear - <i>Cylindropuntia imbricata</i>	
<ul style="list-style-type: none"> • Land managers should prevent seed and propagules spreading from their land • Land managers should mitigate the risk of new weeds being introduced to their land. • Land managers reduce the impacts of the plant on priority assets. <p>The following legislative requirement also applies: Mandatory Measure (<i>Division 8, Clause 33 Biosecurity Regulation 2017</i>) A person must not import into the State or sell.</p>	<ul style="list-style-type: none"> • Identify key sites/assets in the geographic area. • The land should be managed in accordance a regional best practice guide to protect these assets. • Land managers should implement best practice measures that suppress spread.
Sweet briar - <i>Rosa rubiginosa</i>	
<ul style="list-style-type: none"> • Plant should not be bought, sold, propagated, grown, knowingly distributed, carried or released into the environment • Land managers should mitigate the risk of new weeds being introduced to their land • Land managers should prevent spread from their land. 	<ul style="list-style-type: none"> • The land should be managed in accordance with a regional best practice guide to protect these assets.

Regional Priority Weeds objective – ASSET PROTECTION: These weeds are widely distributed in the region. Their spread should be minimised to protect priority assets.

Outcomes to demonstrate compliance with the GBD

Strategic Response in the North West region

Tiger pear - *Opuntia aurantiaca*

- Plant should not be bought, sold, propagated, grown, knowingly distributed, carried or released into the environment.
- Land managers should mitigate the risk of new weeds being introduced to their land.
- Land managers reduce the impacts of the plant on priority assets.
- Land managers should prevent seed and propagules spreading from their land.

The following legislative requirement also applies:

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

- Promote best practice principles to landholders, including a range of control techniques for integrated weed management; maintain competitive vegetation/crops/pastures, hygiene and property management plans.
- Identify key sites/assets in the geographic area.
- The land should be managed in accordance a regional best practice guide to protect these assets.

Appendix 2: Other regional weed lists

The species listed below have been identified and assessed as additional key invasive plants through the North West Local Land Services Invasive Species Implementation Framework 2015. The aim is to prevent the establishment of new invasive species in the North West Local Land Services and to manage those identified as Key Emerging at the controllable level before they cross the threshold where control of spread is no longer an option.

Regional Strategic responses may include but are not limited to:

- develop species information summary (including ID/habitat preferences/pathways) for field based weed management professionals;
- trigger rapid response protocol for any sightings;
- escalate any species that develop a high risk pathway to Appendix A1.2

A2.1 Key Emerging weeds for the North West Local Land Services Region	
Common Name	Scientific Name
African feather grass	<i>Cenchrus macrourus</i> (syn. <i>Pennisetum macrourum</i>)
Black locust, False acacia	<i>Robinia pseudoacacia</i> (non planted)
Blue periwinkle	<i>Vinca major</i>
Box elder	<i>Acer negundo</i>
Bridal creeper ^B	<i>Asparagus asparagoides</i> (syn. <i>Myrsiphyllum asparagoides</i> , <i>Asparagus medeoloides</i>)
Canary Island date palm	<i>Phoenix canariensis</i> (non planted)
Castor Oil	<i>Ricinus communis</i>
Cat's claw creeper ^B	<i>Dolichandra unguis-cati</i> (syn. <i>Macfadyena unguis-cati</i>)
Coral cactus/Boxing glove cactus ^B	<i>Cylindropuntia fulgida</i> var. <i>mamillata</i>
Elephant grass	<i>Pennisetum purpureum</i>
Espartillo	<i>Amelichloa brachychaeta</i> and <i>A. caudata</i>
Feral Fruit and Nut trees	various species.
Fireweed	<i>Senecio madagascariensis</i>
Galenia	<i>Galenia pubescens</i>
Giant Parramatta grass	<i>Sporobolus fertilis</i>
Giant rat's tail grass	<i>Sporobolus natalensis</i> and <i>S. pyramidalis</i>
Hawthorn	<i>Crataegus monogyna</i> , <i>Cotoneaster</i> spp. <i>Pyracantha</i> spp.
Japanese honeysuckle	<i>Lonicera japonica</i>
Nodding thistle	<i>Carduus nutans</i> subsp. <i>nutans</i>
Oleander	<i>Nerium oleander</i> (in riparian zones only)
Onion weed	<i>Asphodelus fistulosus</i>
Osage orange	<i>Maclura pomifera</i> (non planted)
South African Pigeon Grass	<i>Setaria sphacelata</i>
Tall Coolatai, Thatch grass	<i>Hyparrhenia rufa</i>
Toothed spurge, David's spurge	<i>Euphorbia davidii</i>
Tree pear ^B	<i>Opuntia tomentosa</i>
Whiskey grass	<i>Andropogon virginicus</i>

Superscript letters B noted in table are listed as Weeds of National Significance

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

Regional Strategic Weed Management Plan 2017 - 2022



Local Land
Services
North West