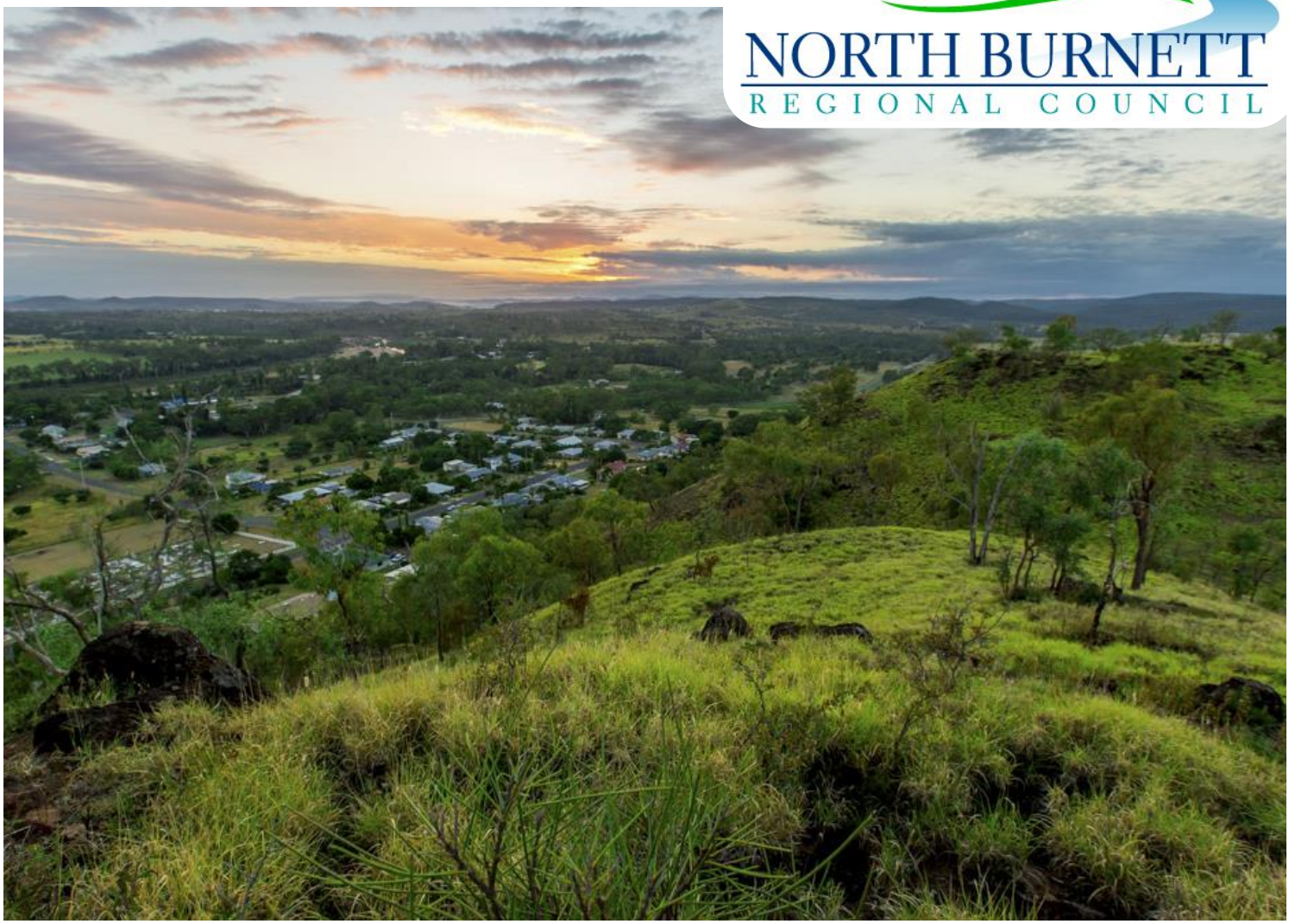
NORTH BURNETT
REGIONAL COUNCIL



BIOSECURITY PLAN 2019 - 2024

Executive Summary

Vision

Council's vision is that by 2030, the North Burnett will be the region of choice for people to live, work and play. The management of invasive plant and animal species supports this vision by reinforcing the sustainability of the natural environment, primary industries and local communities across our region and building the ability and commitment of the community to manage invasive species.

Working Together

The North Burnett Regional Council (NBRC) makes strategic and operational decisions on invasive species management based on a range of factors. These factors include federal and state government imperatives, local government initiatives (either singularly or collaboratively), industry best practice and community behaviours and desires. While the North Burnett Regional Council is responsible for ensuring that invasive species are managed in accordance with the *Biosecurity Act 2014*, the whole community has a responsibility to take action. The intent of this plan will be to collaboratively manage invasive species in partnership with our communities.

Risk Based Decision Making in the North Burnett

A comprehensive risk assessment process has been undertaken to ensure that resources are allocated towards the highest priority issues and are targeted to management activities that are most likely to return the greatest return on investment. Invasive plants and animals in the North Burnett region have been ranked for management actions based on their potential impacts, invasiveness and distribution.

Contents

1. Introduction

1.1 Intent of the Biosecurity Plan

The North Burnett Region Biosecurity Plan provides a framework for invasive species management across the North Burnett Regional Council area. The plan supports the implementation of the *Biosecurity Act 2014* by articulating community expectations and facilitating a collaborative approach in relation to invasive species management in our region. This plan (and the legislation that underpins it) is based on the premise that biosecurity in the North Burnett region is everyone's responsibility.

The North Burnett Region Biosecurity Plan relates to all lands and waters, including State controlled land. It includes invasive plants and animals identified as prohibited or restricted matter in schedules 1 (parts 3 and 4) and 2 (part 2) of the *Biosecurity Regulation 2014* (the Regulation) as well as other invasive species identified as having impacts which are of concern to the local community.

This Biosecurity Plan has built on past planning efforts and has gained immeasurably from the accumulated experience and knowledge of Council staff, the community and their networks. It will guide resource allocation and investment in relation to invasive plant and animal matters in the region and provide a consistent basis for regional planning and delivery.

The overall intent of this Plan is for North Burnett Regional Council and the community to collaboratively manage invasive biosecurity matter and to ensure resources are allocated towards the highest priority biosecurity issues whilst management activities are targeted to provide the greatest return on investment.

1.2 Vision, Goals and Desired Achievements for the North Burnett Region

Council's vision is that by 2030, the North Burnett will be the region of choice for people to live, work and play. The management of invasive plant and animal species supports this vision by reinforcing the sustainability of the natural environment, primary industries and local communities across our region and building the ability and commitment of the community to manage invasive species.

Management Goal 1: Prevent the establishment of new invasive species in the North Burnett region.

Desired Achievements

- High priority species and pathways identified and managed
- Develop and implement early detection programs and capabilities
- Network with government agencies, community and industry groups to gather intelligence on potential or new invasive species incursions

Management Goal 2: Eliminate, or prevent the spread of, new invasive species in the North Burnett region.

Desired Achievements

- Inform the community on potential or new invasive species incursions
- Timely detection of new invasive species incursions
- Provide a rapid response to eradicate or contain new invasive species
- Partner with community groups and adjoining local governments to manage new invasive species incursions

Management Goal 3: Contain the spread of existing invasive species to known areas.

Desired Achievements:

- Contain existing infestations/populations
- Strategic control of infestations relevant to distribution and abundance
- Map and record distribution of invasive species
- Work collaboratively with community groups and other stakeholders to manage invasive species in known areas

Management Goal 4: Reduce the impacts of widespread invasive species in the North Burnett Region

Desired Achievements

- Identification and prioritisation of management programs where benefits are the greatest
- Provide effective and targeted on-ground control where benefits are the greatest
- Private landholders motivated to manage invasive species proactively.

The strategic actions associated with each of the listed management goals are expanded in the invasive species delivery program on pages 28-34. Management expectations for landholders and North Burnett Regional Council for each species are included in Appendix D.

1.3 Strategic Management of Invasive Plants and Animals

Invasive species are a major threat to Australia's natural environment. The impact from weeds on Australian agriculture alone, are estimated to be in the vicinity of $2.5 billion in production losses with an additional $1.8 billion in control costs annually. It is estimated that weeds and pest animals cost the Queensland economy alone more than $700 million each year in both loss of production and cost of control.

Apart from rising control costs associated with the management in invasive species, there are a range of drivers that necessitate a more strategic and efficient approach to their management. These drivers include:

- 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 at both a statewide and local level.
- The global climate is more variable with more extreme weather events and increasing average temperatures. These changes are likely to aid in the establishment and spread of invasive species to new areas due to their adaptability.

North Burnett Regional Council recognises the importance that agriculture and tourism plays in the local economy. Council's annual expenditure on biosecurity exceeds $0.5 million and is funded through general rates and charges. Council acknowledges that the management of invasive species is constrained in terms of resources; both human and financial. Accordingly, a risk-based approach to prevent and eradicate new incursions of invasive species is necessary.

The comprehensive risk assessment process undertaken as part of the development of this Biosecurity Plan will ensure that North Burnett resources are allocated towards the highest priority issues and are targeted to management activities that are most likely to give the greatest return on investment.

2. Policy Framework

2.1 Plans and Strategies influencing the North Burnett Region Biosecurity Plan

The management of invasive plants and animals is undertaken by all levels of government in Australia and is supported by a range of legislation and strategies. Local governments and their communities continue to be best placed to control invasive plants and animals locally. Together they can develop practical and appropriate local solutions to deal with the risks posed by invasive species.

The development of the North Burnett Biosecurity Plan is undertaken in parallel with the Wide Bay Burnett Regional Biosecurity Strategy 2017-2022 which has been endorsed by the Wide Bay Burnett Regional Organisation of Councils.

The Wide Bay Burnett Regional Biosecurity Strategy 2017-2022 will facilitate a coordinated approach to the management of invasive plants and animals across the Wide Bay Burnett by:

- Guiding the risk assessment of invasive plants and animals by individual stakeholders; based on extent, potential threats, desired outcomes and achievability; and
- Identifying agreed desired outcomes, management goals and performance indicators; and
- Increasing the effectiveness of existing programs through coordination of activities and sharing of data and resources.

The development of the Biosecurity Plan is recognised in Theme 5 (Our Efficient and Effective Council) of the North Burnett Corporate Plan 2017-2022 and correspondingly in its Operational Plan.

Figure 1 illustrates the North Burnett Region Biosecurity Plan and its relationship with other plans and strategies that form the national biosecurity framework.

Figure 1 Key Plans and Strategies of Influence

2.2 Queensland Biosecurity Act 2014

The *Biosecurity Act 2014* is designed to deliver a single, cohesive legislative framework to streamline and modernise the way invasive species are managed. The *Biosecurity Act 2014*

- Embeds the principle of shared responsibility for biosecurity risks (including invasive animals) 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 invasive species management investment and response is appropriate to the risk;
- Shifts the focus of responsibility for control of invasive biosecurity matter from the land owner to any person using/traversing the land

The *Biosecurity Act 2014* requires local governments to have a biosecurity plan to address invasive biosecurity matter and provides the legal instrument it needs address invasive biosecurity matter. The term *'invasive biosecurity matter'* includes only invasive plants and animals listed as prohibited and restricted matter in schedules 1 and 2 of the *Act*. The North Burnett Region Biosecurity Plan supports the implementation of the Council's primary legislative function to ensure invasive plants and animals are managed in the local area.

In keeping with the premise that biosecurity is a shared responsibility, the *Act* introduces the legally enforceable concept of a general biosecurity obligation (GBO).

2.3 Supporting Legislation and Policies

A range of other relevant state and national legislation will also influence how this plan is implemented. Key legislation relevant to invasive species management that will continue to operate in tandem with the *Biosecurity Act 2014* are outlined in Table 1. Table 2 includes complementary strategies and polices operating at a range of levels.

Table 1: Supporting Legislation

Level	Description
National	***Environmental Protection and Biodiversity Conservation Act 1999*** - Lists key threatening processes for nominated introduced and/or invasive species - Section 301A provides for the making of Regulations for the control of non-native species
State	***Local Government Act 2009*** - Provides for the way in which a local government is constituted and the nature and extent of its responsibilities and powers and a system of local government in Queensland that is accountable, effective, efficient and sustainable. ***Nature Conservation Act 1992*** - Provides for protection of dingoes in conservation areas - Prohibits the taking of scheduled species (plants and animals) - Regulates impacts on protected areas. ***Water Act 2000*** - Deals with requirements for the protection of riverine environments ***Environmental Protection Act 1994*** - Establishes the concept of general environmental duty, and prohibits environmental harm ***Transport Infrastructure Act 1994*** **and section 93-95 of the** ***Land Act 1994*** - Establish that road reserves are State land that are either controlled by the State Department of Transport and Main Roads, or by the relevant Local Government under the *Local Government Act 2009*. ***Plant Protection Act 2002*** **and** ***Regulation 2002*** - Defines controlled pests and how they are dealt with ***Animal Care and Protection Act 2001*** - Includes providing seized pest animal with appropriate food, shelter and water); ***Health (Drug and Poisons) Regulations 1996*** **(under review)** - Deals with use of poisons (such as Toxin 1080) for feral animal control

Table 2: Supporting Strategies and Policies

Level	Description
Federal	***Australian Weeds Strategy (2017-2027)*** **and** ***Australian Pest Animal Strategy (2017-2027)*** - Identifies national priorities for invasive plant and animal management ***Weeds of National Significance (WONS) strategies*** - Develops strategic plans for range of species identified because of their invasiveness, impacts on primary production and the environment, potential for spread and socioeconomic impacts ***Australia's Biodiversity Conservation Strategy 2010-2030*** - Recognises that invasive species continue to be a major cause of biodiversity pressure which is increasing with climate change ***Recovery Plans Threat Abatement Plans*** **and** ***Wildlife Conservation Plans for Matters of National Environmental Significance***
State	***Queensland Biosecurity Strategy 2017-2021(draft)*** - Establishes a framework to protect Queensland's ecosystems, industries and way of life, maintain Queensland's national and international reputation for product safety and integrity and ensure ongoing market access for commodities through effective management of pests and diseases. ***The Queensland Weed and Pest Animal Strategy 2016–2020*** - Establishes a state-wide planning framework that addresses the environmental, economic and community impacts of Queensland's current and potential weeds and pest animals. - The development and implementation of this strategy is based on the management principles of integration, public awareness, commitment, consultation and partnership, planning, prevention and early intervention, best practice and improvement (research, monitoring and evaluation) ***Queensland Wild Dog Management Strategy 2011-2016*** ***Feral Deer Management Strategy 2013-2018***
Regional	**Burnett Mary Regional Plan 2011** **Wide Bay-Burnett Regional Plan** **Wide Bay Burnett Regional Biosecurity Strategy 2017-2022**
Local	**North Burnett Regional Council Corporate Plan 2017-2022** **North Burnett Regional Council Operational Plan**

2.4 Commencement and Review of the North Burnett Region Biosecurity Plan

This plan will commence from the time that the Plan is adopted by Council and will be in force for a period of 5 years. The review of the North Burnett Region Biosecurity Plan will ensure that Council is best able to respond to the changing nature of biosecurity risks in the region. Specific details of the review process including measuring performance and evaluation result is further described in Section 6 of this plan

3. Invasive Species Management in the North Burnett

3.1 Regional Profile

The North Burnett Regional Council is located in Queensland, approximately 4 hours north of Brisbane and one hour west of Bundaberg. The region encompasses 6 main townships – Biggenden, Gayndah, Mundubberra, Monto, Mt Perry and Eidsvold, which service around twenty-five villages and farming communities.

The climate is sub-tropical and sub-humid with rainfall tending to be more concentrated in the months from October- March. Frosts occur throughout the region, mainly from June-August. Average temperatures range from 5°C to 32°C, however temperatures as high as 43^0C are experienced in the region.

The North Burnett Regional Council covers an area of almost 20 000 square kilometers and has a population of approximately 10,300 (2015). Figure 2 illustrates the geographic location of the North Burnett Regional Council.

Figure 2 North Burnett Regional Council area

Agriculture and forestry and are the largest industry in terms of business numbers in the North Burnett, accounting for nearly 63% of the total number of businesses in 2015. Grazing was the single largest agricultural commodity in 2015, followed by mandarins and milk products.

The North Burnett Region has an abundance of natural resources that include water, rural farmland, mineral deposits, forests, geographical landscapes and National Parks. Points of significant environmental include Auburn, Boyne, Burnett and Nogo Rivers: Cania, Paradise and Wuruma Dam; and Auburn River, Coalstoun Lakes, Kroombit and Mt Walsh National Parks.

3.2 Impacts and Risks

New and recent incursions in Queensland

New introductions and outbreaks of pest species continue to occur throughout Queensland. These are usually via pathways such as the illegal pet trade or via 'hitchhiking' on equipment, cargo, fodder, cattle or other transport. Occasionally new incursions occur when species are deliberately introduced by land managers (for a real or perceived value) but later develop into problems for other land managers, the environment or the community, for example lantana, hymenachne and prickly acacia. In 2013 the Weed Spotters Network Queensland provided 92 notifications for weed species that were found for the first time or had expanded their range. Between 2011 and 2014, there were more than 20 new pest animal incursions in Queensland. These included ferrets, boa constrictors, American corn snakes, a saw-scaled viper and a Chinese stripe-necked turtle. These species have been removed and are not believed to be present now.

Invasive Species in the North Burnett

Weeds and pest animals are a significant threat to the natural, economic and social values in the North Burnett region. With approximately 70% of the region supporting agriculture; weeds and pest animals are a particular economic and productivity management concern.

A study on Natural Resource Management on Australian Farms undertaken by the Australian Bureau of Statistics reported that 80% of agricultural businesses in the Burnett Mary catchment reported undertaking natural resource management activities to prevent or manage weeds.

In the same study, 73% of agricultural businesses in the Burnett Mary catchment reported they had pest problems (including feral animals). Decreased livestock production was a commonly reported problem (55%). Other common problems were decreased value of production and decreased value of holdings.

Infestations of broad scale pasture pests (present in the North Burnett region) such as Parthenium Weed (*Parthenium hysterophorus*) and Giant Rats Tail Grass (*Sporobolus* spp.) can have significant impacts on agricultural production and environmental values. Parthenium weed is also associated with human health issues. Many weed species such as Fireweed (*Senecio madagascariensis*) and Mother of Millions (*Bryophyllum delagoense; Bryophyllum tubiflorum)* have been documented to cause illness to livestock.

Pest animals, including wild dogs/dingoes (*Canis* spp.) and foxes (*Vulpes vulpes*) may predate livestock. Feral pigs (*Sus scrofa*) and rabbits (*Oryctolagus cuniculus*) can degrade agricultural land, resulting in high production losses and environmental damage. Feral deer (*Rusa, Cervis, Axis* spp.) also pose a serious threat to the agricultural productivity of the region, as well as causing traffic hazards, destroying property infrastructure, degrading natural habitat and potential spreading exotic diseases such as foot and mouth.

Table 3 demonstrates how invasive plants and animals can have a range of significant impacts on our valued environments, lifestyles and livelihoods in the North Burnett region.

Table 3: Impacts of invasive plants and animals on key environments (adapted from Sunshine Coast Council Local Government Area Biosecurity Plan 2017)

What are these?	Terrestrial biodiversity and conservation environments	Agriculture and production areas	Community and residential areas
Invasive plant impacts	- Smother and transform ecosystems - Outcompetes native species - Reduce the ecological values of natural areas	- Reduce productivity by outcompeting desirable pasture species - Increase costs of production - Contribute to loss of production/income	- Reduce access to, amenity and scenic values of natural areas - Cause health issues - Reduce function and values of community open space areas
Invasive animal impacts	- Displace and prey on native species - Degrade natural bushlands and ecosystems	- Outcompete livestock - Contribute to loss of production - Prey on and threaten livestock - Carry diseases and parasites that can impact on livestock	- Destroy infrastructure - Cause traffic hazards - Prey on native and domestic animal species

3.3 Risk Based Decision Making

Risk-based decision-making for invasive species focuses on managing the agreed outcomes, while keeping the number of prescribed requirements to a minimum. This has the benefit of allowing flexibility in the application of the legislation and will support proportionate and rapid responses when required.

A risk-based approach to the management of invasive plants and animals is being introduced by the North Burnett Regional Council to ensure that the most effective and necessary steps are taken to manage an invasive species. This requires a reasonable and practical response which is matched to the degree of risk posed by the invasive species. What is considered reasonable and practical will depend on the seriousness of the risk, what the consequences could be and how likely they are to occur.

Historically, pest management has focused on dealing with a narrow range of plant and animal pests affecting primary production industries. Freedom from invasive species remains a vital requirement to ensure market access for our agricultural industries. However, a more diverse range of biosecurity risks associated with weeds and pest animals are now acknowledged as having potential to negatively impact on a wider range of industries, biodiversity, the environment, broad economic interests and social amenity. Risks from invasive plants and animals are invariably unpredictable and often rapidly changing. The likelihood and severity of these risks will continue to be affected by many factors including:

- The growth and movement of human and livestock populations;
- Expansion in the trade of animals and animal products;
- Increased volume and range of plants/plant products species traded;
- Increased geographic distribution of plant species production;
- Changes in vector and reservoir ecology;
- Increased changes in ecosystems; and
- Rapid urbanisation and land-use changes.

3.4 Levels of Service and Resources

North Burnett Regional Council is committed to providing NRM services to the community through advisory, surveillance and auditing services. These services in addition to invasive species management, also include flying fox management, animal control including livestock, stock routes and vector pest management. Resources to deliver services to the community are nominated in Appendix C.

In an endeavor to assist the community, Council will provide the following services:

- Information and advice to the community
- Release of biocontrol including calicivirus
- 1080 baiting programs
- Hire of pig and dog traps
- One (1) spray unit available for hire in each town

3.5 Land Managers Assistance Program

North Burnett Regional Council will work in collaboration with interested land managers to implement the Land Managers Assistance Program. Land managers participating in the assistance program may be able to access the following additional support:

- Free use of Weed and Pest Animal Equipment for a period of one (1) week in any financial year (subject to availability)
- Subsidised herbicide (up to the nominated NRM Levy and within budget limitations)
- Access to free biocontrol agents (depending on availability)
- Advice and extension support by Council Land Protection Officers, specialised contractors and other biosecurity professionals
- Free access to specialised Invasive Species Training Days and other extension events

Land manager access to the Assistance Program will require liaison with the North Burnett Regional Council and development of an agreed Invasive Species Management Module. The module will describe the key invasive species present and the appropriate management approach consistent with the North Burnett Regional Council Biosecurity Plan. This may be included as a module in existing property scaled Biosecurity Plans.

Council Land Protection Officers can assist land managers in the development of this module based on a risk management approach.

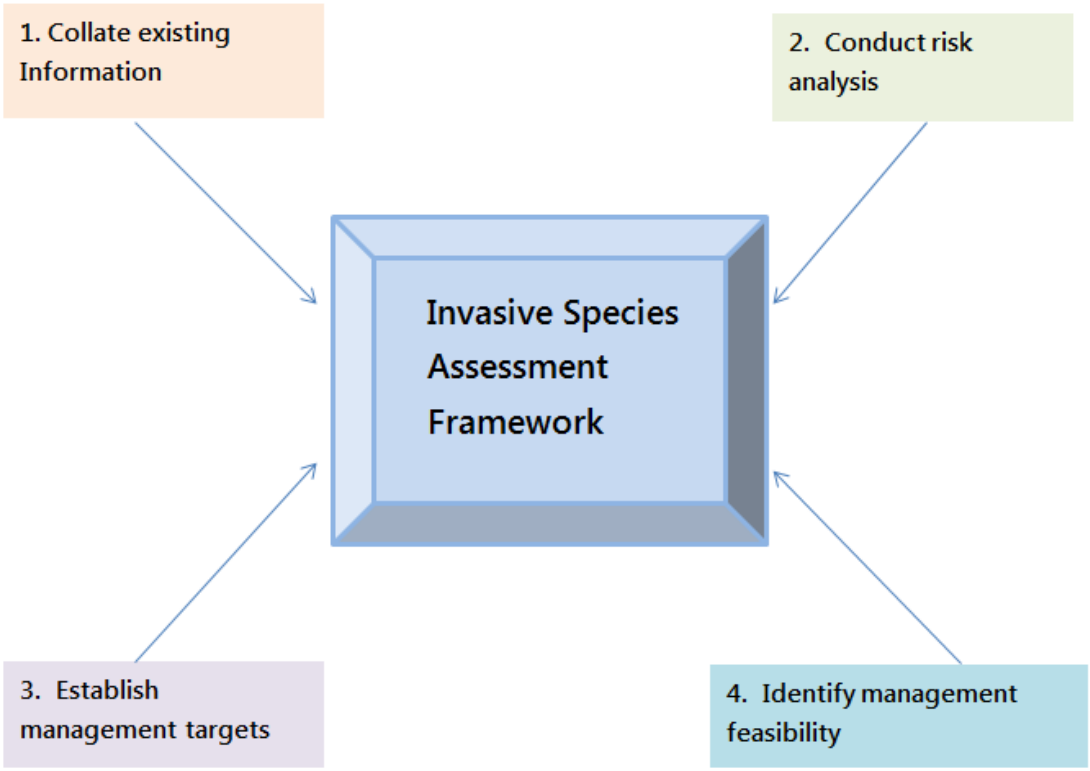
4. Assessment and Ranking of Invasive Species in the North Burnett

4.1 Wide Bay Burnett Invasive Species Assessment Framework

The Wide Bay Burnett Regional Biosecurity Strategy includes an Invasive Species Assessment Framework to assist stakeholders consider risk and determine realistic management targets for invasive species within their individual areas.

All Councils within the WBBROC footprint will develop individual Biosecurity Plans but will utilise a standard approach to analyse risk and determine management outcomes for their area.
The use of the Invasive Species Assessment Framework involves a number of defined steps which are outlined in Figure 3.

Figure 3 Wide Bay Burnett Invasive Species Assessment Framework



As assessment of the risk potential and management options for invasive biosecurity matter was undertaken for the North Burnett region. This process incorporated the identification of management goals and risk scores for individual invasive species. The assessment highlights those invasive species currently absent from the region that could have high impacts on the local environment, agriculture, economy and community. It further identifies those species in the process of establishing and well-established species which would be feasible to manage.

Risk scores were generated for each species based on their invasiveness, current and potential impacts current distribution in the region as suggested in Figure 3. The summarized results resulting from the assessment process can be seen in Appendix B with further background information available in Appendix A.

4.2 Stakeholder Analysis and Consultation

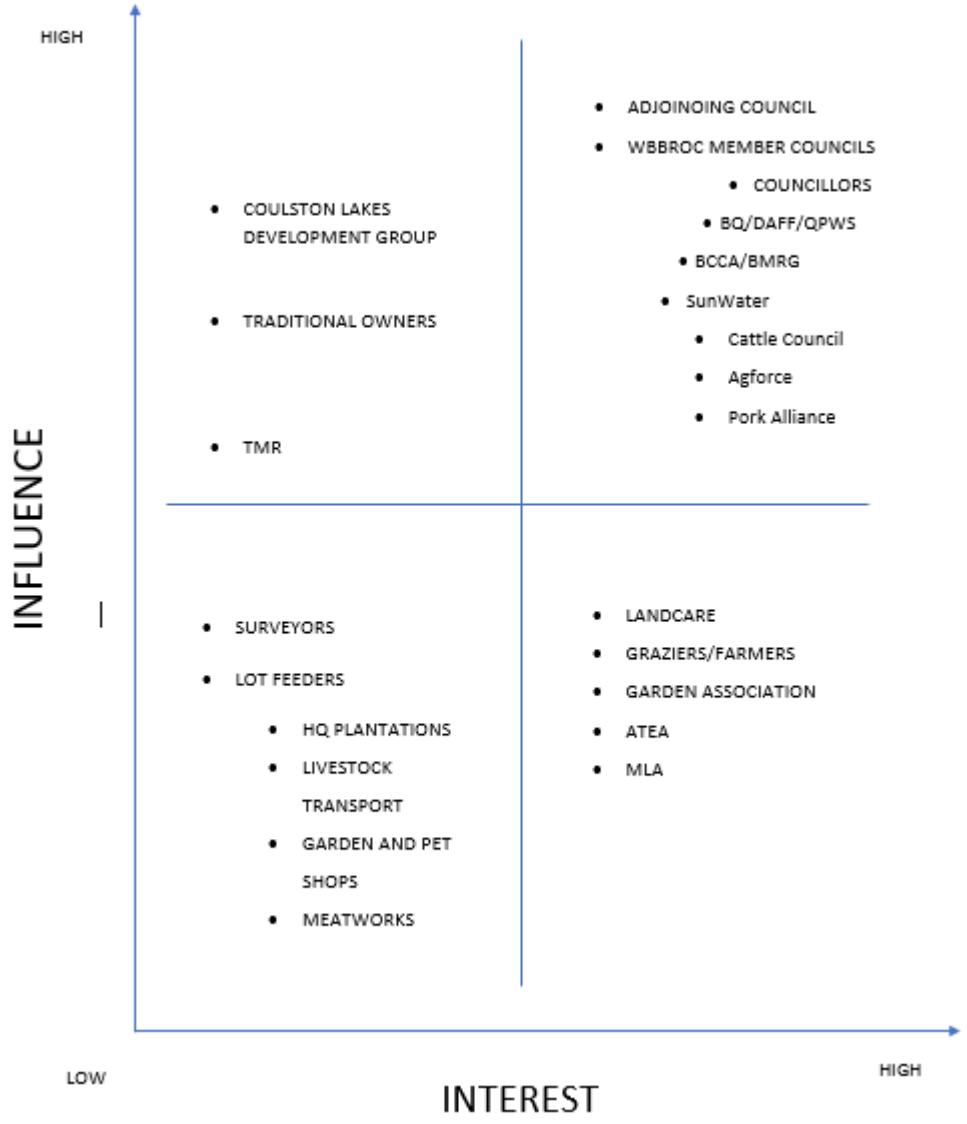
The ownership and implementation of the Biosecurity Plan by the community is key to the success of invasive species management programs in the North Burnett region.

The North Burnett Region Biosecurity Plan provides strategies to build community awareness and capacity to manage invasive biosecurity matter (plants and animals) in the Region. It recognises that the management of invasive plants and animals is most effective if all stakeholders share responsibility and support coordinated effort.

The sectors involved in invasive plant and animal management in the North Burnett include individual landholders, community groups such as Landcare, rural industry and farmer groups, government and non-government organisations, utility managers, environmental businesses and conservation interests.

The information needs of stakeholders in the North Burnett region was identified based on their relative interest and involvement in invasive species management in the region. A communication and consultation program for invasive species management was developed based on the stakeholder analysis included in Figure 4.

Figure 4 North Burnett Region Stakeholder Analysis



High interest high influence – fully engage in planning process

High influence less interest – maintain information flow

Less influence high interest – keep informed of outcomes

Less influence less interest – monitor involvement

5. Implementation

5.1 Guiding Principles

The eight (8) key principles included below are modified from the Australian Weeds Strategy 2017-2027, the Australian Pest Animal Strategy 2017-2027 and the Queensland Weed and Pest Animal Strategy 2016-2022. They have been endorsed by WBBROC as part of the Wide Bay Burnett Regional Biosecurity Strategy 2017-2022 and will guide the management goals and strategic actions of the North Burnett Region Biosecurity Plan.

1. Risk-based prevention and early intervention is generally the most cost-effective approach for managing invasive plants and animals. **Prevention and early detection**
2. Effective invasive plant and animal management is a responsibility shared between all stakeholders including landholders, community, industry and all levels of government. **Commitment**
3. Regular monitoring and evaluation of control activities and research about invasive species is needed to make evidence-based decisions and improve management practices. **Improvement (research, monitoring and evaluation)**
4. Prioritisation of invasive plant and animal management must be informed by a risk-based approach that considers feasibility, likelihood of success, impact and regional significance. **Planning**
5. Invasive species management is an integral part of managing natural resources and agricultural systems. **Integration**
6. Coordination amongst landholders, community, industry and government across a range of scales and tenures is necessary to successfully manage invasive plants and animals. **Consultation and partnership**
7. Sustaining capability and capacity across landholders, community, industry and government is fundamental to effective long-term management of invasive plants and animals. **Public awareness**
8. Invasive species management must be based on ecologically and socially responsible practices that protect the environment and the productive capacity of natural resources while minimising impacts on the community. It should balance feasibility, cost-effectiveness, sustainability, humaneness, community perceptions, emergency needs and public safety. **Best practice**

5.2 Delivery Partners

The North Burnett Region Biosecurity Plan provides strategies to build community awareness and capacity to manage invasive plants and animals in the region. It recognises that the management of invasive plants and animals is most effective when all stakeholders recognise their role in the management of invasive plants and animal, share responsibility and support coordinated effort. This plan aims to consolidate these efforts through improved coordination and communication between organisations and individuals in the region.

The community sectors involved in invasive plant and animal management include individual landholders, community groups such as Landcare, rural industry and farmer groups, non-government organisations, environmental businesses, and conservation interests. The broad roles and responsibilities of the key delivery partners are identified in Table 4.

North Burnett Region residents
- Urban
- Rural/Peri Urban

Natural Resource Management groups
- BMRG
- Burnett Catchment Care Association
- Landcare Groups

Business/Industry/Operators
- Graziers
- Farmers
- Lot Feeders
- Livestock Transport
- Garden Produce and Pet Businesses
- Stock and station agents
- Isis Sugar Mill
- Pork producers
- Dairy producers
- Real Estate Agents
- Media

Traditional Owners
- Wakka Wakka
- Djaku-nde and Jangerie Jangerie
- Goereng Goereng
- Kabbi Kabbi
- Gurang
- Taribelang Bunda
- Wulli Wulli

North Burnett Regional Council
- Roads and Maintenance
- Parks and Gardens
- Land Protection
- Environmental Health
- Asset Management
- Waste Management

Industry/Reference Groups
- Agforce
- Queensland Farmers Federation
- Pork Alliance
- Nursery and Garden Industry of Qld
- Private Forest Service Qld
- ALRTA
- Auburn Tick Eradication Association
- Coulstoun Lakes Development Group
- Citrus Australia

State Government
- Biosecurity Queensland
- HQ Plantations
- DNRM
- TMR
- QR
- QPWS
- Educational institutions
- SunWater

Neighbouring Councils
- Western Downs Regional Council
- Bundaberg Regional Council
- South Burnett Regional Council
- Banana Shire Council
- Gladstone Regional Council
- Gympie Regional Council
- Fraser Coast Regional Council

Utility Managers
- Ergon
- Powerlink
- Telstra

Recreational
- Fish stocking clubs/Boating groups
- Horse sporting clubs

Table 4 Delivery Partner Responsibilities

Local Government	
Local government has a major responsibility for invasive species management through the enforcement of the *Biosecurity Act 2014* and has an important role to play in engaging local communities, managing public lands and assisting with emergency management.	
North Burnett Regional Council	Invasive species management in the local government area including: – monitoring and surveillance, – landholder education and awareness, – management of invasive species on Council lands, roads and reserves – collection of data relating to invasive plants and animals compliance activities – development and implementation of internal policies and procedures across each of Council's business units to prevent or reduce weed seed spread
Wide Bay Burnett Invasive Species Advisory Committee	To coordinate the regional approach to the management of invasive plants and animals in the Wide Bay Burnett
State Government	
The Queensland State Government leads the development of policies, strategies and legislation that promote a comprehensive and responsive biosecurity system across Queensland. The Department of Agriculture and Fisheries (DAF) is the lead agency for invasive species management within the QLD Government.	
Biosecurity Queensland	State/Regional planning, governance and training, mapping and research, compliance, surveillance, early detection, destruction of infestations on a priority basis, raising awareness, support local government planning, 1080 supply and administration.
HQ Plantations	Maintain HQ Plantations Land in accordance with *Biosecurity Act 2014* and prevent spread of invasive plants and animals within the specified lands or into neighbouring properties. Coordination with adjacent landholders, Councils and other State government agencies in regional pest management.
Department of Natural Resources and Mines	Maintain unallocated State Lands in accordance with *Biosecurity Act 2014* and prevent spread of invasive plants and animals within the specified lands or into neighbouring properties. Coordination with adjacent landholders, Councils and other State government agencies in regional pest management.
Queensland Parks and Wildlife Service	Managing invasive plants and animals in parks, forests and other areas gazetted under the *Nature Conservation Act 1992* and *Forestry Act 1959* in accordance with *Biosecurity Act 2014*. Coordination with adjacent landholders, Councils and other State government agencies in regional pest management.

Department of Transport and Main Roads	Maintain road reserves in accordance with *Biosecurity Act 2014* and prevent spread of invasive plants and animals within the road network or into neighbouring properties. Coordination with adjacent landholders, Councils and other State government agencies in regional pest management.
Sunwater	Maintain relevant lands in accordance with Biosecurity Act 2014 and prevent spread of invasive plants and animals to neighbouring properties. Coordinate and collaborate with adjacent landholders, Councils and other State government agencies in regional pest management.
Queensland Rail	Maintain rail corridors in accordance with *Biosecurity Act 2014* and prevent spread of invasive plants and animals within the rail network or into neighbouring properties. Coordination with adjacent landholders, Councils and other State government agencies in regional pest management.

Federal 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.

Department of Agriculture and Water Resources	Manage, coordinate and prepare for response actions to national priority pests, diseases and weeds, including research

Industry Bodies

Industry bodies in the region promote and facilitate invasive species management on agreed local/regional priorities and identify and fund research priorities to enable continued improvement in the management of weeds and pest animals.

ALRTA (Transport Industry)	The Australian Livestock and Rural Transporters' Association (ALRTA) represents transport companies throughout Australia. ALRTA works with governments at all levels, industry groups, community organisations, and regulators to ensure that rural trucking is sustainable, responsible and safe.
Agforce	Landholder support including training for invasive species management. Participation in communication of initiatives to members and encourage member participation in invasive species management.
NGIQ (Nursery and Garden Industry Queensland)	Landholder support including training for invasive species management. Participation in communication of initiatives to members and encourage member participation in invasive species management.

Community groups, volunteers and individuals

Community groups and volunteers play an important role in the management of invasive species in the region by enlisting support and providing on-ground control. Building on this foundation is essential in sharing responsibility for invasive species management.

Burnett Mary Regional Group (BMRG)	Natural resource and environmental management in the Burnett and Mary catchments through - Collaboration with the Queensland Government, Landcare groups, agricultural groups, regional councils and landholders to oversee natural resource and environmental management in the Wide Bay Burnett region - Promoting invasive species management across the Burnett and Mary catchments with adequate and appropriate planning and coordinated delivery - Playing a lead role in information and data sharing - Harnessing a regional approach to invasive species management across the Burnett and Mary catchments that promotes adequate planning and coordinated delivery
Burnett Catchment Care Association	Work with the community, business and government to secure funding to manage invasive plants and animals in the Burnett Catchment; including community advice, training, support, services and workshops
District Landcare groups	Work with the community, business and government to secure funding to manage invasive plants and animals, provide advice, training, support, services and workshops to community
Specific Interest Groups	Champion specific topics of interest and lobby government to change legislation or implementation of biosecurity processes (e.g. Auburn Tick Eradication Association, Coulstoun Lakes Development Group).
Primary Producers, Rural and peri-urban Residents, Urban residents	All landholders to take an active role in managing biosecurity risks under their control. Includes early detection, destruction of infestations and pest control in environmentally significant areas
Traditional Owners	Provide information on traditional land management and advice on key projects that involve biosecurity matters. Provide approval to conduct biosecurity activities on traditional land.

5.3 Invasive Species Delivery Program

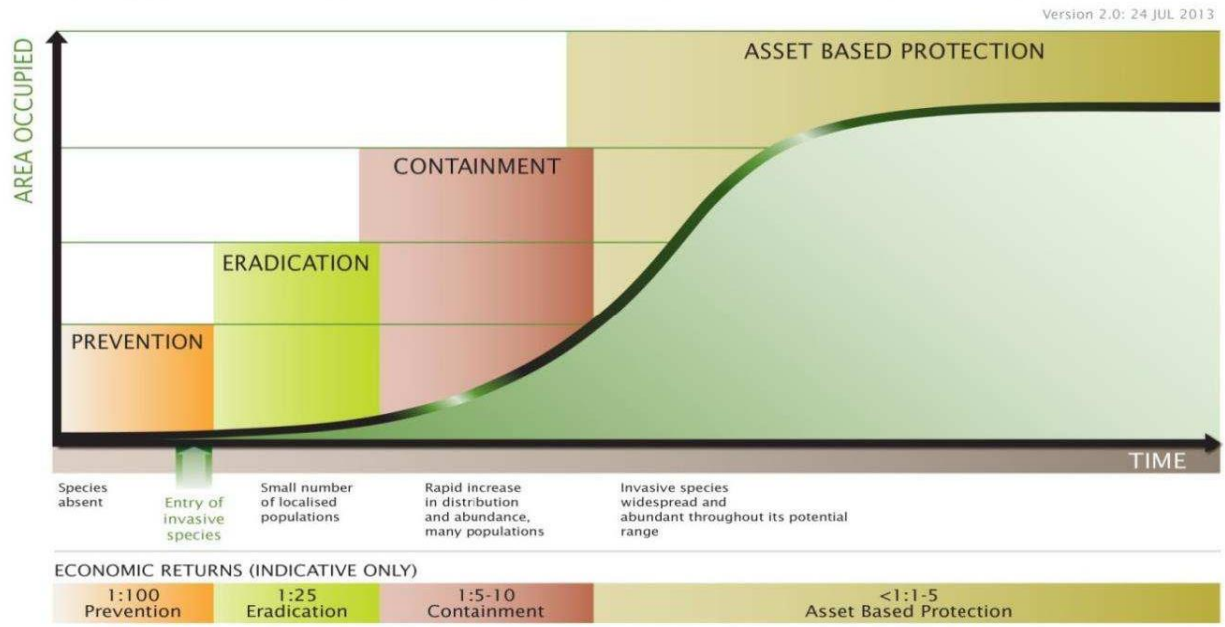
The most effective approach to the management of invasive plant and animal species in a region is to prevent their initial entry. Invasive species possess the ability to rapidly establish and dominate the landscape. Thorough surveillance and detection strategies are critical to deliver a timely and rapid response to new incursions. Preventing, eradicating and containing invasive plant and animals *before* they become widely established and more resilient to interference makes economic sense.

All invasive species are most vulnerable to extinction when their populations are small. An AEC study undertaken in 2002 titled *"Economic impact of state and local government expenditure on weed and pest animal management in Queensland"* indicated that it is economically desirable to invest in the prevention of invasive species. The Benefit Cost Ratio (BCR) indicated a significant return on investment as every dollar invested in prevention (i.e. exclusion, early detection and eradication) programs yielded between $26 and $38 worth of benefit.

The same study estimated that investment in pest management generally (all forms of pest management) generates a return on investment of around 6:1. This dramatically exceeds many other forms of government investment, including building new dams (0.23 - 1.1:1) and roads (0.65 - 1.9:1).

The Generalised Invasion Curve in Figure 5 highlights the most appropriate approach to the management of invasive species, based on the area occupied as well as the indicative economic returns for each management option. The approach needed to prevent the entry of or eradicate an invasive species is very different to that of containment or asset protection.

Figure 5 Generalised Invasion Curve



The management goals included in the North Burnett Region Biosecurity Plan are aligned to the management stages of the Generalised Invasion Curve. Table 5 highlights the management goals, and challenges for success in the North Burnett region.

Table 5 Invasive Species Management Goals and Challenges

Management Goal 1 Phase: Prevention (see definition)	**Prevent the establishment of new invasive species in the North Burnett region.** The challenge is to identify high risk invasive species, assess potential invasiveness and implement effective barriers to prevent their entry.
Management Goal 2 Phase: Eradication (see definition)	**Eliminate new invasive species in the North Burnett region.** The challenge is to develop and deploy effective and efficient ways to eradicate an introduced invasive species before it becomes established.
Management Goal 3 Phase: Containment (see definition)	**Contain the spread of existing invasive species to known areas.** The challenge is to identify areas free of invasive species and develop and deploy approaches to contain the invasive species to a known area.
Management Goal 4 Phase: Asset Protection (see definition)	**Reduce the impacts of widespread invasive species in the North Burnett Region** The challenge is to manage or control these invasive species to reduce their impact where the benefits of control are the greatest.

5.4 Strategic Actions

Monitoring and tracking is critical to ensuring the effectiveness of the North Burnett Region Biosecurity Plan. The inclusion of key achievements, measures and strategic actions for each goal is essential to enable effective monitoring of the invasive species delivery program. The measures and strategic actions reflect the varying management approaches outlined in the Generalised Invasion Curve.

Table 6 Strategic Actions and Output Measures

Management Goal 1: Prevent the establishment of new invasive species in the North Burnett region.

How we will know when we have achieved this?

The introduction and establishment of *new* invasive species is prevented through the implementation of effective barriers.

How will we measure our achievement?

The number of *new* invasive species established that have a potential to impact on environmental, economic and social assets of our region.
Increasing participation and engagement by delivery partners in preventative initiatives.

Ref	Strategic Action	Output Measure	Responsibility (Lead agent)	Timeframe
1.1	Regional high-risk sites and pathways identified and documented	Identify high risk sites and pathways	BQ in partnership with NBRC	12 months from date of adoption of North Burnett Biosecurity Plan
		Undertake coordinated surveillance activities at high risk sites and pathways	BQ in partnership with NBRC and delivery partners	Ongoing
1.2	Appropriate education, incentives and enforcement programs in place	Distribute invasive species identification literature	NBRC in partnership with other delivery partners	Ongoing
		Distribute hygienic practice protocols	NBRC in partnership with other delivery partners	Ongoing
		Provide media coverage	NBRC	Ongoing
		Create and communicate available options for reporting of high-risk invasive species.	NBRC	12 months from date of adoption of North Burnett Biosecurity Plan.

1.3	Collaboration between stakeholders to prevent the establishment of new invasive species	Develop and submit joint management plans for new incursions	NBRC	Ongoing as required
		Develop and submit funding applications for new incursions	NBRC	Ongoing as required
1.4	Form a network of relevant government agencies, community and industry groups to identify potential invasive species incursions and pathways	Engage and work collaboratively with WBBROC members, Biosecurity Queensland, Sunwater and other key stakeholders	NBRC	12 months from date of adoption of North Burnett Biosecurity Plan
		Regular reporting of achievements back to the community	NBRC	Quarterly
1.5	Increase capacity of stakeholders to undertake detection of invasive species	Early detection content on NBRC website	NBRC	6 months from date of adoption of North Burnett Biosecurity Plan
		Set up network of informed community members to assist with early detection	NBRC	6 months from date of adoption of North Burnett Biosecurity Plan

Management Goal 2: Eliminate new invasive species in the North Burnett region.

How we will know when we have achieved this?

New invasive species are eradicated or prevented from establishing through the deployment of timely and efficient control responses.

How will we measure our achievement?

The number of invasive species that have been eradicated from the North Burnett Region.
The number of invasive species that have moved from an eradication phase to a containment or asset protection phase.
Increasing participation and engagement by delivery partners in invasive species eradication initiatives.

Ref	Strategic Action	Output Measure	Responsibility	Timeframe
2.1	Development of surveillance program targeted to eradication of high priority invasive species	Regional surveillance program documented and implemented	NBRC	Program developed within 3 months from date of adoption of North Burnett Biosecurity Plan. Implementation ongoing.
		Develop and update base mapping data sets.	NBRC in partnership with WBBISAC	Ongoing
2.2	Educational material available for identification of high priority invasive species	Distribute targeted invasive species information (print/electronic)	NBRC	6 months from date of adoption of North Burnett Biosecurity Plan. Ongoing as required.
		Council website to include section for new landowners.	NBRC	12 months from date of adoption of North Burnett Biosecurity Plan.

2.3	Increased capacity of stakeholders to recognise, detect and report species targeted for eradication	Participate in field days to promote high priority invasive species	NBRC in partnership with delivery partners	Ongoing
		Media releases promoting approaches to the eradication efforts of target species	NBRC	Ongoing
		Create and communicate incentive programs that encourage the reporting of high - priority invasive species.	NBRC	12 months from date of adoption of North Burnett Biosecurity Plan.
2.4	Prompt eradication of high - priority invasive species	Development and implementation of species management plans.	NBRC	Plan developed within 6 months from date of adoption of North Burnett Biosecurity Plan. Implementation ongoing.
		Undertake joint eradication programs for high - priority invasive species	NBRC in partnership with delivery partners	As required as per species management plan.
		Develop proactive partnerships with community and industry to strengthen surveillance and rapid response activities	NBRC	Ongoing

Management Goal 3: Contain the spread of existing invasive species to known areas.

How we will know when we have achieved this?

By 2023 existing invasive species are contained to known areas and prevented from becoming widespread throughout the North Burnett region.

How will we measure our achievement?

Decrease in the distribution and abundance of existing invasive species across the region.
The number of existing invasive species that have moved from a containment to an eradication phase.
The number of existing invasive species that have become widespread within the region.
Increasing participation and engagement by delivery partners in invasive species containment initiatives.

Ref	Strategic Action	Output Measure	Responsibility	Timeframe
3.1	Development of regional inspection program targeting containment zones, identified species and high-risk pathways	Document and implement regional surveillance program	NBRC	Plan developed within 6 months from date of adoption of North Burnett Biosecurity Plan. Implementation ongoing.
		Develop and update base mapping data sets.	NBRC in partnership with WBBISAC	Ongoing
3.2	Increase capacity of stakeholders to recognise, detect and report invasive species targeted for containment	Participation in field days to promote containment of target species	NBRC	Ongoing
		Media releases promoting approaches to the containment efforts of target species	NBRC	Ongoing
3.3	Development of wash down facilities to reduce the spread of invasive species from containment zones	Wash down facilities established in strategic locations.	NBRC	As per NBRC Capital Expenditure Program
		Maintain and promote the use of established vehicle washdown facilities	NBRC	Ongoing

3.4	Strategic control of invasive species by all stakeholders to prevent spread to clean areas	Ongoing mapping program to show containment zones; including distribution and abundance	NBRC	Ongoing
		Develop collaborative projects with delivery partners to contain invasive species to defined areas	NBRC	Ongoing
3.5	Inclusion of General Biosecurity Obligation objectives in relevant Council operations	Procurement of vegetation management fleet and contractors (e.g. dome top slashers) specifying equipment to minimise weed seed spread.	NBRC	12 months from date of adoption of North Burnett Biosecurity Plan.
		Contracts for civil works projects include provisions for invasive species identification and management	NBRC	12 months from date of adoption of North Burnett Biosecurity Plan.
		Inclusion of general biosecurity obligation contained in staff induction and training	NBRC	6 months from date of adoption of North Burnett Biosecurity Plan.
		Inclusion of general biosecurity obligation contained in staff induction and training	NBRC	6 months from date of adoption of North Burnett Biosecurity Plan.

Management Goal 4: Reduce the impacts of widespread invasive species in the North Burnett Region

How we will know when we have achieved this?

By 2023 the management and control of widespread invasive species across the region is targeted to where the benefits of investment will be greatest.

How will we measure our achievement?

The number of management programs that have been successfully implemented against widespread invasive species at priority sites.
The level of participation from delivery partners in the management of widespread invasive species.

Ref	Strategic Action	Output Measure	Responsibility	Timeframe
4.1	Management of invasive species targeted to provided greatest return in investment	Identify and prioritise assets for protection from invasive species	NBRC in partnership with delivery partners	6 months from date of adoption of North Burnett Biosecurity Plan.
4.2	New and existing programs for reducing the impacts of widespread invasive species at priority sites in place.	Develop management programs targeting greatest impact at priority sites.	NBRC	Programs developed within 12 months from date of adoption of North Burnett Biosecurity Plan. Implementation ongoing.
		Targeted property surveillance undertaken as per management programs	NBRC	Ongoing.
		Ongoing provision of 1080 impregnation services.	NBRC	Ongoing
4.3	Land mangers use best management practices to reduce the impacts of widespread invasive species	Develop proactive partnerships with community and industry to promote best practice approaches.	NBRC in partnership with delivery partners.	Ongoing as required
		Develop extension and education program encouraging the benefits of proactive management of invasive species.	NBRC	Programs developed within 12 months from date of adoption of North Burnett Biosecurity Plan. Implementation ongoing.
		Implement targeted management program to reduce spread on high risk pathways.	NBRC	Ongoing as per regional inspection program.
		Maintain and promote the use of established vehicle washdown facilities.	NBRC	Ongoing.

6. Monitoring, Reporting, and Evaluation

6.1 Measuring success and continuous improvement

Monitoring involves the collection and analysis of information to assist timely decision making, ensure accountability and provide the basis for evaluation and learning. It is an on-going process of methodical collection of data to provide indications of progress and achievement of objectives.

As lead agent in the implementation of the Biosecurity Plan, North Burnett Regional Council has a responsibility to demonstrate to its customers, stakeholders and the community that the Biosecurity Plan is sound and effective. Monitoring, evaluation and reporting on performance will underpin the plan and associated programs and systems.

6.2 Reporting on the progress of strategic actions

North Burnett Regional Council will report on the progress of the strategic actions highlighted in each of the management goals in the following ways:

- Monthly report to Council outlining strategic actions, current activities and progress against output measures
- Quarterly newsletter to stakeholders outlining new incursions, new incursions and progress against output measures
- Promotion of new incursions and results of targeted surveillance program through media channel and Council website
- New incursions reported to Council, Biosecurity Queensland and the WBB Invasive Species Advisory Committee as required
- Sharing of mapping data with key stakeholders, including the WBB Invasive Species Advisory Committee
- Compilation of invasive species (animals) data for Burnett Pork Alliance, Coalstoun Lakes Development Group and QPWS
- Bi-annual meeting with key stakeholders such as Biosecurity Queensland, WBBISAC, WBBROC (adjoining local governments), SunWater, QPWS, BCCA and BMRG

6.3 Review Process

The North Burnett Biosecurity Plan will remain current until 2024. The *Biosecurity Act 2014* does not provide a mandatory requirement to review a Local Government Area Biosecurity Plan. Despite this, the North Burnett Regional Council will review the Plan:

- Three months before the start of each financial year (review the strategic program delivery and species management plan or
- When a state pest management strategy is amended and,
- Prior to a local government election

The review process will be undertaken in collaboration with key delivery partners and consider:

- Assessment of performance measures to review progress towards the achievement of management goals.
- Output target completion combined with critical outcome analysis
- Delivery partner reports
- Spatial and attribute data analysis against known baseline information.

Council may amend, replace or approve minor revisions of the Biosecurity Plan at any time, if required in accordance with relevant requirements of the *Biosecurity Act 2014* and subject to formal Council endorsement.

7. Abbreviations

Commonly used acronyms used throughout this plan include:

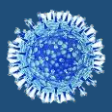
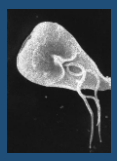
ALGAG	African Love Grass Advisory Group
ALRTA	The Australian Livestock and Rural Transporters' Association
BCCA	Burnett Catchment Care Association
BMP	Best Management Practice
BMRG	Burnett Mary Regional Group
BQ	Biosecurity Queensland
DAF	Department of Agriculture and Forestry
ESA	Environmentally Significant Area
GBO	General Biosecurity Obligation
LPO	Land Protection Officer
LRTAQ	Livestock and Rural Transports Association of Qld
NBRC	North Burnett Regional Council
NRM	Natural Resource Management
NRM&E	Natural Resource Mines and Energy
QPWS	Queensland Parks and Wildlife Service
QR	Queensland Rail
TMR	Transport and Main Roads
WBBISAC	Wide Bay Burnett Invasive Species Advisory Committee
WBBROC	Wide Bay Burnett Regional Organisation of Councils
WONS	Weed of National Significance

8. Definitions

8.1 Invasive Biosecurity Matter

The *Biosecurity Act 2014* identifies invasive species as 'biosecurity matter" which is defined as:

a. a living thing, other than a human or part of a human: or
b. a pathogenic agent that can cause disease in-
    i. a living thing, other than a human: or
    ii. a human, by the transmission of the pathogenic agent from an animal to the human or
c. a disease; or
d. a contaminant.

The Act categorises invasive biosecurity matter as either 'prohibited' or 'restricted	 **AQUATIC DISEASES**, parasites and viruses	 **ANIMAL DISEASES**, parasites and viruses	 **INVASIVE PLANTS**
 **INVASIVE ANIMALS**	 **NOXIOUS FISH**	 **PLANT DISEASES**, parasites and insects	 **TRAMP ANTS**

From a legislative perspective, local government is only required to consider invasive biosecurity matter, which may be declared as prohibited or restricted or other, in the development of the Biosecurity Plan.

Invasive biosecurity matter is classified as

- Prohibited matter (not found in Queensland, but would have a significant adverse impact on our health, way of life, the economy or the environment if it entered the state), or
- Restricted matter (found in Queensland and has a significant impact on human health, social amenity, the economy or the environment. Specific actions must be taken to limit the spread and impact of this matter by reducing, controlling or containing it.

8.2 Categories of Restricted Matter

There are 6 categories of restricted matter relevant to local government.

Category	***Requirement***
1	Must be reported to a Biosecurity Queensland inspector within 24 hours
2	Must be reported to a local government or Biosecurity Queensland inspector within 24 hours
3	Must not be distributed (given as a gift, sold, traded or released into the environment) unless the distribution or disposal is authorised in a regulation or under a permit
4	Must not be moved to ensure that it does not spread into other areas of the state.
5	Must not be possessed or kept unless under a permit of the *Biosecurity Act 2014* or another Act.
6	Must not be fed
7	Must be killed

8.3 General Biosecurity Obligation

All Queenslanders have a '**general biosecurity obligation**' (GBO) under the *Biosecurity Act 2014*. This means that everyone is responsible for managing biosecurity risks that are under their control and that they know about or should reasonably be expected to know about.

A biosecurity risk is the risk that exists when you deal with any pest, disease or contaminant or something that could carry a pest, disease or contaminant (e.g. animals, plants, soil, equipment known as 'carriers'). You are not expected to know about all biosecurity risks, but *you are expected to know about those risks associated with your day-to-day work and your hobbies*.

This may include:

- If you are a livestock owner, you are expected to stay informed about invasive species that could affect or be carried by your animals, as well as weeds and pest animals that could be on your property. You are also expected to manage these invasive species appropriately.
- If you are a landowner (rural, urban, peri-urban), you are expected to stay informed about the weeds and pest animals (such as wild dogs) that could be on your property. You are also expected to manage these invasive species appropriately.
- If you are a commercial horticulture grower, you are expected to stay informed about the invasive species that could affect or be carried by your crops, as well as weeds and pest animals that could be on your property. You are also expected to manage these invasive species appropriately.
- If you transport agricultural produce, you are expected to check whether the transportation could spread weeds or pest animals and manage this appropriately.
- If you farm animals such as deer, goats or pigs commercially, you are expected to ensure that the animals are kept in an escape proof enclosure, cage or other structure. You are also expected to maintain the enclosures in a suitable condition.

8.4 Terms for Management of Invasive Species

Prevention	Actions that limit or minimise the risk of an invasive species entering an area
Eradication	Removal of the entire population of a species in a managed area including reproductive propagules; completely eliminating that species.
Containment	Action taken to prevent the spread of an invasive species beyond a predefined area.
Asset	Something with environmental, social or economic value, whether publicly or privately owned that an invasive species may direct or indirectly affect. Examples of assets may include: - high value agricultural lands, - environmentally significant areas, - public health or - social wellbeing of communities
Asset protection	An asset-based approach to managing an invasive species is appropriate once it has become so widespread that it would be inefficient to control the species everywhere it occurs or alternatively, the impacts or threats were not considered to be substantial. The asset-based approach involves managing the invasive species to achieve protection and restoration outcomes for specific highly valued assets.
High-risk invasive species	Species that are not present in the North Burnett Region however pose a serious threat and high likelihood of entry due to proximity, vectors\pathways of spread and their potential to adapt to the region.
High - priority invasive species	Invasive species present in the region and deemed high priority for control (See Appendix B)
Widespread invasive species	A weed or pest animal that is perpetuated, for the foreseeable future, within an area where it is not feasible (in terms of technical feasibility or a cost–benefit analysis) to eradicate the pest.
Priority sites	Specific sites identified as high value assets requiring protection from the impact of widespread invasive species
High-risk sites	Those locations which new invasive species are more likely to be detected/introduced e.g. cattle yards, feedlots, gravel pits, machinery depots and major water storage impoundments.
High risk pathways	Those locations by which invasive species can travel along through an array of different vectors which aid in the spread e.g. roads, watercourses and stock routes.
Risk management	The process of identifying risks and selecting and implementing measures to reduce levels of risk.

9. References

Further information can be found by contacting Council's Natural Resource Management Team on 1300 696 272 or via the following websites and documents:

https://www.northburnett.qld.gov.au/invasive-pests/

https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/invasive-plants

https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/pests/invasive-animals/restricted

Australian Weeds Strategy 2017-2027
http://www.environment.gov.au/biodiversity/invasive/weeds/publications/strategies/weed-strategy.html

Australian Pest Animal Strategy 2017-202 - http://www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/review-aus-pest-animal-weed-strategy/aus-pest-animal-strategy

Draft Queensland Weed and pest Strategy 2016-2022

Queensland Biosecurity Strategy 2017-2022 - https://publications.qld.gov.au/dataset/draft-queensland-biosecurity-strategy

Burnett Mary Regional Group Strategic Plan 2015-2020
http://www.bmrg.org.au/files/4814/6363/9543/Strategic_Plana.pdf

Wide Bay Burnett Regional Plan 2011 - https://www.dilgp.qld.gov.au/resources/plan/wide-bay/wbb-regional-plan.pdf

Weeds of National Significance (2016) - https://www.daf.qld.gov.au/plants/weeds-pest-animals-ants/weeds/wons

Developing local area biosecurity plans – a guide for local governments 2016

Wide Bay Burnett Regional Biosecurity Strategy 2017-2023 https://bit.ly/2EggCz3

Appendices

A. Wide Bay Burnett Invasive Species Assessment Framework

Councils within the Wide Bay Burnett region utilise a risk-based approach for determining management objectives and priorities for invasive species management to ensure that resources are targeted to provide the greatest return.

The utilisation of an agreed management system will enhance the consistency of individual Biosecurity Plans and identify opportunities for collaboration with key stakeholders throughout the region.

The Wide Bay Burnett Invasive Species Assessment Framework involves a number of defined steps highlighted in Figure 3. The use of a standardised description of components of each step is central to the assessment framework.

Collate existing information on the invasive species

- Gather information about a particular species such as existing priorities and current distribution to build a profile
- Generally, this information is made available by Councils to other stakeholders

Existing Priority	**Score**
Weed of National Significance (WONS)	5
National Eradication Program	5
State Management Program	5
Other	0
Current Status	**Score**
Prohibited Invasive Biosecurity Matter	5
Restricted Invasive Biosecurity Matter	4
Declared locally	4
Environmental	3
Not declared	1
Extent	**Score**
Isolated/historic	5
Localised (occasional)	4
Localised (common)	3
Widespread (occasional)	2
Widespread (common)	1

Conduct a risk analysis on the invasive species

- This involves working through a risk analysis process incorporating both potential and existing threats, while considering the negative impacts of the invasive species on Conservation/Biodiversity, Social, Agricultural and Economic (other than agriculture) values.
- The risk analysis process can be used for both plants and animals

Identify potential threats

Likelihood of widespread establishment	Score
Already established throughout the region	5
Characteristics well suited to the region, very likely to establish, present in neighbouring area, noted historic sites	4
Characteristics moderately suited to the region, numerous means of introduction	3
Limited suitability to the region; few, if any, means of introduction	2
Unsuited to the region; very little, if any, likelihood of establishment	1
Dispersal mechanisms	**Score**
Spread exceptionally easily by all listed vectors	5
Spread easily via 3 of the listed vectors	4
Spread moderately easily via 2 of the listed vectors	3
Spread by only 1 of the following vectors - human/machinery - domestic animal/wildlife - reproductive/vegetative - wind/water	2
Limited ability to spread in any way	1
Invasiveness	**Score**
Species displays all listed characteristics and can successfully invade a range of land systems	5
Species displays 3 listed characteristics and can successfully invade a range of land systems	4
Species displays 2 listed characteristics and can successfully invade suitable land systems only	3
Species displays limited invasive characteristics limited to 1 of the following and may invade suitable land systems only - ability to germinate/reproduce in arrange of environments - competitive ability - reproductive advantage - distance of dispersal	2
Species doesn't display any significant invasive characteristics	1
Management Cost	**Score**
Ongoing and high cost treatments to discharge general biosecurity obligation	5
Ongoing, moderate cost treatments to discharge general biosecurity obligation	4
Initial moderate cost to discharge general biosecurity obligation	3
Multiple, low cost treatments to discharge general biosecurity obligation	2
Single, low cost treatment to discharge general biosecurity obligation	1

Identify impacts caused by infestation/incursion

Conservation/Biodiversity	Score
Species likely to drastically out-compete native species and impact on biodiversity in a broad range of natural areas (including sensitive areas)	5
Species likely to drastically out-compete native species impact on biodiversity limited to the pests' suited habitat	4
Species has the potential to invade edges and disturbed systems, has the potential to destroy ecology which is already threatened	3
Species likely to develop a presence in conservation areas without widespread out-competition of native species	2
Species unlikely to establish effectively in conservation areas unless by isolated infestations, dumping or urban escapes. Unlikely to penetrate undisturbed areas	1
Social	**Score**
Species displays severe impacts on all 4 listed social values	5
Species has significant impacts on 3 of the listed social values	4
Species has significant impacts on 2 of the listed social values	3
Species may impact on 1 of the following social values - human health and wellbeing - personal safety and accessibility - visual amenity - management of public and private assets	2
Species has no documented impacts on any social values	1
Agriculture	**Score**
Major threat to agriculture by way of reduced output with increased control expenses. Control is added to existing routine management practices and impacts on economic viability of operations. Has the potential to devalue land or force change of land use. Impacts likely to extend adjoining properties	5
Moderate threat to agriculture with reduction in output and increased management expenses. Control is added to existing routine pest management practices for crop or pastures. Benefits of management outweigh costs. Not likely to impact on land value. Impacts may to extend adjoining properties	4
Moderate threat to agriculture. Increased maintenance including drainage lines, creeks and roadways. Threats to crop/pasture/livestock can be abated as part of routine management practices.	3
Minor threat to farm assets and visual amenity throughout the property. Species may impact on native vegetation in non-production areas over time	2
Not of concern to agriculture under good land management practices	1

Economic (other than agriculture)	**Score**
Species may have a negative impact on 4 of the listed economic values	5
Species may have a negative impact on 3 of the listed economic values	4
Species may have a negative impact on 2 of the listed economic values	3
Species may have an impact on only 1 of the following economic values - ability to derive income from the land system, including land values - visual amenity - ability to harbour pests - ease of management	2
Not of concern to economic endeavours in the region	1

Calculate the final risk ranking for invasive species in the area:

Once a risk assessment has been conducted on all invasive species in an area (property, local government catchment scale), they can be ranked according to the *risk* represented.

In the Wide Bay Burnett, the formula for the final risk ranking for invasive plants and animals is:

(Existing Priority + Current Status + Potential Threat + Impact) x Extent

B. Invasive Species Considered in the North Burnett Biosecurity Plan

Appendix B includes a list of invasive plants and animals that have been identified as being of significance to the North Burnett Region. They have been ranked using the Invasive Species Assessment Framework. The Generalised Invasion Curve and the corresponding management actions will provide guidance to delivery partners contributing to the management of invasive plants and animals in the North Burnett Region. Further information for each species is included in Appendix D.

Common Name	Scientific Name	Management Action
Chilean Needle Grass	*Nassella neesiana*	Prevent Entry
Cabomba	*Cabomba spp.*	Prevent Entry
Alligator weed	*Alternanthera philoxeroides*	Prevent Entry
Fireweed	*Senecio madagascariensis*	Prevent Entry
Water Hyacinth	*Eichhornia crassipes*	Prevent Entry
Harrisia Cactus	*Harrisia martinii*	Prevent Entry
FireAnts/Electric Ants	*Solenopis invicta*	Prevent Entry
Red Eared Slider Turtle	*Trachemys scripta elegans*	Prevent Entry
Yellow Crazy Ants	*Anoplolepis gracilipes*	Prevent Entry
Feral Goats	*Capra hircus*	Prevent Entry
Hudson Pear	*Cylindropuntia trunicata*	Eradicate
African Box Thorn	*Lycium ferocissimum*	Eradicate
Prickly Acacia	*Vachellia nilotica subsp. indica*	Eradicate
Parkinsonia	*Parkinsonia aculeata*	Eradicate
Mesquite	*Prosopis spp.*	Eradicate
Water Lettuce	*Pistia stratiotes*	Eradicate
Honey Locust	*Gleditsia triancanthos*	Eradicate
Chinee Apple	*Ziziphus mauritiana*	Eradicate
Hymenachne	*Hymenachne amplexicaulis*	Contain
Salvinia	*Salvinia molesta*	Contain
Rubber Vine	*Cryptostegia grandiflora*	Contain
Groundsel Bush	*Baccharis halimifolia*	Contain
Grader Grass	*Themeda quadrivalvis*	Contain
Parthenium weed	*Parthenium hysterophorus*	Contain (Biggenden)
Giant Rat's Tail Grass	*Sporobolus spp.*	Contain

Madeira Vine	*Anredera cordifolia*	Asset Protection
Annual Ragweed	*Ambrosia artemisiifolia*	Asset Protection
Climbing Asparagus Fern	*Asparagus spp.*	Asset Protection
Broad Leaf Pepper Tree	*Schinus terebinthifolius*	Asset Protection
Yellow Bells	*Tecoma stans*	Asset Protection
Chital Deer	*Axis axis*	Asset Protection
Rusa Deer	*Cervus timorensis*	Asset Protection
African Fountain grass	*Pannisetum setaceum*	Asset Protection
Fallow Deer	*Dama dama*	Asset Protection
Red Deer	*Cervus elaphus*	Asset Protection
Dutchman's Pipe	*Aristolochia elegans*	Asset Protection
Parthenium weed	*Parthenium hysterophorus*	Asset Protection
Captain Cook Tree	*Cascabella thevetia*	Asset Protection
Singapore daisy	*Sphagneticola trilobata*	Asset Protection
Praxelis	*Praxelis clematidea*	Asset Protection
Yellow Ginger	*Hedychium flavescens*	Asset Protection
Golden Dodder	*Cuscuta campestris*	Asset Protection
Prickly Pear	*Opuntia stricta*	Asset Protection
Tree Pear	*Opuntia tomentosa*	Asset Protection
Leucaena	*Leucaena leucocephala*	Asset Protection
Fox	*Vulpes vulpes*	Asset Protection
Chinese Celtis	*Celtis sinense*	Asset Protection
Lantana	*Lantana camara*	Asset Protection
Cats Claw Creeper	*Dolichandra unguis-cati*	Asset Protection
Feral Pigs	*Sus scrofa*	Asset Protection
Giant Paramatta grass, American Rats Tail grass	*Sporobolus fertilis and Sporobolus jacquemontii*	Asset Protection
Galvanized Burr	*Sclerolaena birchii*	Asset Protection
Wild Dogs	*Canis familiaris*	Asset Protection
Feral Cats	*Felis catus*	Asset Protection
Rabbits	*Oryctolagus cuniculus*	Asset Protection
Mother of Millions	*Bryophyllum delagoense; Bryophyllum tubiflorum*	Asset Protection
Balloon vine	*Cardiospermum grandiflorum*	Asset Protection
Creeping Lantana	*Lantana montevidensis*	Asset Protection
African Love grass	*Eragrostis curvula*	Asset Protection
Mice	*Mus domesticus*	Asset Protection
Locusts		Asset Protection

C. North Burnett Regional Council Resources

Vehicles

Council currently maintains a fleet of five (5) motor vehicles at locations throughout the NBRC area.

Spray Equipment

NBRC currently has the following equipment:

- Vehicle mounted spray unit for each operational plant item used solely for biosecurity.
- Trailer or skid mounted spray unit for community loan. It is desired that one (1) unit will be available in each town

Loan Resources

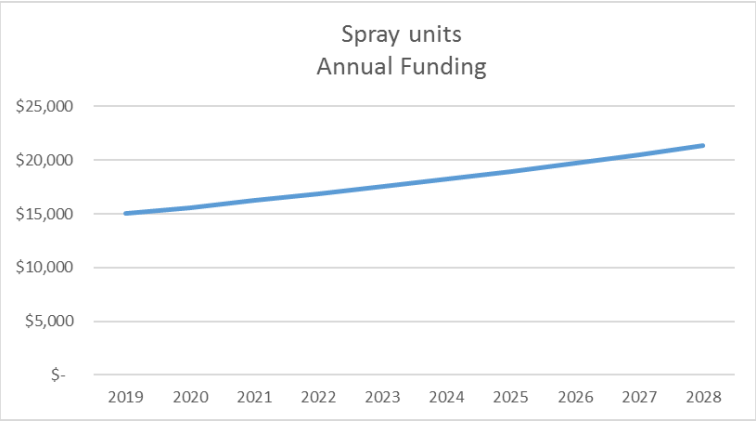
NRBC currently provide the following equipment to the public to assist in the management of invasive species:

- Pig traps in each located in each town.
- Dog traps for wild dogs

Financial Resources

Vehicles will be renewed based on utilisation and condition and will form part of Council's fleet renewal program

To ensure efficiency in operations and to observe safety requirements, one (1) unit will be renewed annually with the older equipment being made available for community loan. This equates to funding resource of approximately $180K over 10 years.



Human Resources

NRBC currently employs five (5) land protection officers based at the following locations:

- Biggenden
- Gayndah
- Mundubberra
- Monto
- Mt Perry

Staff will have current licenses for driving, ACDC, pest technician and firearms.

NBRC Services Provided

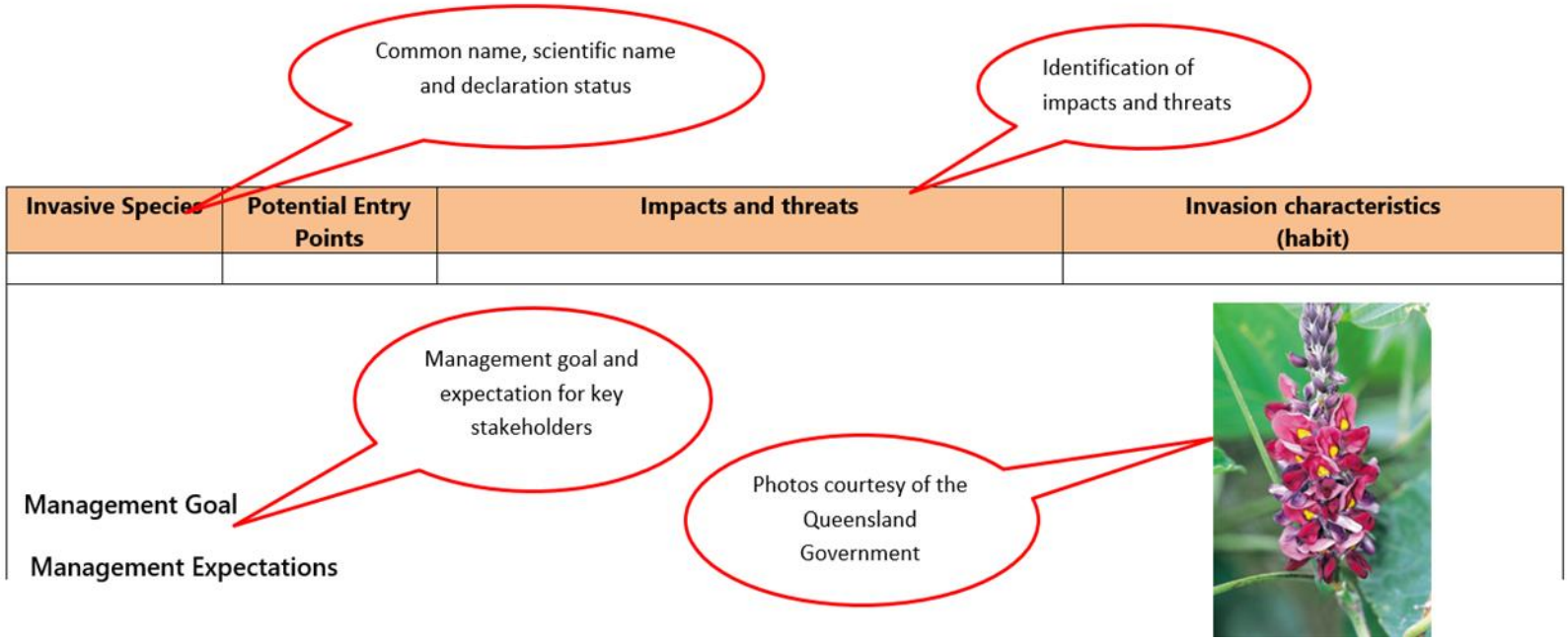
Provision of 1080 Baiting services
Advice to landholders on invasive species management
Invasive species identification
Extension advice and support
Implementation of Biosecurity Surveillance Program
High risk pathway management

D. Invasive Species Information and Management Obligations

The *Biosecurity Act 2014* allows for a flexible approach to biosecurity planning with an emphasis on shared responsibility and risk-based decision making. Management goals and expectations have been defined through consultation with key stakeholders.

The following section of the North Burnett Region Biosecurity Plan provides guidance for delivery partners contributing to the management of invasive plants and animals in the region.

Information sheets for each species considered in the North Burnett Region Biosecurity Plan have been developed as below.



African Boxthorn	Potential Entry Points	Impacts and threats	Invasion Characteristics (perennial multi-branched shrub)
Lycium ferocissimum *Restricted Category 3* ***Weed of National Significance***	***African boxthorn is known to exist in neighbouring Councils.*** ***Its seeds are spread by animals, wind and water, as well as by people – it was introduced to Australia as a hedge plant.***	**Environmental** •Invades reserves and conservation areas. **Economic** •Aggressively invades pastures and reduces useability. •Invades roadsides. •Forms impenetrable, spiny thickets, which can hinder stock movement and mustering. •Provides habitat for pest animals •Attracts insects, including fruit fly, dried fruit beetles and tomato fly, which breed in the fruit. **Social** •Forms impenetrable, spiny thickets that can hinder bush walking.	African boxthorn is spread by birds and animals eating berries and excreting viable seed. African boxthorn has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the North Burnett due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2IAJQwA

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

All sightings to be reported to NBRC on 1300696272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Alligator Weed	Potential Entry Points	Impacts and threats	Invasion characteristics (perennial aquatic and land weed)
Alternanthera philoxeroides ***Restricted Category 3***	***Known infestations in adjoining Councils.*** ***Known substitute for Asian vegetable*** ***Spread easily in waterways and by contaminated machinery (boats, vehicles)***	***Environmental*** Poses extreme threat to waterways and wetlands. Restricts water flow in creeks, channels and drains. Reduces water quality, water bird and fish activity. Kills fish and submerged native water plants. Replaces native wetland plants. ***Economic*** Damages pumps and irrigation equipment. Poses extreme threat to irrigated croplands. Increases water loss through evapotranspiration. ***Social*** Impedes water sports and boating access. Endangers swimmers and animals Creates favourable habitat for mosquitoes.	Alligator weed is not known to be present in the north Burnett region. It has a high to very high weed risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2SZ3KGm

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Cabomba	Potential Entry Points	Impacts and threats	Invasion Characteristics (perennial submerged aquatic)
Cabomba caroliniana ***Restricted Category 3***	***Known infestations in adjoining Councils.*** ***Spread easily in waterways and by contaminated machinery (boats, vehicles)***	***Environmental*** Aggressively invades native freshwater systems. Transforms aquatic ecosystems. Displaces native plants. Affects native wildlife. ***Economic*** Affects water quality. Increases siltation in lakes. Obstructs creeks, lakes and dams. Interferes with infrastructure (e.g. irrigation). ***Social*** Impedes aquatic recreational activities. Endangers swimmers who can become entangled.	Cabomba is not known to be present in the north Burnett region. It has a high to very high weed risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or at** https://bit.ly/2TkPO8U

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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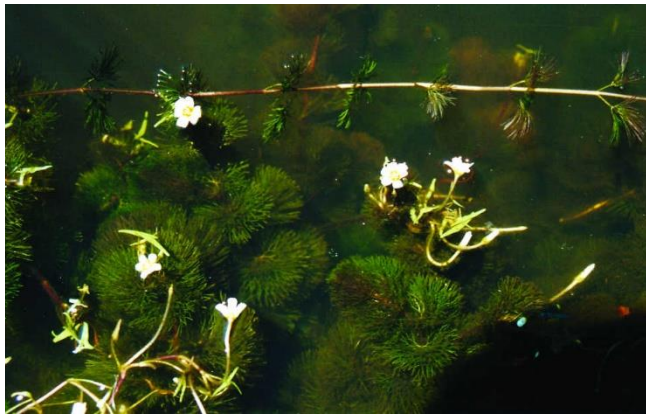
NBRC

Education of all stakeholders to prevent entry



Chilean Needle Grass	Potential Entry Points	Impacts and threats	Invasion Characteristics (perennial tussock grass)
Nassella neesiana ***Restricted Category 3*** ***Weed of National Significance***	***Spread by seeds sticking to clothing, livestock, vehicles and farm/other machinery, in contaminated seeds or fodder.*** ***Also spread by floodwater moving seed downstream and over flood plains.***	***Environmental*** Reduces natural biodiversity by replacing native species. ***Economic*** Heavy infestations displace desirable pasture species. Decreases productivity of pastures by up to 50%. Long, sharp seeds injure animals, downgrading lamb and sheep meat, wool, skins and hides.	Chilean needle grass is not known to be present in the North Burnett region. It has a high to very high weed risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to http://bit.ly/2VNT1PL**

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Electric Ants	Potential Entry Points	Impacts and threats	Invasion Characteristics (ant)
Wasmannia auropunctata ***Restricted Category 1***	Fire ant carriers include soil, mulch, animal manures, baled hay or straw, potted plants and turf. Other carriers include composted material, material that is a product or by-product of mining or quarrying (e.g. gravels, sands).	***Environmental*** Can out-compete and displace other ant species declines in numbers of invertebrates and small vertebrates – in the long term, dense infestations reduce overall biodiversity. ***Economic*** Electric ants collect honeydew from sap-sucking insects and protect them from other predators. This can result in dieback and reduction in crop yield through reduced plant vigour and the spread of crop diseases such as sooty mould. ***Social*** Restrict everyday activities such as picnics and sporting activities as backyards, parks, school playgrounds and sports grounds are unusable.	First detected in Cairns in 2006, electric ants are one of the world's most invasive pests. They affect human health and lifestyle, can blind pets, damage the environment, and have the potential to severely affect agricultural industries. Electric ants are not known to be present in the North Burnett region. They have a high pest risk (highly invasive and high threat) and likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2H26YBS

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Fire Ants	Potential Entry Points	Impacts and threats	Invasion Characteristics (ant)
Solenopsis invicta ***Restricted Category 1***	Fire ant carriers include soil, Mulch, animal manures, baled hay or straw, potted plants and turf. Other carriers include composted material, material that is a product or by-product of mining or quarrying (e.g. gravels, sands).	*Environmental* Feed voraciously on small ground fauna, including insects, spiders, lizards, frogs, birds and mammals. Could displace or eliminate some native species. *Economic* Significantly affect agriculture industry. Attack young animals, stinging around eyes, mouth and nose, leading to blindness and suffocation. Prevent animals from reaching food or water without being stung. *Social* Restrict everyday activities such as picnics and sporting activities as backyards, parks, school playgrounds and sports grounds are unusable.	Fire ants have the potential to inhabit most of Australia's major coastal areas and extensive areas of tropical north. Fire ants are not known to be present in the North Burnett region. They have a high to very high pest risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2T0iftx

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Fireweed	Potential Entry Points	Impacts and threats	Invasion Characteristics (perennial herb)
Senecio madagascariensis ***Restricted Category 3***	***Known infestations in adjoining Councils.*** ***Seeds can spread by contaminated feed, machinery and vehicles***	**Economic** Competes with pasture species. Toxic to livestock, particularly cattle and horses, causing illness, slow growth and poor conditioning, which can result in death. May taint meat and milk **Social** Can cause skin irritation and allergies	Seeds are spread by wind, stock, in pasture seed, hay, turf, mulch and with stock transport. Fireweed is suited to the north Burnett. It has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or at** https://bit.ly/2pCRVnp

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Feral Goat	Potential Entry Points	Impacts and threats	Invasion Characteristics
Capra hircus ***Restricted Category 3, 4, 6***	***Spread by natural population movement. Have been recorded in adjoining Council.***	***Economic*** Competes for pasture, damages fences, and reduces profitability of pastoral and agricultural industries. In many areas, negative impacts are balanced by positive impacts of harvesting for slaughter. Environmental Contributes to overgrazing, which can cause soil erosion and other forms of land degradation. Reduces diversity of plant species through selective feeding. ***Social*** Can transmit diseases to domestic animals.	Feral goats are commonly found in rugged terrain, with the home range usually centred on a water supply. Wild dogs and dingoes are natural enemies. Feral goat populations can double every 1.6 years if not culled or controlled. To prevent increases, around 35% of population must be removed each year. Feral goats have a high to very high pest risk (highly invasive and high threat) and a high likelihood of establishing throughout the North Burnett Region due to current and potential distribution. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2H66QCe

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

All sightings to be reported to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Harrisia Cactus	Potential Entry Points	Impacts and threats	Invasion Characteristics (densely branched cactus)
Harrisia martinii *Prohibited in Queensland*	***Spread by animals, vehicles and humans.***	***Environmental*** Forms dense infestations that choke out other pasture species when left unchecked. ***Economic*** Spines interfere with stock mustering and movement, and cause injuries and lameness. Becomes costly and time-consuming to control ***Social*** Sharp spines threaten native animals, bushwalkers and farm animals Spines can penetrate boots and tyres	Harrisia cactus is not known to be present in the North Burnett region. It generally occurs in brigalow and associated softwood country. It has a high to very high weed risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2Vl8R09

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

All sightings to be reported to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Red Eared Slider Turtle	Potential Entry Points	Impacts and threats	Invasion Characteristics (freshwater turtle)
Trachemys scripta elegans ***Restricted Category 2,3,4,5,6*** ***All sightings of red eared slider turtles must be reported to Biosecurity Queensland on 132523 within 24 hours of the sighting.***	***Spread by pet trade and release into the wild.*** ***Red-eared sliders can move up to 9km from water to find suitable habitat, search for mate, or lay eggs.***	***Environmental*** Affects range of aquatic prey, including rare amphibians. Can take over waterbird nests for basking sites, and damage and prey on eggs and hatchlings. Out-competes native turtle species for food and space in waterways. Carries pathogens and diseases that can kill native turtles and other aquatic wildlife. ***Social*** Captive red-eared sliders have been a source of salmonella infection in humans in USA.	Red eared slider turtles are very aggressive and are listed as one of the world's worst 100 invasive species. They are not known to be present in the North Burnett region. Red eared slider turtles have a high to very high pest risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2VSn4mF

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

All sightings to be reported to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Water Hyacinth	Potential Entry Points	Impacts and threats	Invasion Characteristics (aquatic weed)
Eichhornia crassipes ***Restricted Category 3***	***Known infestations in adjoining Councils.*** ***Spread easily in waterways and by contaminated machinery (boats, vehicles)***	**Environmental** •Destroys native wetlands and waterways, killing native fish and other wildlife. •Depletes water bodies of oxygen. •Increases water loss. •Provides breeding ground for mosquitoes. **Social** •Large infestations stop movement of boats by clogging engine water-cooling systems. •Degrades quality of swimming and makes fishing impossible. •Interferes with and damages infrastructure.	Water hyacinth has been sold illegally as an ornamental plant in garden ponds. Spread through contaminated machinery, recreational vehicles and water flow. Water hyacinth has a very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the north Burnett region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2Q1UsUU

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

All sightings to be reported to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry

Yellow crazy ants	Potential Entry Points	Impacts and threats	Invasion Characteristics (ant)
Anoplolepis gracilipes ***Restricted Category 1***	***Yellow crazy ants were initially believed to prefer rainforest, but recent research confirms they can thrive in harsh, rocky, dry areas in the Northern Territory. Infestations have been found in adjoining Councils.***	***Environmental*** Disrupts natural species, including native birds, animals and plants. Is reducing unique red crab population on Christmas Island. Protects sap-sucking insects such as scale and mealy bugs. ***Economic*** Can affect horticulture industries. ***Social*** Sprays formic acid, which may cause burning and irritate skin and eyes of animals and potentially humans.	The yellow crazy ant is listed as one of the world's 100 worst invasive alien species by the International Union for Conservation of Nature. Yellow crazy ants are not known to be present in the North Burnett region. They have a high to very high pest risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2HPqXpn

Management Goal

Prevent Entry – no known infestations

Management Expectations

Landholder

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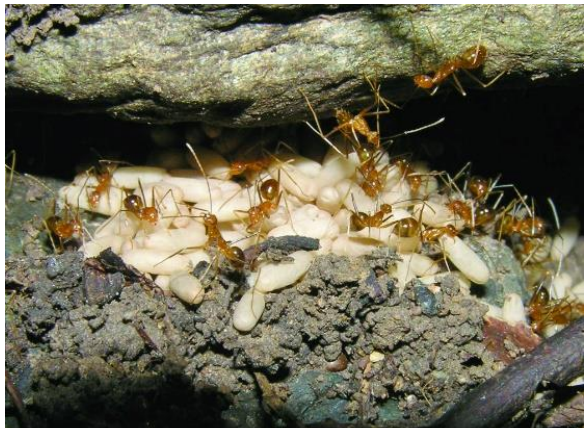
Consistent monitoring of occupied land and activities to prevent entry

NBRC

Education of all stakeholders to prevent entry



Chinee Apple	Vectors and spread	Impacts and threats	Invasion Characteristics (large shrub/small spreading tree)
Ziziphus mauritiana *Restricted Category 3*	***Known infestations in adjoining Councils.*** ***Chinee apple is restricted to drier regions and mainly spreads along watercourses.*** ***Seeds in fruit are spread by animals and birds***	**Environmental** Out-competes and replaces native vegetation. Provides haven for introduced pests such as foxes, cats and rabbits. **Economic** Creates impenetrable thickets that seriously hamper stock management. Reduces pasture production and accessibility.	Chinee apple has been recorded in the Philpot district and is being actively controlled. It is not known to be present further throughout the North Burnett region Chinee apple has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to https://bit.ly/2SOq3d3**

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

Report all sightings to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment.

Honey Locust	Vectors and spread	Impacts and threats	Invasion Characteristics (thorny shrub/small tree)
Gleditsia triacanthos incl. cultivars and varieties *Restricted Category 3*	***Known infestations in adjoining Councils.*** ***Seed is spread by grazing stock, floodwaters, and ornamental plantings.*** ***Isolated infestations associated with disused piggeries.***	**Environmental** Out-competes and replaces native vegetation. Provides haven for introduced pests such as foxes, cats and rabbits. **Economic** Sharp spines can injure livestock and damage equipment and vehicles. Forms dense thickets, particularly along waterways, preventing stock access to water **Social** Sharp spines can injure humans and wildlife	Honey locust has been recorded in the Three Moon Creek, Auburn and Boyne River districts and is being actively controlled. It is not known to be present further throughout the North Burnett region Honey locust has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2H8eewJ

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

Report all sightings to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment.

Hudson Pear	Vectors and spread	Impacts and threats	Invasion Characteristics (densely branched cactus)
Cylindropuntia pallida (syn. rosea), C. tunicata *Restricted Category 2,3,4,5*	Spread by animals, vehicles and humans	**Environmental** Destroys native pastures **Economic** Becomes costly and time-consuming to control **Social** Sharp spines threaten native animals, bushwalkers and farm animals Spines can penetrate boots and tyres	Hudson pear is known to exist in isolated infestations in the Philpot district in the North Burnett. Hudson pear is generally suited semi-arid rangelands. It has a high to very high weed risk (highly invasive and high threat) and a high likelihood of arriving in the region due to current and potential distribution and/ or an existing high-risk pathway. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2TITHLP

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

Report all sightings to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment.

Mesquite	Vectors and spread	Impacts and threats	Invasion Characteristics (multi stemmed shrub/ tree)
Prosopis glandulosa, *P. pallida,* *P. velutina,* *P. spp. hybrid* ***Restricted Category 3***	***Infestations are common in western Queensland along waterways, floodplains, roadsides and in horse paddocks near homesteads. Seeds spread by stock faeces, some pest animals and native animals.***	**Environmental** Forms dense, impenetrable thickets. Out-competes other vegetation. Quickly invades upland country. **Economic** Sharp thorns can puncture vehicle tyres. **Social** Sharp thorns can injure animals and humans.	Mesquite has been recorded in the Byrnstown cemetery and is being actively controlled. It is not known to be present further throughout the North Burnett region. Mesquite has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to https://bit.ly/2WoRSvc**

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

Report all sightings to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment.

Parkinsonia	Vectors and spread	Impacts and threats	Invasion Characteristics (perennial multi-branched shrub)
Parkinsonia aculeata ***Restricted Category 3***	***Parkinsonia is known to exist in neighbouring Councils. It is spread primarily by floodwaters. Minor spread possible by mud sticking to vehicles and animals. Its seeds are spread by animals, wind and water, as well as by people.***	**Environmental** Forms dense, often impenetrable, thorny thickets along watercourses Flooded country is particularly susceptible to invasion from floating seeds. Provides haven for feral pigs, which prey on livestock, damage crops, and degrade the environment. **Economic** Reduces pasture production. Restricts stock access to drinking water and makes mustering almost impossible.	Parkinsonia has been detected in isolated infestations in the Coonambula, Mingo Crossing and Ideraway districts of the North Burnett. Parkinsonia has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the North Burnett due to current and potential distribution and/or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2Rk2ooM

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

Report all sightings to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment

Prickly Acacia	Vectors and spread	Impacts and threats	Invasion Characteristics (thorny shrub/small tree)
Vachellia nilotica ***Restricted Category 3***	***Seeds spread primarily by livestock through ingesting mature pods (long-distance movement possible by livestock transport).*** ***Minor spread by mud on vehicles and water movement***	**Environmental** Degrades soil by facilitating erosion. Threatens biodiversity through transformation of natural grasslands into thorny scrub and woodland. **Economic** Decreases pastures and out-competes them for water. Forms dense thorny thickets that interfere with mustering, stock movement and access to water. Damages tyres (thorns).	Prickly Acacia has been recorded in the Byrnstown, Ideaway, Goorilba and Dirnbir districts and is being actively controlled. It is not known to be present further throughout the North Burnett region Prickly acacia has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2tZlGT9

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

Report all sightings to NBRC on 1300 696 272 or admin@northburnett.com.au

Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment.

Water Lettuce	Vectors and spread	Impacts and threats	Invasion Characteristics (floating waterweed)
Pistia stratiotes ***Restricted Category 3***	***Known infestations in adjoining Councils.*** ***Spread easily in waterways and by contaminated machinery (boats, vehicles) and via the aquatic plant industry***	**Environmental** Restricts water flow and increases water loss. Large infestations damage wildlife habitats. Serves as breeding ground for mosquitoes. Transforms aquatic ecosystems. Shades out native aquatic plants. Reduces oxygenation of water **Economic** Interferes with irrigation and stock watering **Social** Large infestations interfere with boating, swimming and fishing	Water lettuce has been recorded in the Three Moon Creek and Cania Dam districts and is being actively controlled. It is not known to be present further throughout the North Burnett region Water lettuce has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to https://bit.ly/2EY2HxS**

Management Goal

Eradicate existing infestations

Management Expectations

Landholder

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Consistent monitoring of occupied land and activities to manage infestations.

Eradication of known infestations.

NBRC

Education of all stakeholders to eradicate existing infestations and prevent further establishment.

Grader Grass	Vectors and spread	Impacts and threats	Invasion Characteristics (grass)
Themeda quadrivalvis Not declared, however, everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants under their control.	*Grader grass is one of the top 200 most invasive plants of south-eastern Queensland* *Seeds are spread by animals and vehicles, in clothing and mud and commonly during activities such as the grading of roads.*	**Environmental** Increased biomass results in higher fuel loads, thus altering the fire regime, causing thinning of native woodlands. **Economic** Competes with pasture species for water and nutrients. Weed of crops, including Lucerne and other legume seed crops. **Social** Very common weed of roadsides, where it can quickly become a safety hazard by reducing visibility on corners.	Grader grass is a weed of roadsides, disturbed sites, waste areas, open woodlands, grasslands, pastures and crops rangelands, particularly in areas that are overgrazed or disturbed. There are scattered infestations recorded on Council main roads and is not known to be present elsewhere in the North Burnett region. Grader grass has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at https://bit.ly/2XNpJPh**

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Groundsel Bush	Vectors and spread	Impacts and threats	Invasion Characteristics (densely branched shrub)
Baccharis halimifolia ***Restricted Category 3***	*Found in coastal areas of South East Queensland. Rarely found west of Great Dividing Range.* *Seeds spread by wind, running water, vehicles and machinery.*	**Environmental** Replaces plants and destroys native wildlife habitat. Can become abundant in vegetation along watercourses and in coastal woodlands and forest areas. **Economic** Competes with pasture species for water and nutrients. Serious weed of forestry plantations in first year of planting. **Social** Causes allergies induced by airborne pollen and seed fluff.	Groundsel is particularly suited to moist areas and is found in forests, disturbed sites, pastures and waste areas. Scattered infestations of groundsel bush have been recorded in the Deep Creek, Mt Perry and Biggenden districts and is not known to be present elsewhere in the North Burnett region. Groundsel has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2TutkDg

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

GRT	Vectors and spread	Impacts and threats	Invasion Characteristics (grass)
Giant Rats Tail Grass, American Rats Tail Grass (GRT) ***Sporobolus pyramidalis, S. natalensis, S jacquemontii,*** ***Restricted Category 3***	*GRT is one of the top 200 most invasive plants of south-eastern Queensland* *Seeds spread by wind, stock, in pasture seed, hay, turf, mulch and with stock transport.*	**Economic** Quickly dominates pastures, particularly after overgrazing or soil disturbance. Causes losses in carrying capacity and decreases production by up to 80%. Loosens teeth of cattle and horses that graze on it.	Giant Rats Tail Grasses are aggressive weed of roadsides, disturbed sites, waste areas, open woodlands, grasslands, pastures and crops rangelands, particularly in areas that are overgrazed or disturbed. It is generally more widespread in the eastern side of the North Burnett region. Giant Rats Tail Grasses have a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at** http://bit.ly/2DQBtbx

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Hymenachne	Vectors and spread	Impacts and threats	Invasion Characteristics (perennial grass/waterweed)
Hymenachne amplexicaulis ***Restricted Category 3*** ***Weed of National Significance***	***Infestations recorded in nearby Councils.*** ***Seeds spread by water movement and migratory aquatic birds.*** ***Has been planted for cattle fodder***	**Environmental** Affects drains, lagoons, wetlands, creeks and rivers. Increases flooding by reducing flow capacity of drainage networks. Interferes with wildlife habitats. **Economic** Interferes with irrigation and infrastructure. **Social** Degrades water quality for recreational purposes	Hymenachne has been recorded in the Bon Accord, Paradise Dam, private dams, Kerwee, Grosvenor and Biggenden districts and is being actively controlled. It is not known to be present further throughout the North Burnett region Hymenachne has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing throughout the region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2CLx9ZR

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Parthenium	Vectors and spread	Impacts and threats	Invasion Characteristics (annual herb)
Parthenium hysterophorus ***Restricted Category 3*** ***Weed of National Significance***	*Introduced to North Burnett region through contaminated fodder.* *Seeds spread by water, vehicles, machinery and stock.* *Also spread by feral and native animals, and in feed and seed.*	**Environmental** Invades disturbed bare areas along roadsides, heavily stocked areas around yards, and watering points. **Economic** Invades pastures, reduces beef production. Costs cropping industries millions of dollars per year, competes with crops for nutrients and space. **Social** Pollen contains potent allergens that can cause reactions such as dermatitis and hay fever.	Parthenium can set viable seed within 2 weeks of germination, making it highly invasive. It is currently present in the Biggenden and Dillarnil districts, more so in the riparian areas. It is not known to be present elsewhere in the North Burnett region. Parthenium has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2Ce5JP3

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Rubbervine	Vectors and spread	Impacts and threats	Invasion Characteristics (climbing vine)
Cryptostegia grandiflora ***Restricted Category 3*** ***Weed of National Significance***	*Widely distributed throughout tropical and subtropical regions of the world. Found in river systems of southern Cape York and Gulf of Carpentaria, south along coast to Burnett River. Seeds spread by wind and water.*	**Environmental** Smothers riparian vegetation and forms dense thickets. Infestations expand outward from waterways, hillsides and pastures. Decreases biodiversity and impedes stock and native animal movement. **Economic** Poisonous to livestock. Presents difficulties for mustering stock	Rubbervine is regarded as one of the worst weeds in Australia because of its invasiveness, impacts and potential for spread. It is currently recorded in the mid to lower Burnett, Mingo and Biggenden districts, primarily in the riparian areas. Rubbervine has been recorded at Barambah, Mundubberra weir, Cattle Creek, Coocher Creek, Coalstoun Lakes, Muan and Degilbo. Rubbervine has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2J3RGiq

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Salvinia	Vectors and spread	Impacts and threats	Invasion Characteristics (free floating aquatic fern)
Salvinia molesta ***Restricted Category 3*** ***Weed of National Significance***	*Mainly spread by people emptying aquariums and ponds into waterways.* *Also spread by water currents and fouling of fishing equipment and boat trailers.*	**Environmental** Forms thick mats that degrades water quality and destroys wildlife habitats. **Economic** Builds up and collects debris during flooding, causing bridges and fences to collapse. Reduces water flow to irrigation equipment, increasing pumping times and costs. **Social** Endangers children and livestock, who can become entangled in heavy infestations. Creates mosquito-breeding habitat. Interferes with recreational activities such as boating, fishing and swimming.	Salvinia does not produce flowers but reproduces by vegetative means. Produces little growth in winter. Salvinia prefers slow-moving streams or still-water ponds with high nutrient levels and water temperatures. Under optimal conditions, it can double in volume every 2-3 days. Salvinia has been recorded in at Mingo, Degilbo, Woowoonga Creek and Paradise Dam. Salvinia has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to https://bit.ly/2EZGnE4**

Management Goal

Contain existing infestations

Management Expectations

Landholder

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Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

African Fountain Grass	Vectors and spread	Impacts and threats	Invasion Characteristics (perennial tussock grass)
Pennisetum setaceum ***Restricted Category 3***	*African fountain grass is spread by wind, moving water, and seeds attached to fur, clothing and vehicles. Also spread by people moving plants.*	**Environmental** Out-competes native plants. Increases fire intensity due to high biomass. **Economic** Out-competes and replaces grasses used in grazing.	African fountain grass is highly invasive and can compete with pasture and native plants. It is a serious weed in California and Hawaii, where it has invaded dry, hot sites. It prefers drier, hot, sites in arid, semi-arid and seasonally dry tropical and subtropical areas, generally around towns. Young specimens are ornamental and have previously been planted in gardens and along roadsides in Queensland. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2KeGnon

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

African Lovegrass	Vectors and spread	Impacts and threats	Invasion Characteristics (densely tufted perennial grass)
Eragrostis curvula ***Not declared, however, everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.***	*African lovegrass is spread a number of ways including slashing of roadsides.* *Seed is easily transported by machinery and motor vehicles.* *Cattle can excrete viable seed up to 10 days after consumption.* *Also spread on fur and hooves of animals, and in soil and grain.*	**Environmental** Competes with native species during regeneration after fire. **Economic** Competes with other pasture species. Becomes unpalatable to stock as it ages. May contain low (3%) levels of protein, causing stock that graze on it to do poorly. **Social** Forms dense monocultures up to 1.2m high, creating large fuel loads and posing fire hazard.	African lovegrass was probably first introduced to Australia as a contaminant of pasture seed. African lovegrass cultivars have also been used as soil stabilisers to control erosion. It has been planted in different locations throughout South East Queensland, and has naturalised in all Australian states. It is found along roadsides, railway lines and other neglected areas, often spreading to adjacent pastures. May be spreading into more fertile areas of southern Queensland and invading pastures, lucerne and summer cropping areas. **Further information can be found at the Business Queensland website or go to http://bit.ly/2J5Qbzy**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Annual Ragweed	Vectors and spread	Impacts and threats	Invasion Characteristics (fast growing fern like plant)
Ambrosia artemisiifolia ***Restricted Category 3***	*Annual ragweed must not be given away, sold, or released into the environment without a permit. Seeds spread by floodwater, stock, or in fodder or topsoil from infested areas.*	**Economic** Invades and suppresses weak and overgrazed pastures, reducing productivity. Infestations can become particularly dense in overgrazed pastures. **Social** Pollen contains potent allergens that can aggravate asthma and cause respiratory allergies such as hay fever.	Annual ragweed often colonises bare areas on roadsides and banks of watercourses, and can invade pastures from these areas. It is widespread throughout the North Burnett region. Annual ragweed has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2KaCLnc

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Balloon Vine	Vectors and spread	Impacts and threats	Invasion Characteristics (vine)
Cardiospermum grandiflorum ***Restricted Category 3***	*Balloon vine flowers in spring and summer, however seedlings can germinate most of the year if disturbed.* *Balloon vine reproduces by seed contained within its light papery fruit. The fruit are most commonly dispersed by wind and water. They may also be spread in dumped garden waste.*	**Environmental** Smothers native vegetation. Prevents plants from receiving sunlight needed for photosynthesis.	Balloon vine is widespread in South East Queensland and northern New South Wales and can grow in disturbed areas, gardens and riparian areas. **Further information can be found at the Business Queensland website or go to http://bit.ly/301Rbd7**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Broadleafed Pepper Tree	Vectors and spread	Impacts and threats	Invasion Characteristics (Large spreading tree)
Schinus terebinthifolius ***Restricted Category 3***	*Broadleaved pepper tree is common in many habitats in South East Queensland and Prefers coastal dune areas, wetlands, streambanks. Berries are spread by birds and animals.*	**Environmental** Forms dense thickets that can choke native plants. Establishes in disturbed bushland. Competes with ground covers and shrubs, and tolerates shade. **Economic** Out-competes and replaces native grasses used in grazing. **Social** Contains toxic resins that can affect human and animal health.	Broadleafed pepper tree has escaped gardens and invaded coastal dune lands, wetlands and streambanks. It also out-competes and replaces native grasses used in grazing, and can harbour mango black spot disease and witches' broom diseases that affect citrus. It is common throughout the North Burnett region. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2G7uVqB

Management Goal

Asset protection

Management Expectations

Landholder

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Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Captain Cook Tree	Vectors and spread	Impacts and threats	Invasion Characteristics (large spreading tree)
Cascabela thevetia, (previously Thevetia peruviana) ***Restricted Category 3***	*Captain Cook tree has often been planted as an ornamental tree in Australia's domestic gardens and public spaces. It is predominantly spread by dumped garden waste*	**Economic** Out-competes and replaces native grasses used in grazing. **Environmental** Forms dense thickets that can choke native plants. Establishes in disturbed bushland. Competes with ground covers and shrubs, and tolerates shade. Spreads rapidly in waterlogged or poorly drained soils. **Social** Contains toxic resins that can affect human and animal health.	Captain Cook tree can invade native vegetation, threaten pasture, and is poisonous to animals and humans and has become a highly invasive weed in parts of Queensland. It is highly invasive, especially along creek systems and can be found along roadsides and in waste areas, disturbed areas and pastures. **Further information can be found at the Business Queensland website or go to http://bit.ly/2LpgByo**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Feral cats	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Felis catus ***Restricted Category 3, 4, 6***	*Feral cats are domestic cats living in a wild state. Although the domestic cat has a long history of associating with humans, it retains a strong hunting instinct and can easily revert to wild behaviours. They are most active at night, with peak hunting activity soon after sunset and just before sunrise.*	**Environmental** Eats small mammals, birds, reptiles, amphibians, insects and even fish. Threatens native biodiversity. Carries toxoplasmosis, which is particularly harmful to marsupials. **Economic** Condemnation of sheep and lamb carcasses due to sarcosporidiosis and toxoplasmosis, which are carried by feral cats. **Social** Can injure/transmit disease to domestic cats. Carries parasites that can affect humans.	Feral cats are found throughout Australia. They are often more muscular than house cats, and are opportunistic predators that have a major impact on native species. Successful control programs require multiple methods, including night shooting, poisoning, trapping and fencing, combined with land management practices. **Further information can be found at the Business Queensland website or go to http://bit.ly/2H3Ti7P**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Cats Claw Creeper	Vectors and spread	Impacts and threats	Invasion Characteristics (vine)
Macfadyena unguis-cati ***Restricted Category 3***	*Cats claw creeper is found in coastal and subcoastal areas of South East Queensland. It flowers mainly during spring and early summer, producing numerous pods with many seeds which are spread by water and wind. It also has extensive tuberous roots spread by floods and human activity*	**Environmental** Smothers native vegetation, including growing up over trees. Changes soil chemistry.	Cats claw creeper is an aggressive climber that was once used as an ornamental plant in Queensland gardens – it can be found in gardens, over fences, along roadsides and waterways, and in disturbed rainforest. In the wild, cat's claw creeper can smother native vegetation and change soil chemistry. It is now found in many parts of Queensland. Cats claw creeper is currently targeted for biological control including the tinged bug, leaf tying moth and leaf-mining jewel beetle. **Further information can be found at the Business Queensland website or go to http://bit.ly/2UZt0IN**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Chinese Celtis	Vectors and spread	Impacts and threats	Invasion Characteristics (large evergreen tree)
Celtis sinense ***Restricted Category 3***	*Chinese celtis has naturalised throughout most of South East Queensland. It flowers in spring and produces thousands of berries which are spread by birds, flying foxes and water.*	**Environmental** Forms dense infestations and prevents regeneration of native riparian vegetation. Destroys habitats of native animals.	Chinese celtis is a fast-growing, deciduous tree. It forms dense infestations along creekbanks and prevents native riparian vegetation from regenerating. It also sucks up water and can affect populations of native animals through habitat destruction. **Further information can be found at the Business Queensland website or go to** http://bit.ly/2DQBoo1

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Climbing asparagus fern	Vectors and spread	Impacts and threats	Invasion Characteristics (Climbing fern)
Asparagus scandens ***Restricted Category 3*** ***Weed of National Significance***	*Asparagus fern is spread by fruit-eating birds, foxes, rabbits. May also be spread by dumping weed cuttings or plants in bushland or other areas where they may spread.*	**Environmental** Becomes dominant ground cover, displacing native plants, even in undisturbed systems.	Climbing asparagus fern invades shaded woodland, heathland, sclerophyll forest, cool rainforest, riparian and coastal habitats and disturbed areas. It is common throughout the North Burnett region. Climbing asparagus fern has a high to very high weed risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/ or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2uT7VoS

Management Goal

Asset protection

Management Expectations

Landholder

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Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Creeping lantana	Vectors and spread	Impacts and threats	Invasion Characteristics (low growing shrub)
Lantana montevidensis ***Restricted Category 3***	*Creeping lantana has the ability to persist during periods of extended drought and an ability to grow and reproduce under conditions of both shade and full sunlight. Spread by fruit-eating birds and people. Stems can root at nodes where they touch the soil. Occasionally creeping lantana is dispersed in dumped garden waste.*	**Environmental** Becomes dominant ground cover, displacing native plants, even in undisturbed systems. **Economic** Invades native and improved pastures, replacing desirable species.	In the Burnett region during the 1980s and the early 1990s the level of infestation seemed to reach a critical level and the impact of the plant increased dramatically. Some grazing properties in the North Burnett suffered decreases in carrying capacity that jeopardised the viability of those enterprises. Land values decreased and severe infestations on National Parks became apparent. The plant often grows in large tracts of rough terrain where traditional control measures are not practical. **Further information can be found at the Business Queensland website or go to http://bit.ly/2J3b4vr**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Chital deer	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Axis axis ***Restricted Category 3, 4, 6***	*Chital deer contained within a deer-proof fence (e.g. on farms or in game parks) are not declared pests. Farmed deer that escape captivity quickly revert to a wild state.*	**Environmental** Contributes to overgrazing, which can cause soil erosion and other forms of land degradation. Reduces diversity of plant species through selective feeding. **Economic** Competes for pasture, damages fences, and reduces profitability of pastoral and agricultural industries. **Social** Can transmit diseases to domestic animals.	Feral chital deer prefer woodlands, forests and clearings near waterways. Permanent water is essential and has major influence on range. Feral chital deer have a high to very high pest risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2G5iziI

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Fallow deer	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Dama dama ***Restricted Category 3, 4, 6***	*Fallow deer contained within a deer-proof fence (e.g. on farms or in game parks) are not declared pests. Farmed deer that escape captivity quickly revert to a wild state. Preventing more deer from entering the wild is a key control strategy.*	**Environmental** Can damage natural environment by eating native vegetation, damaging trees, spreading weed seeds and fouling water **Economic** Sometimes selectively consumes new growth and ringbarks orchard trees, leading to reduced orchard viability. In dry seasons, competes with cattle for pasture and supplementary feed. **Social** Can be traffic hazard on roads and highways.	Feral fallow deer prefer open grassy clearings in forested areas. Most active at dawn and dusk. Feral fallow deer have a high to very high pest risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2I1Vuzz

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Red deer	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Cervus elaphus ***Restricted Category 3, 4, 6***	*Red deer contained within a deer-proof fence (e.g. on farms or in game parks) are not declared pests. Farmed deer that escape captivity quickly revert to a wild state. Preventing more deer from entering the wild is a key control strategy.*	**Environmental** Can damage natural environment by eating native vegetation, damaging trees, spreading weed seeds and fouling water **Economic** Sometimes selectively consumes new growth and ringbarks orchard trees, leading to reduced orchard viability. In dry seasons, competes with cattle for pasture and supplementary feed. **Social** Can be traffic hazard on roads and highways. Aggressive rutting stags can pose risk to humans.	Red deer are listed as one of the world's 100 worst invasive alien species by the International Union for Conservation of Nature. Red deer prefer open, grassy glades in forest. They are a grazer and browser, eating more woody matter and tree shoots when feed is scarce. They are known to be widely distributed in the North Burnett Region. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2OJiHcQ

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Rusa deer	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Rusa timorensis, Cervus timorensis ***Restricted Category 3, 4, 6***	*Rusa deer contained within a deer-proof fence (e.g. on farms or in game parks) are not declared pests. Farmed deer that escape captivity quickly revert to a wild state. Preventing more deer from entering the wild is a key control strategy.*	**Environmental** Can damage natural environment by eating native vegetation, damaging trees, spreading weed seeds and fouling water **Economic** Sometimes selectively consumes new growth and ringbarks orchard trees, leading to reduced orchard viability. In dry seasons, competes with cattle for pasture and supplementary feed. **Social** Can be traffic hazard on roads and highways.	Rusa deer prefer grassy plains bordered by dense brush or woodlands to retire to during daylight hours. They will graze on grass, but will also browse on other vegetation depending on season and availability of food. Feral rusa deer have a high to very high pest risk (highly invasive and high threat) and a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution. **Further information can be found at the Business Queensland website or go to https://bit.ly/2D0YR5E**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
Containment of known infestations.

NBRC

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Dutchman's Pipe	Vectors and spread	Impacts and threats	Invasion Characteristics (vine)
Aristolochia spp. ***Restricted Category 3***	*Dutchman's has been widely promoted as an unusual ornamental plant. Flowers are striking, reddish-purple, marked with white and yellow, shaped like traditional Dutchman's pipe. It is spread by seed and dumping of garden waste.*	**Environmental** Invades rainforest habitat. Resembles natural food plants of butterflies but poisons larvae when they feed. Threatens survival of rare birdwing butterfly (*Ornithoptera richmondia*).	Dutchman's pipe is popular in gardens and suburban backyards. It prefers moist, fertile soils and is a prime invader of rainforest. **Further information can be found at the Business Queensland website or go to http://bit.ly/2Wq6ESg**

Management Goal

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Fox	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Vulpes vulpes ***Restricted Category 3, 4, 5,6***	*The fox was introduced to Australia from England as a sport animal during the 1860s and became a pest species within 30 years.* *Today, foxes are widespread throughout most of mainland Australia.* *Foxes are usually active at night and threaten many agricultural and native species.*	**Environmental** Threat to long-term survival of many small marsupial species in Australia. Can significantly affect ground-nesting birds and turtles. **Economic** Inflicts significant impact on sheep and goat industries. Occasionally damages irrigation systems and horticultural crops. **Social** Can spread diseases to domestic animals	Foxes are widespread throughout most of Queensland and are adaptable to variety of habitats, including deserts and urban environments such as inner-city areas, parklands and airports. Control methods include shooting, trapping, fencing, baiting, and livestock guardian dogs, combined with land management. **Further information can be found at the Business Queensland website or go to http://bit.ly/2WtdVk6**

Management Goal

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Galvanised burr	Vectors and spread	Impacts and threats	Invasion Characteristics (perennial shrub)
Sclerolaena birchii ***Not declared however, everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.***	*Galvanised burr seeds germinate throughout the year but most germination occurs in autumn and spring. Seedlings flower 8 weeks after germination and produce viable seed by 12 weeks. When a plant dies its tap root breaks allowing the dead bush to roll in the wind. Seeds are distributed as stem segments and burrs break off.*	**Economic** Reduces wool values by causing vegetable fault. Dense infestations impede stock movement and block cultivation machinery. **Social** The spines and burrs are a considerable nuisance to shearers, stock and working dogs.	Over time, the density of galvanised burr populations will wax and wane. Numbers of plants fall close to zero during long droughts and rise sharply when seasonal conditions are more favourable to germination and growth. The slow breakdown of the woody burrs during long droughts can create large numbers of viable seeds in the soil (the seedbank). Adequate rainfall in winter will result in high germination rates of galvanised burr. When this is followed by rainfall in spring or early summer, a dense stand of galvanised burr will result. **Further information can be found at the Business Queensland website or go to** http://bit.ly/2Y7TjhR

Management Goal

Asset protection

Management Expectations

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Giant Parramatta Grass	Vectors and spread	Impacts and threats	Invasion Characteristics
Sporobolus fertilis ***Restricted Category 3***	*Seeds set throughout frost-free period of the year. Produces up to 85,000 seeds per square metre each year with initial seed viability of about 90%. Seeds can remain viable for up to 10 years.* *Seeds are spread by livestock, feral and native animals, vehicles, machinery and fast-flowing water.*	**Environmental** Causes significant degradation of natural areas. **Economic** Invades pastures and replaces more productive types of grass, especially after overgrazing or soil disturbance. Causes loss in carrying capacity and decreased production by up to 80%. Mature leaf blades are tough and difficult for cattle to graze. Loosens teeth of grazing cattle and horses.	Giant parramatta grass is a clumping grass that looks very similar to another weedy sporobolus grass, giant rat's tail grass. Giant parramatta grass adapts to a wide range of soils and conditions and is suited to conditions present in 60% of Queensland, including areas with low rainfall. **Further information can be found at the Business Queensland website or go to http://bit.ly/2ViyEul**

Management Goal

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Golden Dodder	Vectors and spread	Impacts and threats	Invasion Characteristics (parasitic plant)
Cuscuta campestris ***Not declared, however everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.***	*Golden dodder reproduces by vast numbers of tiny seeds, and sometimes also by stem fragments. These seeds and stem fragments are spread mostly in contaminated agricultural produce, water and may also be dispersed in mud attached to vehicles and by animals.*	**Environmental** Minor environmental weed in south-eastern Queensland, most concern in inland wetland areas **Economic** Attacks a wide range of naturalised species and native plants that are growing in grasslands, open woodlands, coastal vine thickets, riparian areas and wetlands.	Golden dodder is widely naturalised throughout the coastal and sub-coastal regions of Australia. It is most abundant in south-eastern South Australia, south-eastern Queensland and eastern New South Wales. It is a common weed of crops, that is also commonly found growing on plants and other weeds in pastures, gardens, parks, along waterways and along roadsides. It causes damage by absorbing food material from the host plant, but the dense mat of stems it produces can also cause shading of the ground vegetation layer. **Further information can be found at the Business Queensland website or go to http://bit.ly/2H0gCTX**

Management Goal

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Lantana	Vectors and spread	Impacts and threats	Invasion Characteristics (heavily branched shrub)
Lantana camara ***Restricted Category 3***	*Lantana flowers appear throughout most of the yea.* *Seed banks remain viable for at least 4 years.* *Spread is mainly via people dumping plants and fruit eating birds*	**Environmental** Forms dense infestations that smothers native vegetation. Destroys habitats of native animals. **Economic** Some varieties are poisonous to stock. Decreases carrying capacity and can be costly to control **Social** Thickets are impenetrable for animals, people and vehicles.	Lantana covers 5 million hectares throughout most coastal and hinterland areas of Australia, from north Queensland to southern New South Wales and including the Northern Territory and Western Australia. Lantana is a heavily branched shrub that can grow as compact clumps, dense thickets, and scrambling and climbing vines. It can smother native vegetation and form impenetrable stands. It grows in wide variety of habitats, from exposed dry hillsides to wet, heavily shaded gullies. **Further information can be found at the Business Queensland website or go to http://bit.ly/2WreSJR**

Management Goal

Asset protection

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Landholder

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Leucaena	Vectors and spread	Impacts and threats	Invasion Characteristics (shrub/small tree)
***Leucaena leucocephala* Not declared, however everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.**	*Leucaena is a small tree that has been planted for fodder in many tropical areas of the world, including Queensland. It sets seeds and flowers year-round. Seeds are spread by cattle, wind, water and machinery.*	**Environmental** Forms dense thickets, hindering movement of wildlife and excluding all other plants. **Social** Forms thickets along roadsides that can decrease visibility.	Leucaena is listed as a weed in New Guinea, Hawaii, western Polynesia and the USA. In Australia, it has naturalised in many areas and on a number of offshore islands. Unless heavily grazed or otherwise controlled, leucaena can spread rapidly to adjacent areas. As a weed, it is found on disturbed sites, in gardens and waste areas, and along creek lines and roadsides. **Further information can be found at the Business Queensland website or go to http://bit.ly/2DQabBX**

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

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Locusts	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Locusta migratoria and Austracris guttulosa ***Not declared, however, everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants and animals.***	*Rainfall triggers dispersal of mature adults during spring and summer following overwintering period.* *Biosecurity Queensland is responsible for coordinating locust control throughout Queensland.*	**Economic** Forms dense swarms that feed on winter crops, pasture and trees. Nymphs also cause significant crop damage, particularly in seedling sorghum. Can have large impact on crops, even at low densities.	Migratory locusts are the world's most widespread locust species, and are found throughout Africa, Asia and Australia. In Australia, they are found primarily in Queensland's Central Highlands. Swarms of migratory locusts can damage pasture and crops. Plagues of spur-throated locusts are less frequent than other locust plagues, but migrations to cropping areas can occur. **Further information can be found at the Business Queensland website or go to http://bit.ly/2VmcB60 and http://bit.ly/2H8zMH1**

Management Goal

Asset protection

Management Expectations

Landholder

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Madeira Vine	Vectors and spread	Impacts and threats	Invasion Characteristics (vine)
Anredera cordifolia ***Restricted Category 3***	*Madeira vine is spread by aerial tubers and sections of severed stem (seed production is rare in Australia). It is also spread by people moving and dumping plants.*	**Environmental** Madeira vine is a serious environmental weed that can degrade intact native forests, Smothers trees, shrubs and understorey species, can cause canopy collapse of mature trees Can grow as a ground cover, disrupting native seedling germination and growth. **Economic and social** Adds to infrastructure damage during floods by destabilising banks and creating increased resistance for floodwater Destruction of riverside vegetation by Madeira vine has led to increased bank erosion and water turbidity issues	Madeira vine is a vigorous climbing vine found in bushland, edges of rainforests, waterways, disturbed sites, waste areas, parks, gardens and roadsides. It is spread by aerial tubers and sections of severed stem (seed production is rare in Australia). Madeira Vine is very ornamental and have previously been planted in gardens and along roadsides in Queensland. **Further information can be found at the Business Queensland website or go to** http://bit.ly/2DSkyoO

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

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Mother of Millions	Vectors and spread	Impacts and threats	Invasion Characteristics (poisonous succulent)
Bryophyllum delagoense (syn. B. tubiflorum and Kalanchoe delagoensis), B. x houghtonii (syn. B. daigremontianum x B. delagoense, K. x houghtonii) ***Restricted Category 3***	*Each leaf produces small plantlets along its edge. It is spread by floodwater and establishes if pastures are in poor condition. It is also spread by animals, slashers, machinery and vehicles.*	**Environmental** Forms infestations in grasslands, open woodlands and coastal dunes. **Economic** Poisonous, particularly when flowering (newly exposed stock especially vulnerable). Affects use of stock routes **Social** Poisonous	Mother of millions establishes well in leaf litter or other debris on shallow soils in shady woodlands. It is predominantly found on roadsides, fence lines, and coastal dunes and around old rubbish dumps. It is very adaptable to dry conditions. **Further information can be found at the Business Queensland website or go to http://bit.ly/2V2z6bn**

Management Goal

Asset protection

Management Expectations

Landholder

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Containment of known infestations.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

House Mouse	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Mus domesticus ***Not declared, however, everyone has a GBO to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.***	*The house mouse is considered a pest because it eats a wide range of foodstuffs and reproduces rapidly. Field breeding occurs mostly in spring and early summer; however, breeding can occur at any time. First breeding commences from 5 weeks.*	**Economic** Causes serious damage to crops and pastures during plagues. **Social** Can transmit salmonella (which causes food poisoning) to human foodstuffs.	The house mouse was probably introduced to Australia from Europe by early settlers. Today, it is found throughout Australia and in other countries around the world. Mice are present in agricultural areas around long grass and crops. They may be found in and around sheds and homes. When seasonal conditions are favourable, mouse numbers can increase to a level where they become a serious pest, causing damage to crops, stored products and equipment. **Further information can be found at the Business Queensland website or go to http://bit.ly/2H6x8Tw**

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

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Parthenium	Vectors and spread	Impacts and threats	Invasion Characteristics (annual herb)
Parthenium hysterophorus ***Restricted Category 3*** ***Weed of National Significance***	*Introduced to North Burnett region through contaminated fodder.* *Seeds spread by water, vehicles, machinery and stock.* *Also spread by feral and native animals, and in feed and seed.*	**Environmental** Invades disturbed bare areas along roadsides, heavily stocked areas around yards, and watering points. **Economic** Invades pastures, reduces beef production. Costs cropping industries millions of dollars per year, competes with crops for nutrients and space. **Social** Pollen contains potent allergens that can cause reactions such as dermatitis and hay fever.	Parthenium can set viable seed within 2 weeks of germination, making it highly invasive. It is currently identified for containment in the specified districts and asset protection elsewhere in the North Burnett region. Parthenium has a high likelihood of establishing further throughout the North Burnett Region due to current and potential distribution and/or existing high-risk pathways. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2Ce5JP3

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
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NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Feral Pig	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Sus scrofa ***Restricted Category 3, 4, 6***	*Pigs were brought from Europe to Australia by the First Fleet in 1788 as livestock. Pigs soon escaped and established wild populations that have expanded over time. Today, it is estimated that Australia has up to 24 million feral pigs. Feral pigs are generally shy and nocturnal, but can be active any time of day.*	**Environmental** Spreads weeds and causes soil erosion. Preys on wide range of native species. Significantly affects marine turtle populations by eating eggs. Can carry diseases that affect native animals. **Economic** Damages almost all crops from sowing to harvest. Damages pasture by grazing and rooting. Can carry diseases and parasites that affect stock. **Social** Carry many diseases that affect people	Feral pigs inhabit about 40% of Australia, from subalpine grasslands to monsoonal floodplains. The greatest concentrations are in larger drainage basins, and swamp areas of coast and inland. Effective control requires integrated, collaborative approach, where all stakeholders participate in planned management program. The most effective strategy is to combine various control methods (including shooting, poisoning, trapping and fencing) with appropriate land management practices. **Further information can be found at the Business Queensland website or go to http://bit.ly/2vEfKit**

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Praxelis	Vectors and spread	Impacts and threats	Invasion Characteristics (annual herb)
Praxelis clematidea ***Not declared***	*Praxelis can invade crops, grasslands and conservation areas in northern and eastern parts of Queensland. Seeds are spread by water, wind, vehicles and animals.*	**Environmental** Invades environmental areas. **Economic** Invades pasture, where it can form dense stands that exclude other vegetation.	Prexalis is found in northern and eastern Queensland along roadsides and railways, and in disturbed areas and pastures. It flowers mostly during summer and autumn and each plant produces hundreds of small black seeds. It is easily confused with *Ageratum houstonianum* (Blue Billygoat Weed) however Praxelis has serrated leaves and a more pungent smell. **Further information can be found at the Business Queensland website or go to http://bit.ly/2VeYiAl**

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Prickly Pear	Vectors and spread	Impacts and threats	Invasion Characteristics (spiny succulent)
Opuntia stricta ***Prohibited***	*Prickly pear reproduces sexually and asexually. Asexual reproduction (cloning) occurs when pads or fruits on ground take root and produce shoots. Also spread by birds and animals eating fruit and excreting viable seed. Can be spread by animals and floods moving broken pads long distances.*	**Environmental** Vigorous in hot, dry conditions, causing other plants to lose vigour or die. **Economic** Competes with and invades pastures. Impedes stock movement and mustering. **Social** Can harm animals and prevent them from eating.	The preferred habitat varies depending on species and can range from streams, banks, and roadsides to woodlands. Pads can survive long periods of drought before weather conditions allow them to set roots. Biological control options available – the most successful of these species were the Cactoblastis stem-boring moth and the four cochineal mealybugs. Several other agents remain but not in sufficient numbers to provide control. Can be confused with tree pear however its stem segments are velvety and it has orange flowers and reddish-purple fruit. **Further information can be found at the Business Queensland website or go to http://bit.ly/2ZVO1YF**

Management Goal

Asset protection

Management Expectations

Landholder

All sightings to be reported to Biosecurity Queensland within 24 hours.
Consistent monitoring and management of occupied land.

NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Rabbit	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Oryctolagus cuniculus ***Restricted Category 3,4,5,6*** ***It is an offence to keep domestic rabbits in Queensland without a permit.***	*Rabbits were brought to Australia by the First Fleet as food animals. Today, rabbits are one of Australia's major agricultural and environmental pests, costing between $600 million and $1 billion annually.* *Introducing and selling rabbits in Queensland is illegal and penalties apply.*	**Environmental** Degrades native vegetation by eating seedlings, preventing vegetation from regenerating. Competes with native animals for food Provides food for (feral) predator species **Economic** Reduces pasture production, including reserves for dry seasons, which also reduces livestock and wool production. Reduces crop production and product quality. Feral populations are expensive to control. **Social** Damages infrastructure, gardens and buildings.	Rabbits are spread throughout Queensland, with high populations in Granite Belt and south-west; moderate populations in Maranoa, southern Warrego and the north Burnett. Rabbit distribution correlates with soil types, especially types suitable for burrowing. They also occupy tussock grasses and areas littered with fallen timber and live in and under buildings, in old machinery and storage containers, and in old waste facilities. **Further information can be found at the Business Queensland website or go to http://bit.ly/2J3LRAR**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.

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NBRC

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Singapore Daisy	Vectors and spread	Impacts and threats	Invasion Characteristics (vigorous ground cover)
Sphagneticola trilobata ***Restricted Category 3***	*Singapore daisy has previously been planted as an ornamental species in domestic gardens and public spaces. It spreads mainly by cuttings from slashing and pruning –all small pieces can regrow.*	**Environmental** Spreads rapidly and smothers seedlings, ferns and shrubs. Invades environmental areas.	Singapore daisy is found in gardens, parks, bushland, disturbed areas, along roadsides and footpaths. It spreads rapidly and out-competes native plants, invades lawns, irrigated areas, and areas around drains. **Further information can be found at the Business Queensland website or go to http://bit.ly/2DRzDqZ**

Management Goal

Asset protection

Management Expectations

Landholder

Consistent monitoring and management of occupied land.
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NBRC

Education of all stakeholders to contain existing infestations and prevent widespread establishment.

Velvet Tree Pear	Vectors and spread	Impacts and threats	Invasion Characteristics (spiny succulent)
Opuntia tomentosa ***Restricted Category 3***	*Tree pear reproduces sexually and asexually. Asexual reproduction (cloning) occurs when pads or fruits on ground take root and produce shoots. Also spread by birds and animals eating fruit and excreting viable seed. Can be spread by animals and floods moving broken pads long distances.*	**Environmental** Vigorous in hot, dry conditions, Dense infestations compete with native vegetation, limiting the growth of small shrubs and groundcover species **Economic** Competes with and invades pastures. Impedes stock movement and mustering. **Social** The spines are capable of causing serious injury to animals and humans.	The preferred habitat varies depending on species and can range from streams, banks, and roadsides to woodlands. Pads can survive long periods of drought before weather conditions allow them to set roots. Biological control options available – the most successful of these species were the Cactoblastis stem-boring moth and the four cochineal mealybugs. Several other agents remain but not in sufficient numbers to provide control. **Further information can be found at the Business Queensland website or go to http://bit.ly/2ZVO1YF**

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

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Wild Dog	Lifecycle and spread	Impacts and threats	Invasion Characteristics
Canis familiaris, C. familiaris dingo, C. lupus familiaris, C. lupus dingo ***Restricted Category 3, 4, 6***	*There is higher activity in autumn (mating season). They prefer more inaccessible areas during whelping and rearing seasons (winter and spring).* *Wild dogs use roads, creeks and fencelines as travel ways.*	**Environmental** Competes directly with dingoes for food and living spaces, particularly in refuge areas. Threatens biodiversity Hybridisation between dingoes and other wild dogs is swamping dingo gene pool. **Economic** Causes significant stock losses. Lowers profitability from bitten stock. Creates risk of disease being spread to domestic animals (e.g. hydatidosis, neospora). **Social** Can spread hydatids and other diseases Can attack pets in urban/fringe areas	Wild dogs are found throughout Queensland in varied habitats. The term 'wild dog' refers to purebred dingoes, dingo hybrids, and domestic dogs that have escaped or been deliberately released and now live in the wild. Effective control requires integrated, collaborative approach across all tenures by all stakeholders at landscape (rather than property) level in cooperative and coordinated manner. **Further information can be found at the Business Queensland website or go to http://bit.ly/2LtlVkl**

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

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Yellow Bells	Vectors and spread	Impacts and threats	Invasion Characteristics (Densely branched shrub)
Tecoma stans ***Restricted Category 3***	*Yellow bells flowers and produces profuse amounts of winged seeds in summer. Seeds are spread by wind, water and suckering.*	**Environmental** Forms dense thickets that can choke native plants. Establishes in disturbed bushland.	Yellow bells prefers disturbed areas, grasslands, waterways and along roadsides. It readily invades native bushland and roadsides. **Further information can be found at the Business Queensland website or go to** https://bit.ly/2wNSYG0

Management Goal

Asset protection

Management Expectations

Landholder

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NBRC

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Yellow Ginger	Vectors and spread	Impacts and threats	Invasion Characteristics (annual herb)
Hedychium flavescens ***Restricted Category 3***	*Yellow ginger's popularity as a garden plant increases the risk of it spreading in Queensland.* It *probably spreads from broken rhizomes. The main form of spread is by people dumping unwanted plants.*	**Environmental** Forms dense stands. Suppresses or replaces native plants.	Yellow ginger can out-compete native plants and is a major weed in a number of countries, including New Zealand and Hawaii. It prefers rainforests, moist forests and areas along watercourses. It is also known as cream garland lily, cream ginger, cream ginger lily, wild ginger and yellow ginger lily. **Further information can be found at the Business Queensland website or go to http://bit.ly/2vEib4q**

Management Goal

Asset protection

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Landholder

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