

BALONNE SHIRE BIOSECURITY PLAN
2019 - 2024
BALONNE SHIRE COUNCIL



Executive summary

The Balonne Shire Biosecurity Plan provides strategic direction for the management of pest plants and animals in the Balonne local government area. It covers a period of five years and is consistent with principles of pest management, state pest management strategies, guidelines for pest management and Balonne's community interest. It integrates with the South West Natural Resource Management Plan 2015-2025, the Regional Natural Management Plan for the Border Rivers and Maranoa-Balonne 2015-2025 and Biosecurity Plans / Pest Management Plans of neighbouring local government areas.

The goals of this plan are to:

- engage all stakeholders within the Balonne Local Government Area.
- work together in implementing ongoing, coordinated and effective management of all priority pests.

The plan identifies strategic actions that address six main objectives:

1. Education and awareness - the community (including local businesses and government) is informed, knowledgeable and has ownership of pest plant and animal management.
2. Commitment, roles and responsibilities – Council and the community are committed and enabled to participate in the coordinated management of pest plants and animals.
3. Monitoring and assessment - reliable information is available as a basis for decision-making.
4. Strategic planning and management - established strategic directions are maintained and owned by the community.
5. Prevention and early intervention – the introduction, establishment and spread of pest plants and animals is prevented.
6. Integrated management systems - integrated systems for managing the impacts of established pest plants and animals are developed and widely implemented.

The plan prioritises pest plants and animals within the Balonne local government area into three categories (high, medium and low) and also identifies local alert species (that are not currently known from the Balonne region but could cause significant impacts if introduced). Descriptions, impacts, control measures and strategic actions are provided for high priority species.

Acknowledgements

Balonne Shire Council acknowledges the Traditional Custodians of the land within the Balonne Shire Council local government area. We pay respect to Elders past, present and emerging. Balonne Shire Council is committed to honouring Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to the land, waters and seas and their rich contribution to society.

We thank everyone who provided their valuable time and knowledge to inform this Biosecurity Plan, particularly landholders and other community members who attended workshops and completed surveys during plan development. Their input was critical to developing a plan that will guide a collaborative cross-tenure approach to effectively manage pests and their impacts on the community.

We also gratefully acknowledge the support and expert input from Biosecurity Queensland, Balonne Shire's Wild Dog Advisory Committee, Queensland Murray Darling Committee and Agforce.

Balonne Shire Council would like to acknowledge and thank Ecosure Pty Ltd for preparing this Biosecurity Plan.

Glossary, acronyms and abbreviations

BROC	Border Regional Organisation of Councils
BSCWDAC	Balonne Shire Council Wild Dog Advisory Committee
Council	Balonne Shire Council
DAF	Department of Agriculture and Fisheries
DES	Department of Environment and Science
DNRME	Department of Natural Resources, Mines and Energy
Invasive biosecurity matter	Pest plants and animals that are listed in the <i>Biosecurity Act 2014</i> as prohibited matter in Schedule 1, parts 3 and 4 or restricted matter in Schedule 2, part 2
LGA	Local Government Area
LGAQ	Local Government Association of Queensland
NRM	Natural resource management
Pest	Introduced plant or animal species that is either: <ul style="list-style-type: none">- invasive biosecurity matter listed in the <i>Biosecurity Act 2014</i>- assessed to have significant environmental, social and / or economic impacts within the Balonne LGA
PMP	Pest Management Plan
PPMP	Property Pest Management Plan
PWG	Pest Working Group
QMDC	Queensland Murray-Darling Committee
ROC	Regional Organisation of Councils
SQNRM	Southern Queensland Natural Resource Management
TMR	Department of Transport and Main Roads
WoNS	Weed of National Significance

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1 Introduction

The Balonne Biosecurity Plan (the Plan) provides a coordinated approach to the management of pest plants and animals within the Balonne Local Government Area (LGA). The Plan:

- sets achievable objectives and strategies to manage pest plants and animals in the LGA
- prioritises pest plants and animals currently present or with high potential to occur in the LGA
- identifies the roles and responsibilities of all stakeholders and provides mechanisms to inform, support and integrate pest management activities
- outlines processes to monitor and evaluate the effectiveness of the plan.

For the purposes of this plan, a pest plant or animal species is defined as either:

- an invasive biosecurity matter listed in the *Biosecurity Act 2014* or
- assessed to have significant environmental, social and / or economic impacts within the Balonne LGA.

1.1 Balonne Local Government Area

The Balonne LGA covers an area of approximately 31,074 km² in South West Queensland with an estimated population of 4,334 (Queensland Government 2019). Of these, about 2,400 live in St George, its largest town and administrative centre (ABS 2017). Important land uses within the LGA include:

- grazing (primarily beef cattle, but also meat sheep, sheep for wool production, and goats)
- dry-land agriculture (primarily cereal crops such as wheat, oats, and sorghum)
- irrigated agriculture (primarily cotton)
- viticulture and vegetable production
- conservation and natural environments (including four national parks and four state forests)
- oil, gas, and mineral resources extraction (and associated infrastructure)
- transport infrastructure (road, rail, and pipelines).

The LGA contains a broad diversity of landforms and vegetation types, including:

- brigalow forests and woodlands on fertile clay soils
- eucalypt forest and woodlands on sandstone landscapes, basalt soils, and granite landscapes

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- cypress pine woodland and forest on sandstone landscapes
 - mulga woodlands on sandy earths
 - dry rainforest and softwood scrubs
 - riparian forests along waterways
 - grasslands and open woodlands on floodplains and fertile clay soils
 - aquatic vegetation.

The Balonne LGA lies at the boundary of two biogeographic regions. The eastern portion of the region lies in the Brigalow Belt Bioregion, while the western portion is in the Mulga Lands Bioregion.

1.2 Pest plants and animals - impacts and spread

Pest plants and animals can impact on:

- the economy (e.g. reduce productivity and profitability of grazing, agriculture, transport and exports)
- human / animal health (e.g. spread of disease, public safety risk, toxicity, allergens, increased risk of fire)
- environmental values (e.g. compete with native species, predate on native species, alter ecosystem function, integrity and species composition and degrade physical landscape features)
- social amenity (e.g. reduced aesthetics and impeded access in recreational areas).

The introduction and dispersal of pests in the region are influenced by a variety of natural and human processes. Natural dispersal processes such as wind, water and movement via birds are impossible to restrict. However, dispersal caused by human activities can be managed by implementing coordinated strategies at local, regional, state, national and international levels. Some features of the Balonne LGA that affect the introduction and spread of pest plants and animals include the following:

- Balonne lies within two bioregions and supports a wide variety of ecosystems, so provides suitable conditions for a diverse range of pest plants and animals.
- Primary production in the Balonne LGA is principally grazing, but also includes cereal crops such as wheat, oats, and sorghum. Agricultural activities and seasonal employment (e.g. backpackers) associated with periods of high agricultural production may result in the introduction and spread of pest plant material. Surrounding LGAs similarly support large agricultural areas. Balonne can assist in managing the spread of agricultural weeds across LGA (and state) boundaries.
- Projected growth in the coal seam gas industry (particularly in the northern part of the LGA) is likely to result in increased vehicle traffic across rural land and therefore increased risk of spreading pest plant seeds.

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- The LGA includes the catchment of several rivers of the Queensland Murray Darling Basin. As a result, parts of the LGA are susceptible to periodic flooding, which can spread pest plant material. Repairs to associated road damage may also require earthmoving equipment moving throughout the LGA, potentially aiding the dispersal of pest plant seeds.
 - Balonne LGA includes large areas of natural environments (including state forests). Such areas often have limited access and may require a specialised approach to managing biosecurity risks.
 - Domestic animal escapees and roaming pets can have the same negative impacts as pest animals, and can also contribute to the growth of pest animal populations.

1.3 Legislation

The Queensland *Biosecurity Act 2014* commenced in July 2016 and establishes an effective biosecurity system that minimises biosecurity risks and facilitates a coordinated response to biosecurity events. The Act imposes a general biosecurity obligation (s23) on persons to prevent or minimise the impact of biosecurity risks on human health, social amenity, the economy and the environment.

The Act prescribes the following:

- Prohibited Biosecurity Matter – may be a pest animal, weed, disease, exotic fish or insect pest not found in Queensland (and requires a permit to keep). If it was to enter Queensland it would significantly impact our health, way of life, the economy and the environment. Listed in Schedule 1 or included in a prohibited matter regulation or emergency prohibited matter declaration. If prohibited matter is found, it must be reported to an inspector or local government authorised person within 24 hours.
- Restricted Biosecurity Matter – may be a pest animal, weed, disease, exotic fish or insect pest found in Queensland. Restricted matter is considered to have a significant impact on human health, social amenity, the economy and the environment. Listed in Schedule 2 or included in a restricted matter regulation. Specific actions are required to limit the impact of this matter by reducing, controlling or containing it.

Chapter 3 of the Act outlines the functions and obligations of local governments in relation to biosecurity matters. Under the Act, local government must:

- manage invasive biosecurity matter for their LGA (s48)
- have a Biosecurity Plan for managing invasive biosecurity matter for its LGA (s53), which may contain:
 - achievable objectives
 - strategies, activities and responsibilities for achieving the objectives
 - strategies to inform the local community about the content of the plan and achievement of its objectives
 - methods to monitor implementation of the plan and evaluate its effectiveness

- other matters the local government considers appropriate for management of invasive biosecurity matter for its LGA
- make the plan freely available for inspection by members of the public.

While the Act covers a range of biosecurity matters (including contaminants, diseases, pathogens and living things other than humans), the obligations of a local government are limited to invasive biosecurity matter (s48). This is defined as a plant or animal that has, or is likely to have, an adverse impact on human health, social amenity, the economy or the environment. Types of biosecurity matter identified in the Act and the scope of a local government biosecurity plan to manage them are summarised in Table 1. Some pests that are not generally within the scope of a local government biosecurity plan have been included in this plan. Examples include species that are the responsibility of state and/or Commonwealth agencies such as European carp (*Cyprinus carpio*) and species that are not restricted matters such as plague locusts. It is noted that a local government can only use powers under the Act to manage or enforce compliance for invasive biosecurity matter.

There are other serious biosecurity risks beyond the scope of this Plan that may impact Balonne Shire, and everyone in the community has an obligation to report these to the relevant government agency (or Council if there is uncertainty about the responsible agency). For example, anthrax is a notifiable disease and any suspected case should be immediately reported to the Queensland Department of Agriculture and Fisheries (DAF).

In some instances, native plants and animals impact landholders (e.g. kangaroos, wedge-tailed eagles, crows, pimelea) and can be perceived as pests. For example, an abundant population of kangaroos can compete with livestock for food. However, native animals are not included in the scope of the Plan and are managed separately in accordance with the Queensland *Nature Conservation Act 1992*.

Table 1 Biosecurity matter and scope of local government biosecurity plans. Responsibility for the prevention and management of other pests, shaded grey, is shared between state and Commonwealth government agencies.

	Within scope of local government biosecurity plans (Invasive Biosecurity Matter)	Outside the scope of local government Biosecurity Plans
Prohibited Matter	Schedule 1 Part 3 – Invasive Plants Part 4 – Invasive Animals	Schedule 1 Part 1 – Aquatic diseases, parasites and viruses Part 2 – Animal diseases, parasites and viruses Part 5 – Marine animals and plants Part 6 – Noxious fish Part 7 – Prohibited matter affecting plants Part 8 – Tramp ants
Restricted Matter	Schedule 2 Part 2 – Restricted matter – invasive biosecurity matter	Schedule 2 Part 1 – Restricted matter – other than invasive biosecurity matter

The Act identifies seven categories of restricted matter, which must be managed in specific ways (Table 2). Invasive biosecurity matter excludes categories 1 and 7 restricted matter. It is important to note that everyone has a general biosecurity obligation under the Act to take all

reasonable and practical measures to prevent or minimise the biosecurity risk associated with pests in all categories.

Table 2 – Categories of Restricted Matter under the *Biosecurity Act 2014*. A pest may be included in several categories. For example, a European fox falls into categories 3, 4, 5 and 6.

Category	Action required	Restricted Matter included
Category 1	Must be reported to a Department of Agriculture and Fisheries inspector within 24 hours of becoming aware of its presence	Red imported fire ants, electric ants, Asian honey bees, some animal pathogens, aquatic pathogens
Category 2	Must be reported to an inspector or local government authorised person within 24 hours of becoming aware of its presence.	Certain noxious fish, weeds and pest animals such as red-eared slider turtles
Category 3	Must not be distributed or disposed of. This means it must not be 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.	Weeds, pest animals and noxious fish such as gambusia, wild dogs
Category 4	Must not be moved to ensure that it is not spread into other areas of the state.	Specific weeds, pest animals and noxious fish such as Hudson pear, feral pig or giant cichlid
Category 5	Must not be possessed or kept under your control, unless authorised under a permit of the Act or another Act. These pests have a high risk of negatively impacting on the environment.	Weeds, pest animals and noxious fish such as miconia, rabbits, carp
Category 6	Must not be possessed or kept under your control. This category of restricted matter must not be fed, except for the purpose of preparing for or undertaking a control program.	Invasive animals such as feral deer, foxes, rabbits and wild dogs and noxious fish such as carp, gambusia and tilapia
Category 7	A person who has category 7 restricted matter must, as soon as practicable, kill the restricted matter and dispose of it in the way prescribed under regulation.	Noxious fish such as carp, gambusia and tilapia

A local government can declare a pest species using a local law under the *Local Government Act 2009*. Currently Council has not declared any pest plants or animals.

The Biosecurity Plan links to numerous other legislative and planning processes at Commonwealth, state, regional and local levels. It integrates with the South West Natural Resource Management Plan 2015-2025, the Regional Natural Management Plan for the Border Rivers and Maranoa-Balonne 2015-2025 and Biosecurity Plans / Pest Management Plans of neighbouring local government areas (i.e. Maranoa Regional Council, Paroo Shire Council, Goondiwindi Regional Council and Western Downs Regional Council). Relevant legislation, plans and strategies are summarised in Appendix 1.

1.4 What does this mean for me?

The *Biosecurity Act 2014* shifts the management of pests and other biosecurity risks from a

prescriptive approach to a risk-based system that considers the likelihood and consequences of biosecurity risks. In practical terms, this means that a person or organisation must:

- understand the biosecurity risks associated with their activities
- take all reasonable and practical steps to prevent or minimise each biosecurity risk.

The Balonne Biosecurity Plan identifies and prioritises invasive pest species within the Balonne LGA and provides for the coordinated and effective management of these pests. Key stakeholders involved in implementing, monitoring and reviewing the Biosecurity Plan are summarised in Section 2.7. Private landholders and occupiers should comply with the following general biosecurity obligations:

- be aware of the pest plants and animals that could be on your property
- manage any pests appropriately according to the Biosecurity Plan and relevant regional or state legislation
- identify and manage possible biosecurity risks when transporting or discarding material that may contain pests (e.g. weeds in soil, potting mix, stock feed or animal manure).

Advice and assistance in the identification and management of pests can be obtained from numerous sources, including Council, regional groups (e.g. Southern Queensland Natural Resource Management [SQNRM]) and state agencies (e.g. Biosecurity Queensland, DAF).

Useful online information sources include:

- Biosecurity matters in Queensland including weeds and pest animals
www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases
- Weed and pest animal fact sheets
www.daf.qld.gov.au/plants/weeds-pest-animals-ants/educational-resources-and-careers/publications/fact-sheets
<http://keyserver.lucidcentral.org/weeds/data/media/Html/index.htm#A>
- Australian invasive species
www.environment.gov.au/biodiversity/invasive-species
- Interactive maps of weed distribution in Queensland
<https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/pest-mapping/distribution-maps>
- Interactive identification key for weeds of Australia
www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/identification

2 Plan development and implementation

2.1 Plan development

Development of the plan incorporated the following processes:

- review of relevant legislation, plans, strategies and guides in the LGA, the southern Queensland region, the state and Australia
- review of existing pest information
- community engagement (workshops and survey)
- consultation with internal Council stakeholders and external stakeholders
- five landholder workshops held from 19th to 23rd November 2018 to seek input on biosecurity issues and identify and prioritise pests within the Balonne LGA; attended by a total of 70 participants from the following stakeholder groups:
 - Balonne Shire Council
 - Biosecurity Queensland, DAF
 - Property owners and land managers
 - Balonne Shire Council Wild Dog Advisory Committee (BSCWDAC)
 - Agforce
 - Queensland Murray-Darling Committee (QMDC) Rangers
 - Ecosure Pty Ltd
- prioritisation of pests using a consistent and transparent system
- internal reviews by Council
- responses to a public exhibition period of the draft Plan
- review and adoption by Council.

2.2 Pest distribution

Distribution data is limited for many pest species in the Balonne LGA, so extent has been assessed using a combination of state government pest mapping, known records and local knowledge of pest management officers and community members.

2.3 Pest prioritisation

Pests were prioritised against eight attributes within three categories (pest status, potential impact of the pest and capacity to manage the pest). Attributes and the associated scoring system are shown in Table 3.

Table 3 - Pest Prioritisation Scoring System used in Balonne LGA

Category	Attribute	Score			
		3	2	1	0
Status	National status	National alert list or national eradication program	Weed of National Significance (WoNS) or national feral animal list	Not scored	Not scored
	State declaration	Invasive prohibited matter	Invasive restricted matter or restricted matter - noxious fish	Not scored	Not scored
Potential impact	Environmental impact	Major impact on biodiversity and/or riparian areas	Moderate impact on biodiversity and/or riparian areas	Minor impact on biodiversity	No impact
	Social impact	Major risk to public health / safety (e.g. fatality) or amenity	Moderate risk to public health / safety / amenity	Minor annoyance	No impact
	Economic impact	Major threat to primary production, industry or transport	Moderate threat	Minor threat	No impact
Capacity to manage pest	Current / potential distribution	Localised with high potential to spread further in / beyond LGA	Widespread with moderate potential to spread further	Widespread with little risk of further spread	Not scored
	Invasiveness	Rapid dispersal mechanisms and high population growth rate	Moderate dispersal and population growth rate	Slow dispersal and population growth rate	Not scored
	Achievability	Population small and can be effectively contained / eradicated	Population large but can be effectively contained / reduced OR population small but no effective control	Population large and difficult to contain with current controls	Not scored

Scores for each attribute were combined to provide a total prioritisation score, which was used to categorise each pest species as High, Medium or Low priority as shown in Table 4. Prioritisation scores and categories are provided in Section 4.1.

Table 4 - Prioritisation categories

Priority	Score
Low	0-9
Medium	10-14
High	15+

The Plan also identified some pests as local alert species. These species are not currently known from the Balonne LGA but could cause significant impacts if introduced. Local alert species are listed in Appendix 2.

The Plan focuses on high priority pests, but also considers medium and low priority pests and local alert species.

2.4 Pest management categories

The Biosecurity Plan specifies four pest management categories, based on priority and current and potential distribution of the species within the LGA (Table 5).

Table 5 - Management categories with associated actions and targets

Management category	Key actions	Target
Prevention	Effective weed hygiene Alert community Stakeholder consultation	No incursions within LGA
Early detection and eradication	Targeted and opportunistic surveys Targeted control program timed to prevent all reproduction of the pest species	No populations of new pests established in LGA
Containment	Containment zones identified, promoted and managed to prevent spread	Infestations contained or reduced to scale that can be eradicated (i.e. species can be moved to eradication category) No spread of pests outside containment zones
Asset protection	Widespread pests are managed to reduce impacts on high value assets	Buffers maintained Key assets protected Impacts mitigated

2.5 Plan implementation and review

Council will coordinate implementation of the Biosecurity Plan and will regularly review and update the Plan with the assistance of the Pest Working Group (PWG). The PWG will comprise a group of key people with knowledge and expertise in the management of pests in the Balonne LGA. The PWG will:

- communicate issues raised by stakeholders
- communicate outcomes of PWG meetings to stakeholders
- regularly review and update list of new pests in the “prevention” category
- review the need for quarantine zones required to manage priority pests in the “prevention” and “early detection and eradication” categories
- review annual reports
- assist in the review of Annual Work Plans
- assist in the development of new Annual Pest Action Plans as required
- assist in facilitating the development of specific pest management plans for high priority pest species
- advise on new and emerging weeds
- advise of any new pest control and monitoring techniques
- recommend a species for declaration under a local law.

2.6 Plan duration

The duration of the Plan is five years from the date of adoption, after which time it will be reviewed by Council and the PWG.

2.7 Stakeholders

Stakeholders for monitoring and managing pests in the LGA and region, including roles and responsibilities, are shown in Table 6.

Table 6 – Biosecurity Plan stakeholders

Area	Stakeholder and role
Commonwealth Government	<p>The Department of Agriculture and Water Resources coordinates the management of biosecurity and quarantine systems across Australia. It directs national responses to outbreaks of new pest species using the Biosecurity Incident Management System. It develops and coordinates emergency response plans, including guidelines, templates and standard operating procedures.</p> <p>The Invasive Plants and Animals Committee provides advice on weeds, vertebrate pest animals and freshwater invertebrate pests. The Committee developed the Australian Pest Animal Strategy 2017-2027 and the Australian Weeds Strategy 2017-2027 to provide guidance on best practice management to protect Australia's economy, environment and social wellbeing.</p>
State Government	<p>Biosecurity Queensland is an agency within DAF that coordinates efforts to prevent, respond to, and recover from pests and diseases that threaten Queensland's economy and environment. It works closely with local governments, communities and other stakeholders to minimise impacts of weeds and pest animals. DAF developed the Queensland Biosecurity Strategy 2018-2023 to provide a biosecurity system framework to protect the state's agricultural, environmental and social values.</p> <p>Numerous other agencies within the Queensland government are involved in the management of land or infrastructure in the Balonne LGA, including:</p> <ul style="list-style-type: none"> · DAF · Department of Natural Resources, Mines and Energy (DNRME) · Department of Transport and Main Roads (TMR) · Department of Environment and Science (DES) · Queensland Rail · Ergon Energy · Powerlink. <p>State agencies operating within Balonne LGA are reasonably expected to have knowledge on biosecurity risks that affect people, economy and the environment. Reasonable and practical measures must be taken to reduce risks of invasive biosecurity matter under their control.</p>
Local Government	<p>Queensland local government authorities in and adjoining the Balonne LGA, including:</p> <ul style="list-style-type: none"> · Maranoa Regional Council · Paroo Shire Council · Goondiwindi Regional Council · Western Downs Regional Council. <p>Local governments are required to develop, adopt and implement Biosecurity Plans and manage pests within their LGA.</p>
Pest Working Group	<p>The Pest Working Group (PWG) will be established by Council and will comprise a group of key people with knowledge and expertise in the management of pests in the Balonne LGA. The PWG will assist in the implementation and review of the Biosecurity Plan.</p>

Area	Stakeholder and role
Stakeholder Groups	Stakeholder groups e.g. The Wild Dog Advisory Committee (WDAC) may be established to facilitate and coordinate priority invasive pest management.
Industry	Businesses operating within Balonne LGA are reasonably expected to have knowledge on biosecurity risks that affect people, economy and the environment. Reasonable and practical measures must be taken to reduce risks of invasive biosecurity matter under their control.
Regional Organisations	<p>Numerous regional organisations are involved in natural resource management (including pest management) within Queensland.</p> <p>SQNRM has been established to oversee the strategic delivery of community based natural resource management across the region. This includes Swift NRM which is the consulting service of SQNRM.</p> <p>The Local Government Association of Queensland (LGAQ) is the peak body for local government in Queensland. It is a not-for-profit association that assists local councils in their dealings with state and federal government, business and the community. The LGAQ supports Regional Organisations of Councils (ROCs), including the Border Regional Organisation of Councils (BROC).</p>
Local Community Groups	Local groups such as fishing clubs and off-road 4WD groups have a responsibility to ensure their activities do not result in the increased spread of invasive biosecurity matter.
Private Landholders and Occupiers	Members of the local community who own and occupy land in the Balonne LGA, including urban, peri-urban and rural areas. Reasonable and practical measures must be taken to reduce risks of invasive biosecurity matter under their control.

3 General strategic plan

3.1 Vision

Reduce the impact of invasive biosecurity matter on human health, social amenity, the economy and environment in the Balonne Shire through the implementation of strategic actions. A high degree of biosecurity buy-in, cooperation, and data sharing between Council, agencies, landholders, the community and other stakeholders will be evident over the five-year life of the Plan.

3.2 Goals

Goals of the Plan are to:

- i. engage all stakeholders within the Balonne LGA
- ii. work together in implementing ongoing, coordinated and effective management of all pests
- iii. focus investment on reducing the impact of 'high priority' invasive pests.

3.3 Objectives and strategic actions

The Plan will target the six objectives in Table 7. Strategic actions to achieve these objectives are prioritised in the following sections to assist Council in allocating resources.

Table 7 - Biosecurity Plan Objectives

	Desired Outcome	Objective
1	Education and Awareness	The community (including local businesses and government) is informed, knowledgeable and has ownership of pest plant and animal management.
2	Commitment, Roles and Responsibilities	Council and the community are committed and enabled to participate in the coordinated management of pest plants and animals.
3	Monitoring and Assessment	Reliable information is available as a basis for decision-making.
4	Strategic Planning and Management	Established strategic directions are maintained and owned by the community.
5	Prevention and Early Intervention	The introduction, establishment and spread of pest plants and animals is prevented.
6	Integrated Management Systems	Integrated systems for managing the impacts of established pest plants and animals are developed and widely implemented.

Strategic actions are prioritised as:

- High priority – will be actioned with ongoing resourcing
- Medium priority – will be actioned subject to resources, such as grant funding.

3.3.1 Desired Outcome 1 - Education and Awareness

The community (including landholders, local businesses and government) is informed, knowledgeable and has ownership of pest plant and animal management.

Table 8 - Strategic actions addressing Objective 1

No	Strategic action	By whom	Priority	Success indicator
1.01	Provide information regarding pests, including alert species, best practice control methods, and Council pest management to the community, using media such as local newspapers, 'Beyond the Wire' newsletter, radio, television and websites.	Council, DAF Landcare, SQNRM	High	Best practice control information provided. Articles or advertisements are published.
1.02	Establish and promote access points for the community to obtain pest information (e.g. Council external website, libraries). Information sources include Biosecurity Plan, pest fact sheets, best practice pest management, weed hygiene.	Council, DAF, industry groups	High	Pest information readily available to the community.
1.03	Advise landholders of their legislative responsibilities.	Council, DAF	High	Reduction in breaches of the <i>Biosecurity Act 2014</i> .
1.04	Continue productive working relationships with elected members, connecting them with areas of community concern / focus, pest management coordination, legal responsibilities and resourcing.	Council	High	Information provided. Elected members actively involved in pest management program.
1.05	Consult with local Aboriginal groups to identify potential pest impacts on cultural heritage values.	Council	High	Potential cultural heritage impacts identified and appropriately managed.
1.06	Ensure appropriate Council staff undertake relevant training (e.g. pest identification and best practice management approaches and techniques) and attend relevant committees, working groups, workshops and forums (e.g. state pest conferences).	Council	High	Staff are appropriately trained and regularly attend relevant workshops, forums and events
1.07	Raise community awareness of potential introduction of pests and appropriate hygiene protocols.	Council, DAF, stakeholders (state and local government, industry), community groups	High	Hygiene requirements understood by relevant stakeholders.

No	Strategic action	By whom	Priority	Success indicator
1.08	Keep the regional organisation of Councils, DAF and SQNRM aware of pest plant and animal activities and management within the Balonne Shire by participating in regional pest management meetings.	Council, PWG	High	At least two regional meetings attended per year. Balonne Shire Council pest management priorities reflected in regional plans and activities.
1.9	Communicate to landholders how they can be involved in coordinated pest animal control programs.	Council	High	Information on coordinated pest animal control programs distributed to the community.
1.10	Provide landholders with information on legislated requirements for the management of native wildlife and vegetation.	Council	High	Legislative responsibilities made available for landholders prior to erecting exclusion fences.
1.11	Educate the community about restrictions on keeping pest animals as pets and the importance of responsible pet ownership.	DAF, Council	High	Reduced number of community complaints and enquiries regarding feral and domestic pets.
1.12	Educate the community about restrictions on planting / growing pest plants and benefits of planting natives (e.g. Grow Me Instead program).	DAF, Council	High	Number of awareness activities, events, information requests completed. Information resources available.
1.13	Build partnerships with local Landcare and tourist organisations to organise pest plant and animal awareness raising activities at local events (including shows, field days, Agforce / grower meetings and popular tourist sites). For example, display the Parthenium trailer at the St. George and Dirranbandi Shows.	Council, Landcare, tourist organisations	Medium	Pest plant and animal resource material is displayed at least two annual events.

3.3.2 Desired Outcome 2 - Commitment, Roles and Responsibilities

Council and the community are committed and enabled to undertake the coordinated management of pest plants and animals.

Table 9 - Strategic actions addressing Objective 2

No	Strategic action	By whom	Priority	Success indicator
2.01	Continue to seek in-kind and financial sponsorship to resource implementation of the plan, including the application of grants.	Council	High	In-kind and financial sponsorship secured to support Plan implementation as required.
2.02	Establish partnerships with key stakeholders to plan and undertake strategic actions identified within this Plan.	Council	High	Mutually beneficial partnerships established.
2.03	Maintain a register of "biosecurity orders" issued to landholders in accordance with section 379 of the <i>Biosecurity Act 2014</i> .	Council	High	Register updated regularly.
2.04	Establish and maintain a Pest Working Group with a Terms of Reference (TOR), to promote effective communication between Council and stakeholders and to evaluate the effectiveness of the plan.	Council	High	PWG established with TOR.
2.05	Participate in developing a region-wide network of local government biosecurity officers.	DAF, Council	High	Network established and operating.
2.06	Develop policy and procedures for communication with state land managers and their lessees about pest management.	Council	High	Policy and procedure document produced.
2.07	Invite key Council personnel to relevant committees, forums, working groups, etc. (including internal council events).	Council	Medium	Number of Council personnel attending events.
2.08	Continue to support the Queensland Parks and Wildlife Service to bait national parks and state forests with a coordinated approach.	Council	Medium	Baiting of national parks and state forests conducted during a coordinated baiting campaign.
2.09	Investigate additional regulation of any pest species at the next review of local laws (e.g. local declaration of species, restrictions on certain pets).	Council	Medium	Existing local laws reviewed. New / amended laws adopted.

3.3.3 Desired Outcome 3 - Monitoring and Assessment

Reliable information is available as a basis for decision-making.

Table 10 - Strategic actions addressing Objective 3

No	Strategic action	By whom	Priority	Success indicator
3.01	Digitally record and continually update all known locations of high priority pests identified in this Plan, and periodically provide this information to DAF.	Council, Landcare, SQNRM DAF	High	DAF maps showing the distribution of pests that include updated data from Council.
3.02	Develop and maintain a GIS pest database system for efficient collection and analysis of priority-pest data (including distribution, management, monitoring, evaluation of control activities and high priority incidents and detections).	Council	High	Spatial database established and maintained.
3.03	Monitor and evaluate implementation of the Biosecurity Plan and report annually.	Council, PWG	High	Annual evaluation report produced and Plan amended if required.
3.04	Identify and monitor high risk areas / activities / industries to limit the spread of invasive biosecurity matter.	Council, DAF	High	Reduction of recorded weed spread through high risk areas / activities.
3.05	Encourage the community to report sightings of pest plants and animals to local government e.g. through the feral scan ap.	Council	High	Program improved through citizen science and new incursions promptly identified.
3.06	Survey the community for awareness of pest issues in LGA and attitudes towards pest management. Conduct surveys before and after Plan implementation to gauge changes in awareness and assist in Plan review.	Council	High	Surveys completed. Awareness improved.

3.3.4 Desired Outcome 4 - Strategic Planning and Management

Established strategic directions are maintained and owned by the community.

Table 11 - Strategic Actions Addressing Objective 4

No	Strategic action	By whom	Priority	Success indicator
4.01	Integrate actions within this Biosecurity Plan into Council's Corporate Plan and other Council planning documents.	Council	High	Biosecurity Plan actions integrated into Corporate Plan and other Council planning documents.
4.02	Complete a new Biosecurity Plan three months before the existing plan expires.	Council	High	New plan completed in 2024.
4.03	Establish fair and equitable rates and charges to private landowners for pest management services undertaken by Council.	Council	High	Value of income derived from service provision is equivalent to expenses of work undertaken.
4.04	Transparent review of the private landholder pest animal levy and other funding options annually for fair and equitable collection for pest management services undertaken by Council.	Council	High	Pest management funding considered fair and equitable by the community.
4.05	Review plans to ensure consistency between the Biosecurity Plan and related PMPs and resource management plans.	Council, PWG, DAF, neighbouring councils, stakeholder groups	Medium	No inconsistencies identified.
4.06	Participate in the development of regional pest plant and animal management plans, workshops and actions, as appropriate and where funding / resources permits.	Council	Medium	Regional plans support Balonne priorities.
4.07	Support coordinated state-wide, regional and social media campaigns regarding pest detection, hygiene and management.	Council, DAF	Medium	Support provided to campaigns targeting pest detection, hygiene and management.

3.3.5 Desired Outcome 5 - Prevention and Early Intervention

The introduction, establishment and spread of pest plants and animals is prevented.

Table 12 - Strategic actions addressing Objective 5

No	Strategic action	By whom	Priority	Success indicator
5.01	Develop an Invasive Plants and Animals Surveillance and Control Program for the Balonne LGA (emergency response plan) that ensures rapid and effective response to discovery of pest species in Balonne LGA (including local alert species identified in Appendix 2).	Council, DAF	High	Emergency response plan developed.
5.02	Review and use a standard code of practice to minimise weed seed spread associated with any works undertaken by Council and outside contractors to Council (including on existing and new developments).	Council	High	Code of practice produced and adhered to.
5.03	Identify any necessary quarantine areas within the LGA and implications for the community.	Council, DAF	Medium	Quarantine areas identified. Implications assessed and communicated to community.
5.04	Adopt weed prevention protocols and promote the use of these protocols to other stakeholders (e.g. weed hygiene inspections and wash down facilities).	Council	Medium	Weed prevention protocols adopted by Council and key stakeholders.
5.05	Include the existing weed hygiene declaration as a requirement of the permit application for travelling and agistment stock.	Council	Medium	A weed hygiene declaration is obtained for all travelling and agisted stock.
5.06	Promote weed hygiene declarations for movement of harvesting, construction, and other industry related equipment, as well as, the movement of fodder, soil and turf.	Council, DAF, Landcare, SQNRM Industry	Medium	Key stakeholders are using weed hygiene declarations.

3.3.6 Desired Outcome 6 - Integrated Management Systems

Integrated systems for managing the impacts of established pest plants and animals are developed and widely implemented.

Table 13 - Strategic actions addressing Objective 6

No	Strategic action	By whom	Priority	Success indicator
6.01	Develop policy, procedures and forms to allow for accurate data collection and vetting of applicants of pest management incentive schemes.	Council	High	Policy, procedures and forms developed and implemented.
6.02	Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.	Council, DAF	Medium	Management plans produced for high priority pest species.
6.03	Strategically fund wild dog/pest animal exclusion fencing on landholdings to improve economic capacity through increased production and the expansion of small stock.	Council, landholders	Medium	Percentage of Shire exclusion fencing funded by Council.
6.04	Identify, prioritise, develop and implement PMPs for environmentally significant areas, as required, including the integrated management of pest species.	Council	Medium	Identified PMPs for environmentally significant areas developed and implemented.
6.05	Participate in the coordination of plague pest animal management with all stakeholders and support the lead agency, as appropriate.	Council	Medium	Amount and type of support provided.
6.06	Review incentive schemes for landholders to manage animal (e.g. bounty) and plant priority pests.	Council	Medium	Landholders accessing incentive schemes.
6.07	Develop a rapid investigation and response procedure for reports of public safety risk.	Council, TMR, DES, DNRME	Medium	Response procedure to public safety risk developed.
6.08	Investigate appropriate biological control agents, promote where appropriate and facilitate access.	Council, DAF	Medium	Appropriate biological control agents are identified, promoted, and accessed.
6.09	Advise regional pest / natural resource management groups of areas in which future research is required to help manage pest plants and animals within the Shire.	Council, DAF, Landcare, SQ Landscapes landholders, industry	Medium	Regional pest / natural resource management groups attended by Council staff.

4 Priority pest species plan

4.1 Species prioritisation

The number of pest species within each priority category is summarised in Table 14. Table 15 provides the scoring and prioritisation of pest plants known or likely to occur in the Balonne LGA and Table 16 provides scoring and prioritisation for pest animals. In both tables, species are sorted first by priority (high, medium or low) and then alphabetically by common name. Plague locusts have been included in the local alert species list (Appendix 2) due to their seasonal nature.

Table 14 Number of pest species within priority categories

Priority	Number of pest species	
	Plants	Animals
High	12	5
Medium	17	4
Low	18	-
Local alert species	10	4
Total	57	13

4.2 Distribution and management of high and medium priority pests

Appendix 3 summarises the distribution and proposed management of high and medium priority pest species that are known or likely to occur in the LGA. The following information is provided for each species:

- Current knowledge of the abundance of the species is assessed within the LGA (i.e. widespread, localised, absent or unknown).
- Proposed management of the species is identified (i.e. prevention, early detection and eradication, containment or asset protection). These management categories are described in more detail in Section 2.4.

4.3 High priority species profiles

Appendix 4 provides detailed profiles for all high priority pests. Each profile includes:

- description of key diagnostic features for the species
- distribution within Queensland

-
- methods of reproduction and dispersal
 - environmental, social and economic impacts in the Balonne LGA
 - effective control methods
 - proposed management category and strategic actions within the Balonne LGA.

4.4 Pest animal exclusion fencing exemptions

It is recognized that in the Balonne Shire, Wild Dog Exclusion Fencing (WDEF) is a key component for the management of high priority pest animals. To assist in the construction and maintenance of WDEF along Council managed road corridors, Council is enacting the five (5) metre external vegetation clearance exemption provided for under the *Planning Regulation 2017* (Qld).

All clearing undertaken under this exemption must be conducted by Council, or their representatives, and in accordance with the Balonne Shire Wild Dog Exclusion Fence Vegetation Clearance Policy and associated procedures.

Table 15 Prioritisation of pest plants

Common name	Scientific name	Score									Priority
		National	State	Environment	Social	Economic	Current Distribution	Invasiveness	Achievability	Total Score	
African boxthorn	<i>Lycium ferocissimum</i>	2	2	3	2	3	2	2	3	19	High
Common pest pear	<i>Opuntia stricta</i>	2	2	2	1	2	2	3	2	16	High
Coral cactus	<i>Cylindropuntia fulgida</i>	2	2	2	1	2	3	3	3	18	High
Devil's rope pear	<i>Cylindropuntia imbricata</i>	2	2	2	1	2	3	3	3	18	High
Harrisia cactus	<i>Harrisia martinii</i>	0	2	3	1	3	3	2	3	17	High
Hymenachne	<i>Hymenachne amplexicaulis</i>	2	2	3	2	1	3	2	2	17	High
Mother-of-millions	<i>Bryophyllum delagoense</i>	0	2	2	2	3	3	3	3	18	High
Parkinsonia	<i>Parkinsonia aculeata</i>	2	2	3	1	3	3	2	2	18	High
Parthenium	<i>Parthenium hysterophorus</i>	2	2	2	3	3	3	3	2	20	High
Prickly acacia	<i>Vachellia nilotica</i>	2	2	3	1	2	3	2	3	18	High
Tiger pear	<i>Opuntia aurantiaca</i>	2	2	2	1	3	2	3	2	17	High
Velvety tree pear	<i>Opuntia tomentosa</i>	2	2	2	1	2	2	3	2	16	High

Common name	Scientific name	Score									Priority
		National	State	Environment	Social	Economic	Current Distribution	Invasiveness	Achievability	Total Score	
African lovegrass	<i>Eragrostis curvula</i>	0	0	2	2	2	2	2	1	11	Medium
Bathurst burr	<i>Xanthium spinosum</i>	0	0	2	1	3	2	1	2	11	Medium
Cat's claw creeper	<i>Dolichandra unguis-cati</i>	0	0	3	1	1	3	3	3	14	Medium
Cotton-tails	<i>Froelichia floridana, F. gracilis</i>	0	0	1	0	2	3	2	2	10	Medium
Florestina	<i>Florestina tripteris</i>	0	0	1	0	2	3	2	3	11	Medium
Lantana	<i>Lantana camara</i>	2	2	2	0	1	3	2	2	14	Medium
Lippia	<i>Phyla canescens</i>	0	0	3	1	2	3	3	2	14	Medium
Mexican poppy	<i>Argemone ochroleuca</i>	0	0	2	2	2	2	2	2	12	Medium
Mimosa bush	<i>Vachellia farnesiana</i>	0	0	2	0	2	2	2	2	10	Medium
Night blooming cereus	<i>Cereus uruguayanus</i>	0	0	2	1	2	3	1	3	12	Medium
Noogoora burr	<i>Xanthium occidentale</i>	0	0	2	1	3	2	1	2	11	Medium
Paterson's curse	<i>Echium plantagineum</i>	0	0	2	1	2	3	3	2	13	Medium

Common name	Scientific name	Score									Priority
		National	State	Environment	Social	Economic	Current Distribution	Invasiveness	Achievability	Total Score	
Saffron thistle	<i>Carthamus lanatus</i>	0	0	2	0	2	2	2	2	10	Medium
Spear thistle	<i>Cirsium vulgare</i>	0	0	2	1	2	3	2	2	12	Medium
Weir vine	<i>Ipomoea calobra</i>	0	0	2	1	2	3	2	2	12	Medium
Wild tobacco	<i>Solanum mauritianum</i>	0	0	2	0	3	3	2	3	13	Medium
Wild turnip weed	<i>Brassica tournefortii</i>	0	0	2	0	2	2	2	2	10	Medium
American malvastrum	<i>Malvastrum americanum</i>	0	0	1	0	1	1	2	2	7	Low
Blue heliotrope	<i>Heliotropium amplexicaule</i>	0	0	1	0	2	2	2	2	9	Low
Capeweed	<i>Arctotheca calendula</i>	0	0	1	0	3	2	2	1	9	Low
Common sowthistle	<i>Sonchus oleraceus</i>	0	0	1	0	1	1	2	1	6	Low
Cretan weed	<i>Hedychnois rhagadioloides</i> , syn. <i>Leontodon rhagadioloides</i>	0	0	1	0	1	3	2	2	9	Low
Crownbeard	<i>Verbesina encelioides</i>	0	0	1	0	2	1	2	1	7	Low

Common name	Scientific name	Score									Priority
		National	State	Environment	Social	Economic	Current Distribution	Invasiveness	Achievability	Total Score	
Goathead / Spiny emex	<i>Emex australis</i>	0	0	1	1	2	1	2	2	9	Low
Gomphrena weed	<i>Gomphrena celosioides</i>	0	0	1	1	1	2	2	2	9	Low
Khaki weed	<i>Alternanthera pungens</i>	0	0	1	1	1	1	1	1	6	Low
London rocket	<i>Sisymbrium irio</i>	0	0	1	0	1	2	2	1	7	Low
Maltese cockspur	<i>Centaurea melitensis</i>	0	0	2	0	2	2	1	2	9	Low
Mayne's pest	<i>Glandularia aristigera</i>	0	0	2	0	1	2	2	2	9	Low
Paddy melon / Pie melon	<i>Citrullus lanatus</i> var. <i>lanatus</i>	0	0	1	0	1	3	1	2	8	Low
Red natal grass	<i>Melinis repens</i>	0	0	2	0	1	1	3	1	8	Low
Small flowered mallow	<i>Malva parviflora</i>	0	0	1	0	2	1	3	1	8	Low
Sow thistle	<i>Sonchus asper</i> subsp. <i>glaucescens</i>	0	0	1	0	1	3	2	2	9	Low
Spiny burr grass	<i>Cenchrus incertus</i>	0	0	1	1	2	3	1	2	10	Low
Tall fleabane	<i>Conyza bonariensis</i>	0	0	1	0	2	2	2	1	8	Low

Table 16 Prioritisation of pest animals

Common Name	Scientific Name	Score									Priority
		National	State	Environment	Social	Economic	Current Distribution	Invasiveness	Achievability	Total Score	
European fox	<i>Vulpes vulpes</i>	2	2	3	1	2	1	2	2	15	High
European rabbit (domestic and wild breeds)	<i>Oryctolagus cuniculus</i>	2	2	3	1	2	1	3	2	16	High
Feral chital deer	<i>Axis axis</i>	2	2	3	3	3	3	2	3	21	High
Feral pig	<i>Sus scrofa</i>	2	2	3	3	3	1	3	2	19	High
Wild dog (other than domestic dog)	<i>Canis spp.</i>	0	2	3	3	3	1	2	2	16	High
Cat (other than domestic cat)	<i>Felis catus</i>	2	2	3	2	1	1	2	1	14	Medium
European carp	<i>Cyprinus carpio</i>	0	2	3	2	0	1	3	1	12	Medium
Feral goats	<i>Capra hircus</i>	2	2	2	1	2	1	2	2	14	Medium
Gambusia / Mosquitofish	<i>Gambusia holbrooki</i>	0	2	3	2	0	3	3	1	14	Medium

References

Australian Government undated, *National weeds lists*. Accessed at <http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/index.html>

Australian Bureau of Statistics (2017). *Balonne (S) 2016 Census QuickStats*. Retrieved 9th April 2019.

Balonne Shire Council Wild Dog Advisory Committee (2019). *Balonne Shire Council Wild Dog Management Plan 2019-2024*. Balonne Shire Council.

Department of Agriculture and Fisheries (2018). *Queensland Biosecurity Strategy 2018-2023*. Queensland Government.

Invasive Plants and Animals Committee (2016). *Australian Pest Animal Strategy 2017 to 2027*. Australian Government Department of Agriculture and Water Resources, Canberra.

Invasive Plants and Animals Committee (2016). *Australian Weeds Strategy 2017 to 2027*. Australian Government Department of Agriculture and Water Resources, Canberra.

Queensland Murray Darling Committee (undated). *Regional Natural Management Plan for the Border Rivers and Maranoa-Balonne 2015-2025 – Summary of objectives*. Queensland Murray Darling Committee.

Queensland Government (2019). *Estimated resident population by local government area (LGA), Queensland, 2008 to 2018p*. Accessed at <http://www.qgso.qld.gov.au/products/tables/erp-lga-qld/index.php>

South West Natural Resource Management (2016). *South West Natural Resource Management Plan 2015-2025*. South West Natural Resource Management.

Appendix 1 Relevant legislation and planning instruments

Australia

<p>Australian Weed Strategy 2017-2027</p> <p>Australian Pest Animal Strategy 2017-2027</p>	<p>These strategies provide guides for the consistent management of pest plants and animals across the country. Stages of management identified in these strategies include:</p> <ul style="list-style-type: none"> · prevention of species not yet established in Australia · eradication of a newly arrived species at either a local, regional, state or national scale · containment of a species that cannot be completely eradicated to reduce or limit its spread into at-risk areas · asset protection, which may be applied to manage threats of species that have spread too far to be eradicated or contained, with the aim of strategically minimising economic, environmental and social impacts.
<p>Weeds of National Significance (WoNS)</p>	<p>WoNS are high impact, established weeds for which targeted, strategic co-investment in a nationally coordinated manner will deliver long-term benefits across Australia. The Australian government has developed national management strategies and manuals for 32 WoNS.</p>
<p>National Environmental Alert List</p>	<p>The alert list lists 28 weed species that are in the early stages of establishment and have the potential to become a significant threat to biodiversity if they are not managed.</p>
<p>Feral animals in Australia</p>	<p>The Australian government lists ten feral animal species that are recognised as threats to native animals and plants.</p>
<p>Threat Abatement Plans</p>	<p>These plans aim to reduce the impact of listed threatening processes on native species and ecological communities. Plans have been developed for threatening pests including rabbits, foxes, feral cats, feral pigs, tramp ants, cane toads and specific grasses.</p>
<p>Australian Emergency Plant Pest Response Plan</p>	<p>The Commonwealth has developed the Australian Emergency Plant Pest Response Plan that provides nationally consistent guidelines to manage response procedures for Emergency Plant Pests affecting Australia’s agricultural industries.</p>

Queensland

<p><i>Biosecurity Act 2014</i></p>	<p>This Act establishes an effective biosecurity system that minimises biosecurity risks and facilitates a coordinated response to biosecurity events across Queensland. See Section 1.3 for more details.</p>
<p>Queensland Biosecurity Strategy 2018-2023</p>	<p>The Department of Agriculture and Fisheries has developed this strategy in collaboration with over 30 partner organisations. It aims to promote effective management of Queensland’s biosecurity risks, including weeds, pest animals and diseases, through collaborative partnerships between government, industry and communities.</p>
<p>State Agency Pest Management Plans</p>	<p>A number of state agencies (e.g. Ergon, Department of Transport and Main Roads, Department of National Parks, Sport and Racing) have plans and strategies in place to manage pests within lands under their control.</p>

Regional

<p>Regional Management Plans</p>	<p>Regional plans include:</p> <ul style="list-style-type: none"> · South West Natural Resource Management Plan 2015-2025 · Regional Natural Management Plan for the Border Rivers and Maranoa-Balonne 2015-2025 · Maranoa – Balonne Regional Plan 2009.
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Local

Balonne Shire Pest Management Plan 2012-2016	Pest management in the Balonne LGA was guided by the previous PMP. The Biosecurity Plan will supersede this plan when adopted by Council.
Neighbouring PMPs / Biosecurity Plans	Neighbouring plans include: <ul style="list-style-type: none">· Maranoa Regional Council Pest Management Plan 2012-2016· Goondiwindi Regional Council Pest Management Plan 2015-2019· Paroo Shire Council Biosecurity Plan 2018-2022· Pest Management Plan Western Downs Regional Council 2011 - 2015.
Balonne Shire Council Wild Dog Management Plan 2019 - 2024	This plan is aligned with the Biosecurity Plan and will continue to provide a framework for coordinated control of wild dogs in the Balonne LGA.

Property

Property Pest Management Plans	Council assists landholders to develop Property Pest Management Plans (PPMPs) for the strategic management of pest plants and animals on their property.
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Species management

Management guides for specific pest species	Examples include: <ul style="list-style-type: none">· Species management guides for WoNS· Commonwealth Threat Abatement Plans· Wild Dog Management Strategy 2011-16· Feral pig control – A practical guide to pig control in Queensland.
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Appendix 2 Local alert species

Local alert species are not currently known from the Balonne LGA but could cause significant impacts if introduced. An Invasive Plants and Animals Surveillance and Control Program (emergency response plan) will be developed to respond to the discovery of any local alert species within the Balonne LGA (strategic action 5.01 in Section 3.3.5).

Common name	Species name	Status *
Pest animals		
Cane toad	<i>Rhinella marina</i>	
Feral deer (other than chital deer)	<i>Dama dama</i> , <i>Cervus elaphus</i> , <i>Axis porcinus</i> , <i>Rusa timorensis</i> , <i>Rusa unicolor</i>	R
Plague locust	<i>Locusta mjigratoria</i> , <i>Austracris guttulosa</i> , <i>Chortoicetes terminifera</i>	
Tilapia	<i>Tilapia mariae</i> and <i>Oreochromis mossambicus</i>	R
Pest plants		
African fountain grass	<i>Pennisetum setaceum</i> , syn. <i>Cenchrus setaceus</i>	
Balloon vine	<i>Cardiospermum grandiflorum</i>	R
Chinese celtis	<i>Celtis sinensis</i>	R
Cholla cactus	<i>Cylindropuntia</i> spp. (other than <i>Cylindropuntia fulgida</i> and <i>C. imbricata</i>)	P or R
Harrisia cactus	<i>Harrisia</i> spp. syn. <i>Eriocereus</i> spp. (other than <i>Harrisia martinii</i>)	P or R
Hudson pear	<i>Cylindropuntia rosea</i>	R
Karoo thorn	<i>Vachellia karroo</i>	P
Mesquite	<i>Prosopis</i> spp.	P or R
Prickly pears	<i>Opuntia</i> spp. (excluding <i>Opuntia aurantiaca</i> , <i>O. stricta</i> and <i>O. tomentosa</i>)	P or R
Rat's tail grasses	<i>Sporobolus jacquemontii</i> , <i>S. fertilis</i> , <i>S. pyramidalis</i> and <i>S. natalensis</i>)	R
Yellow bells	<i>Tecoma stans</i>	R

* Status under *Biosecurity Act 2014*: P = invasive prohibited matter; R = restricted matter.

Appendix 3 Distribution and management of high and medium priority pests

Table 1 High priority pest plants

Common name	Scientific name	Distribution	Management
African boxthorn	<i>Lycium ferocissimum</i>	Widespread	Containment
Common pest pear	<i>Opuntia stricta</i>	Widespread	Asset protection
Coral cactus	<i>Cylindropuntia fulgida</i>	Localised	Early detection and eradication
Devil's rope pear	<i>Cylindropuntia imbricata</i>	Localised	Early detection and eradication
Harrisia cactus	<i>Harrisia martinii</i>	Localised	Early detection and eradication
Hymenachne	<i>Hymenachne amplexicaulis</i>	Localised	Early detection and eradication
Mother-of-millions	<i>Bryophyllum spp.</i>	Localised	Early detection and eradication
Parkinsonia	<i>Parkinsonia aculeata</i>	Localised	Early detection and eradication
Parthenium	<i>Parthenium hysterophorus</i>	Localised	Early detection and eradication
Prickly acacia	<i>Vachellia nilotica</i>	Localised	Early detection and eradication
Tiger pear	<i>Opuntia aurantiaca</i>	Widespread	Containment
Velvety tree pear	<i>Opuntia tomentosa</i>	Widespread	Containment

Table 2 Medium priority pest plants

Common name	Scientific name	Distribution	Management
African lovegrass	<i>Eragrostis curvula</i>	Widespread	Asset protection
Bathurst burr	<i>Xanthium spinosum</i>	Widespread	Asset protection
Cat's claw creeper	<i>Dolichandra unguis-cati</i>	Localised	Early detection and eradication
Cotton-tails	<i>Froelichia floridana, F. gracilis</i>	Localised	Containment

Common name	Scientific name	Distribution	Management
Florestina	<i>Florestina tripteris</i>	Localised	Early detection and eradication
Lantana	<i>Lantana camara</i>	Localised	Containment
Lippia	<i>Phyla canescens</i>	Localised	Containment
Mexican poppy	<i>Argemone ochroleuca</i>	Widespread	Asset protection
Mimosa bush	<i>Vachellia farnesiana</i>	Widespread	Asset protection
Night blooming cereus	<i>Cereus uruguayanus</i>	Localised	Early detection and eradication
Noogoora burr	<i>Xanthium occidentale</i>	Widespread	Asset protection
Paterson's curse	<i>Echium plantagineum</i>	Localised	Containment
Saffron thistle	<i>Carthamus lanatus</i>	Widespread	Asset protection
Spear thistle	<i>Cirsium vulgare</i>	Localised	Containment
Weir vine	<i>Ipomoea calobra</i>	Localised	Containment
Wild tobacco	<i>Solanum mauritianum</i>	Localised	Early detection and eradication
Wild turnip weed	<i>Brassica tournefortii</i>	Widespread	Asset protection

Table 3 High priority pest animals

Common name	Scientific name	Distribution	Management
European fox	<i>Vulpes vulpes</i>	Widespread	Asset protection
European rabbit (domestic and wild breeds)	<i>Oryctolagus cuniculus</i>	Widespread	Asset protection
Feral chital deer	<i>Axis axis</i>	Localised	Early detection and eradication
Feral pig	<i>Sus scrofa</i>	Widespread	Asset protection
Wild dog (other than domestic dog)	<i>Canis spp.</i>	Widespread	Asset protection

Table 4 Medium priority pest animals

Common name	Scientific name	Distribution	Management
Cat (other than domestic cat)	<i>Felis catus</i>	Widespread	Asset protection
European carp	<i>Cyprinus carpio</i>	Widespread	Asset protection
Feral goats	<i>Capra hircus</i>	Widespread	Containment
Gambusia / Mosquitofish	<i>Gambusia holbrooki</i>	Localised	Containment

Appendix 4 Profiles for high priority pests

Profiles are provided for all high priority pests, including:

- description of key diagnostic features for the species
- distribution within Queensland
- methods of reproduction and dispersal
- environmental, social and economic impacts in the Balonne LGA
- effective control methods
- proposed management category and strategic actions within the Balonne LGA.

Additional species information and control measures are provided in Department of Agriculture and Fisheries invasive plant and animal fact sheets:

<https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/fact-sheets>

High priority plants*

African boxthorn - *Lycium ferocissimum*

High priority.

Description: African boxthorn is a perennial, spiny shrub from South Africa. Grows up to 5 m in height with widely spreading main branches. The numerous branchlets and the main stem have spines. Leaves are quite succulent and bright green, 2 cm wide and 3 cm long. Flowering generally occurs in summer with white to pale mauve flowers.

Queensland Distribution: Occurs mainly in non-coastal areas of south-eastern Queensland. Typically occurs along roadsides, in pastures and waterways, including dry creek beds.

Reproduction and dispersal: Seeds may germinate throughout the year and are spread by birds and animals, such as foxes and rabbits. Young plants quickly establish a root system and compete with other species.

Impacts: Inhibits movement of stock by forming sharp-spined, impenetrable thickets. Can create problems along fence lines and can provide a haven for rabbits.

Control: Requires integrated approach of applying mechanical and chemical control methods in combination with land management practices.

Management Category: Containment

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Common pest pear - *Opuntia stricta*

High priority.

Description: Common pest pear forms large clumps and grows up to 1.5 m high. The stems are divided into spineless oval pads. Spines occur on the young pads and in areoles along the trunk of the plant. It has yellow flowers and purple skinned fruit.

Queensland Distribution: Typically found in low rainfall areas.

Reproduction and dispersal: Spread by seed or vegetatively when segments or fruits contact the ground and take root. The pads (joints, segments) can withstand long periods of drought before setting roots in ideal weather conditions.

Impacts: Competes with native vegetation, sharp spines or barbs can injure stock and native animals and can contaminate hides and wool. Can prevent or reduce grazing activities and productivity. Can impede stock mustering and limit recreational activities. Large infestations can also provide a harbour for pest animals such as rabbits and foxes.

Control: Largely controlled by cactoblastis, *Cactoblastis cactorum*. It can also be controlled by the cochineal mealy bug, *Dactylopius opuntiae*. Can also be controlled by chemical methods.

Management Category: Asset protection

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Promote appropriate biological control agents.

Coral cactus - *Cylindropuntia fulgida*

High priority.

Description: This cactus is distinguished by presence of distorted segments that have a corrugated surface. Depressions (areoles) on segments have clusters of small bristles (glochids) that readily attach to skin and are difficult to remove. Areoles also have 0–10 white to brownish spines to 1.7 cm long. Spines are at the base of areoles and glochids at the top. Flowers and fruit are absent.

Queensland Distribution: Typically found in low rainfall areas.

Reproduction and dispersal: Spreads vegetatively by movement of segments which root where they contact the ground and also by seed. Much of the movement is by water down watercourses. Spread can also be via stock movement.

Impacts: Competes with native vegetation, sharp spines or barbs can injure stock and native animals and can contaminate hides and wool. Can prevent or reduce grazing activities and productivity. Can impede stock mustering and limit recreational activities. Large infestations can also provide a harbour for pest animals such as rabbits and foxes.

Control: Coral cactus can be controlled by biological and chemical methods. Plants are damaged to a limited extent by the form of *Dactylopius tomentosus* (a cochineal insect) present in Australia.

Management Category: Early detection and eradication

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Promote appropriate biological control agents.

Devil's rope pear - *Cylindropuntia imbricata*

High priority.

Description: This cactus is an open branching shrub which grows to 1.5 – 3 m high. A rope-like appearance from short raised ridges on pads. White or pale yellow spines are present on the areoles. It has flowers with a dull, purple –red colour and yellow fruits.

Queensland Distribution: Typically found in low rainfall areas.

Reproduction and dispersal: Spread by seed or vegetatively when segments or fruits contact the ground and take root. The pads (joints, segments) can withstand long periods of drought before setting roots in ideal weather conditions.

Impacts: Competes with native vegetation, sharp spines or barbs can injure stock and native animals and can contaminate hides and wool. Can prevent or reduce grazing activities and productivity. Can impede stock mustering and limit recreational activities. Large infestations can also provide a harbour for pest animals such as rabbits and foxes.

Control: Can be controlled by biological and chemical methods. Biological control includes the cochineal mealy bug *Dactylopius tomentosus*.

Management Category: Early detection and eradication

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Promote appropriate biological control agents.

Harrisia cactus - *Harrisia martini*

High priority.

Description: Harrisia cactus is a perennial with spiny fleshy stems that forms tangled mats. This cactus has pink flowers which open at night and round, red fruits 4 – 5 cm across. It has shallow feeding roots up to 15 cm below ground level and tuberous storage roots which grow to a depth of 15 -60 cm.

Queensland Distribution: Harrisia cactus has been recorded in brigalow and associated softwood county, box and ironbark stands and cypress pine forests.

Reproduction and dispersal: The plant fruits prolifically (each fruit contains from 400-1000 seeds) and seeds are spread widely by birds and animals, such as feral pigs. Plants are easily established from seed dropped by these animals. Harrisia cactus can also reproduce by stem sections taking root. A deep, underground, tuberous root system allows the plant to survive even if the above ground parts are killed.

Impacts: Dense infestations reduce pasture productivity and impede stock movement.

Control: Can be controlled by mechanical, biological and chemical methods.

Two introduced insects have become established in the field: A stem boring longicorn beetle *Alcidion cereicola* and a mealy bug *Hypogeococcus festerianus* (the most successful of the two). Mealy bug disperses naturally via wind although landholder assistance is necessary for its continuous spread, particularly between patches.

Management Category: Early detection and eradication

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Promote appropriate biological control agents.

Hymenachne - *Hymenachne amplexicaulis*

High priority.

Description: A robust perennial deep water grass which can grow to 3 m with support and 1.5 m without support. Stems are erect or ascending from a prostrate base and contain white pith. Roots may be produced at the lower nodes. Leaf blades are green, 10 to 45 cm long, up to 3 cm wide, strongly clasping the stem at the base and have prominent light coloured veins and hairy margins. Flowers are dense, spike-like and cylindrical.

Queensland Distribution: Can be found in wetlands and waterways along the Queensland coast.

Reproduction and dispersal: Hymenachne is a prolific seeder and seeds are spread by water (floodwater and irrigation water), human activity and water birds. Also spreads by broken segments of the brittle stem and roots.

Impacts: Will readily invade waterways and drains, altering hydrology and causing increased flooding. It will also invade and dominate riparian areas, displacing native flora and fauna and limiting recreational use

Control: Chemical control via spot spraying and over-spraying can be effective.

Management Category: Early detection and eradication.

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Mother-of-millions – *Bryophyllum delagoense*

High priority.

Description: Mother-of-millions are a fleshy succulent plant which grows to approximately 1 m in height. Orange-red bell-shaped flowers form in clusters on tall flower spikes in winter. Small plantlets grow along the edges of the leaves which drop readily to quickly form new colonies.

Queensland Distribution: This species is adapted to dry conditions and has spread into various areas of Queensland. It occurs in pasture lands, shady woodlands, on roadsides, around rubbish dumps and along fence lines.

Reproduction and dispersal: Reproduces by seed and by small plantlets that grow at the ends of the leaves. Leaf parts can also take root. The tiny seeds are likely to be water and wind dispersed and plantlets and leaves can be spread by vehicles, soil, machinery and animals.

Impacts: Highly toxic to livestock.

Control: For small areas, pull up plants by hand and either (i) stack and burn them or (ii) bag and bury the plants at a sufficient depth at Balonne Shire Council's refuse tip.

Burning (during appropriate conditions) is the most economical control, encourages grass competition and can lessen the problem for years to come. Herbicides can also be used to control mother-of-millions all year round, however the most opportune time is in winter when the plants are flowering and they are easy to see.

Management Category: Early detection and eradication

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Parkinsonia - *Parkinsonia aculeata*

High priority.

Description: A perennial tree that grows up to 10 m and is hairless and thorny. Younger branches are bright green, thin and zigzagged. Leaves have a short, spine-tipped stalk and are green and flattened. The leaf branches are 20 to 40 cm long with tiny oblong leaflets in rows along each side. Leaves are arranged alternately along the stem. Flowers are yellow and fragrant with 5 petals. Cylindrical seed pods are 3-13 cm long and are swollen around the seeds.

Queensland Distribution: Parkinsonia is widespread throughout Queensland. It is adapted to an extremely wide variety of soil types and could potentially spread along watercourses and related areas throughout the sub humid and semi-arid environments of Queensland.

Reproduction and dispersal: Cattle and horses eat the pods and scatter the seeds. Flood water also spreads pods and seeds.

Impacts: Parkinsonia can form dense and often impenetrable thorny thickets along watercourses and bore drains. It can quickly colonise areas, choking out all grass and other native ecosystems. It can restrict stock access to drinking water and make mustering impossible.

Control: Seedlings can be hand pulled or spot-sprayed; smaller trees can be cut, scraped and painted; larger trees stem injected. Four insects have been introduced for biological control of parkinsonia and are now well established throughout Queensland.

Management Category: Early detection and eradication.

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Promote appropriate biological control agents.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Parthenium weed - *Parthenium hysterophorus*

High priority.

Description: An annual herb that grows to 1.5 m. Stem is erect with distinct ribs. It becomes woody and develops branches in its top half when mature. Leaves are pale green, deeply lobed and covered with fine, soft hairs. Leaves are arranged alternately along the stem. Flowers are small, diamond shaped and creamy-white in colour.

Queensland Distribution: Parthenium weed infests more than eight million hectares of central Queensland with serious outbreaks in the south and north of the state.

Reproduction and dispersal: Spread easily by water, machinery, feral animals, humans, vehicles, chicken and stock fodder, stock movement and pasture seeds.

Impacts: Parthenium will grow virtually anywhere. It reduces pasture production potential, invades brigalow, gidgee and softwood scrub soils and any disturbed soil situation (e.g. overgrazed pastures). Also a health problem as contact with the plant or pollen can cause serious allergic reactions such as dermatitis and hay fever.

Control: Herbicide control through spot spraying and over-spraying. Ongoing maintenance required. Pasture management can assist in controlling large infestations. A number of insect species and two rust pathogens have been introduced as biological control for parthenium.

Management Category: Early detection and eradication.

Strategic Actions:

Educate businesses undertaking high risk activities (e.g. fodder producers, quarries, feedlots) about effective weed hygiene practices.

Promote appropriate biological control agents.

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Prickly acacia - *Vachellia nilotica* (syn. *Acacia nilotica*)

High priority.

Description: An umbrella shaped perennial tree that can grow from 4-10 m tall. Young shrubs form dense thorny thickets, while mature trees are usually single stemmed, with spreading branches that have lost most of their thorns. Leaves are fern-like with 4-10 pairs of leaf branches, each bearing 10-20 pairs of small, narrow, green leaflets. Pairs of thorns grow at the base of the leaves. Flowers are borne in clusters of golden yellow spherical heads. Elongated pods are 6-25 cm long and are very constricted between each seed.

Queensland Distribution: Widespread throughout the Mitchell grasslands and plains of Queensland primarily in the semi-arid zone.

Reproduction and dispersal: Spread by cattle and water.

Impacts: Forms impenetrable thickets. Dense canopy cover can suppress native ground storey plants. Can colonise grasslands, restricting access to waterways and station infrastructure, increasing management costs and reducing yield.

Control: Cut, scrape and paint; stem injection; mechanical control with follow up herbicide application to regrowth and seedlings.

Management Category: Early detection and eradication.

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Tiger pear - *Opuntia aurantiaca*

High priority.

Description: This cactus is a low shrub with stems that are dark green to purple and red. Tiger pear has yellow flowers. Ripe fruits are red with purple markings although fruits are rarely formed.

Queensland Distribution: Typically found in low rainfall areas.

Reproduction and dispersal: Spread by seed or vegetatively when segments or fruits contact the ground and take root. The pads (joints, segments) can withstand long periods of drought before setting roots in ideal weather conditions.

Impacts: Competes with native vegetation, sharp spines or barbs can injure stock and native animals and can contaminate hides and wool. Can prevent or reduce grazing activities and productivity. Can impede stock mustering and limit recreational activities. Large infestations can also provide a harbour for pest animals such as rabbits and foxes.

Control: Can be controlled by biological and chemical methods. Biological control includes the cochineal mealy bug *Dactylopius austrinus*.

Management Category: Containment

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Promote appropriate biological control agents.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Velvety tree pear - *Opuntia tomentosa*

High priority.

Description: This cactus grows in a tree-like form up to 5 m high. The stems are dull green with deep orange flowers. The fruits are dull red, egg-shaped and produce many seeds.

Queensland Distribution: Typically found in low rainfall areas.

Reproduction and dispersal: Spread by seed or vegetatively when segments or fruits contact the ground and take root. The pads (joints, segments) can withstand long periods of drought before setting roots in ideal weather conditions.

Impacts: Competes with native vegetation, sharp spines or barbs can injure stock and native animals and can contaminate hides and wool. Can prevent or reduce grazing activities and productivity. Can impede stock mustering and limit recreational activities. Large infestations can also provide a harbour for pest animals such as rabbits and foxes.

Control: Can be controlled by biological and chemical methods. Biological control includes the cochineal mealy bug *Dactylopius opuntiae*.

Management Category: Containment

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Promote appropriate biological control agents.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

* Information sources include Department of Agriculture and Fisheries fact sheets, Balonne Shire Pest Management Plan 2012 – 2016 (Balonne Shire Council 2012).

High priority animals*

European fox - *Vulpes vulpes*

High priority.

Description: Foxes are active, small canids which can vary in size with body length ranging from 45 to 90 cm. Foxes have a reddish-brown coat with white underparts and a white tipped bushy tail. Lower legs and nose are black-tipped.

Queensland Distribution: Foxes are found over the vast majority of Queensland, ranging from deserts to urban environments. However they prefer temperate areas over tropical regions, which limits their abundance in northern areas.

Reproduction and dispersal: Breeding can begin in their first year, females having an average of four cubs. Dens are established late winter for birthing in spring and rearing. Multiple dens can be used at a time. Foxes generally disperse in autumn from where they were born at 6–9 months of age. Dispersal behaviour varies between males and females and between individuals of the same litter. Males typically disperse further than females and distances of 300 km have been recorded.

Impacts: Destructive predator of native animals and livestock. Potential vector for exotic disease.

Control: Trapping, ground shooting, poison baiting and den fumigation.

Management Category: Asset protection.

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

European rabbit (domestic and wild breeds) - *Oryctolagus cuniculus*

High priority.

Description: Rabbits are small mammals with adults usually weighing around 1 – 2 kg. Rabbits are typically 34-45cm in length with grey brown fur and a pale underbelly however other colours include ginger and black. The fluffy tail is brown with white underneath.

Queensland Distribution: Abundant in much of southern Queensland, localised and occasional north of Tropic of Capricorn.

Reproduction and dispersal: Short gestation (30 days) with up to 6 litters of up to 8 kittens possible in a good season. Rapid population growth in areas with suitable climate.

Impacts: Destroy native vegetation through grazing and burrowing, cause erosion, compete for food and shelter with native wildlife. Compete heavily with domestic livestock for fodder. Burrows may impact infrastructure and can lead to injury in livestock and domestic animals.

Control: It is illegal to keep pet rabbits in Queensland. Den destruction, poisoning / baiting, fumigation, trapping, biological control, shooting and exclusion fences can be effective. An ongoing control program incorporating multiple methods is required.

Management Category: Asset protection.

Strategic Actions:

Educate the community about risk of feral animals and benefits of responsible pet ownership.

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Promote appropriate biological control agents.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Feral chital deer - *Axis axis*

High priority.

Description: Small deer with a reddish-brown coat, permanent white spots in a broken line along spine, and white throat. Tail is larger than those on most deer.

Queensland Distribution: Originally population was established at a release site near Charters Towers. Additional populations have now become established around Charters Towers, Townsville, in the Gulf and central and southern Queensland.

Reproduction and dispersal: Breeding is non-seasonal, but most calves (up to three per breeding female) born in second half of the year after gestation of around 234 days. Rapid population growth and dispersal in suitable habitat.

Impacts: Overgrazes native vegetation, damages trees and ground vegetation, spreads weeds and fouls watercourses. May damage forestry seedlings, crops, orchards and infrastructure. Competes with livestock and wildlife. Traffic hazard.

Control: Shooting, trapping and exclusion fences can be effective.

Management Category: Early detection and eradication.

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Survey to clarify distribution of this species.

Encourage community to report sightings of this species.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Feral pig - *Sus scrofa*

High priority.

Description: Colouring is usually black, buff or spotted black and white. Juveniles are often striped. Growth is similar to domestic pigs, though environmental conditions may stunt development. Pigs are nocturnal and camp during the day under cover wherever possible. Omnivorous, eating both plants and animals, and can have a home range of 5-50 km².

Queensland Distribution: Found in most areas of Queensland.

Reproduction and dispersal: Under favourable conditions breeding can occur throughout the year and sows can produce two weaned litters per year (on average 6 piglets per litter).

Impacts: Damage crops, predate on and compete with livestock, damage property / infrastructure, native vegetation and wetlands (through trampling, rooting for plants and invertebrates, and wallowing) and impact native wildlife (through competition, predation, habitat destruction or disturbance). Pigs transmit disease and could spread exotic diseases such as foot and mouth disease if this was introduced to Australia.

Control: Required over large areas due to large home range. Removal of 70% of the population is required each year to offset reproduction rate. There are four basic methods of feral pig control: trapping, poisoning, hunting and fencing.

Management Category: Asset protection.

Strategic Actions:

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Develop specific management plans for high priority pest species. These plans should include the integrated management of pest species.

Wild dog (other than domestic) - *Canis* species

High priority.

Description: Wild dogs include dog / dingo hybrids and domestic dogs that have gone feral and are no longer dependent on humans. Pure dingoes generally only occur in very remote locations (far west Queensland) and on Fraser Island. Dingoes have a more heavily boned skull and larger teeth (especially the canine) than domestic dogs of similar size.

Queensland Distribution: Found throughout Queensland.

Reproduction and dispersal: Generally breed once a year in April-June, with 4-6 pups born following a 9 week gestation. Travel across large home range and easily disperse.

Impacts: Predate on livestock and wildlife. Potential risk to human safety. Potential vector for disease.

Control: A planned strategy that uses a combination of trapping, shooting, fencing and poison baiting, as well as considering wild dog behaviour, will enable effective management. 1080 baits can only be handled by licensed operators and are restricted in urban areas. Livestock guardian dogs are also effective in reducing stock predation.

Management Category: Asset protection.

Strategic Actions:

Educate the community about risk of feral animals and benefits of responsible pet ownership.

Prioritise control actions based on potential environmental, social and economic impacts to local sites.

Implement wild dog management plan developed by Balonne Shire Council Wild Dog Advisory Committee.

* Information sources include Department of Agriculture and Fisheries fact sheets.

Revision History

Revision No.	Revision date	Details	Prepared by	Reviewed by	Approved by
00	3/05/2019	Balonne Shire Council Biosecurity Plan - draft	Julie Whelan, Senior Environmental Scientist	Jess Bracks, Principal Wildlife Biologist	Con Lokkers, Principal Ecologist
01	1/08/2019	Balonne Shire Council Biosecurity Plan – second draft	Digby Whyte – BSC input	Julie Whelan, Senior Environmental Scientist Jess Bracks, Principal Wildlife Biologist	
02	7/11/2019	Balonne Shire Council Biosecurity Plan - final	Digby Whyte – BSC input	Julie Whelan, Senior Environmental Scientist	
03	13/11/2019	Balonne Shire Council Biosecurity Plan - final	Digby Whyte – BSC input	Julie Whelan, Senior Environmental Scientist	

Distribution List

Copy #	Date	Type	Issued to	Name
1	14/11/2019	Electronic	Balonne Shire Council	Digby Whyte
2	14/11/2019	Electronic	Ecosure	Administration

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