LIVINGSTONE SHIRE COUNCIL

BIOSECURITY PLAN 2025 - 2029

Livingstone SHIRE COUNCIL

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Executive Summary

Livingstone Shire Council's five-year Biosecurity Plan was developed for the benefit of the whole community and has application to the entire shire. It is prepared in accordance with the requirements of the Queensland *Biosecurity Act 2014*.

Responsibilities for local government and the community are clearly identified in the Biosecurity *Act 2014.* Livingstone Shire Council has recognised its responsibilities and roles within the *Act* and has developed a Biosecurity Plan that addresses current legislation; guides effort and investment and endeavours to raise community awareness of invasive species and pest management. Limited resources continue to inhibit the achievement of desired pest management goals so the Biosecurity Plan prioritises actions to address invasive species that present the highest risk. It is anticipated that this Plan will assist pest management planning and facilitate external partnerships in order to achieve pest management objectives.

Location map of shire in region and state

PART A: STRATEGIC OVERVIEW

1.0 INTRODUCTION

1.1 Purpose

The *Biosecurity Act* 2014 supports the prevention, eradication and effective management of invasive biosecurity matter in Queensland by providing for the development of biosecurity plans. Under the Act, local governments, together with the community, are required to have a biosecurity plan in place to manage invasive biosecurity matter in their local government areas.

The key purpose of a biosecurity plan is to bring all sectors of a local community together to manage invasive biosecurity matter in the local government area. The term 'invasive biosecurity matter' includes only invasive plants and animals listed as prohibited and restricted matter in schedules 1 and 2 of the *Biosecurity Act* 2014. Local governments may also address invasive plants and animals that are not listed on these schedules, but pose a threat to the area, such as species declared under local law. Diseases, crop pests and marine pests are not included, as these are addressed under the general biosecurity obligation and the regulatory role of Biosecurity Queensland.

1.2 Background

The Cooperative Research Centre (CRC) for Australian Weed Management estimated that impacts of invasive terrestrial weeds on agriculture cost the Australian economy approximately $4 billion per year (Sinden et al. 2004). As Queensland is Australia's second largest state and has the highest proportion of land area in any state dedicated to agriculture, the costs associated with lost production and weed control in Queensland are considerable. According to the Invasive Animals CRC, the direct annual economic impact from pest animals on Australia is $743 million (Gong et al. 2009). Weeds and pest animals cause degradation of natural resources including vegetation and pose a threat to wildlife, Foxes and feral cats have been implicated in the decline or possible local extinction of at least 17 native species listed as threatened or vulnerable. The potential for pest animals to act as vectors for zoonotic diseases is a concern for native and domestic animals. Invasive species can have impacts on human health and recreational activities.

1.3 Scope of the Plan

Local governments are responsible for ensuring invasive biosecurity matter is managed within their jurisdiction and in accordance with locally or regionally developed biosecurity plans. Local governments and their communities are well placed to control invasive biosecurity matter. Together, they can develop practical solutions that are appropriate to the levels and types of issues in their local area.

Under the *Biosecurity Act 2014*, everyone has a General Biosecurity Obligation, that is, an obligation to take all reasonable and practical measures to prevent or minimise a biosecurity risk from invasive plants, animals and other biosecurity matter.

The management of invasive biosecurity matter (invasive plants and animals) is the shared responsibility of land managers, industry, the community and all levels of

government. Whilst the primary responsibility rests with the land manager, collective actions using a nil-tenure approach is best practice, particularly for mobile species.

A biosecurity plan covers all land within the boundaries of the local government area, including state land. Land owned by the Australian Government or held by Aboriginal and Torres Strait Islander communities under a Deed of Grant in Trust are included.

Under the *Biosecurity Act 2014*, "Prohibited matter" (*Schedule 1*) and "Restricted matter" (*Schedule 2*) replace the former declared pest classes. While prohibited biosecurity matter is illegal and not found in Queensland, restricted biosecurity matter may already be widely spread across Queensland but still needs to be contained.
There are seven restriction categories;
1 – Must be reported to a Biosecurity Queensland inspector within 24 hours
2 – Must be reported to a Biosecurity Queensland inspector or authorised person within 24 hours
3 – Must not distribute or dispose of unless under a regulation, restricted matter permit or by an authorised officer
4 – Must not move or cause or allow to be moved
5 – Must not keep in the person's possession or under the person's control
6 – Must not feed
7 – Must dispose of noxious fish such as tilapia away from water bodies

The State Government along with federal authorities has the role to respond to the prevention and management of marine pests and other introduced pathogens.

1.4 Other Legislation and Plans

In addition to preparing this Biosecurity Plan in accordance with the *Biosecurity Act 2014*, other relevant legislation was incorporated including:

- *Local Government Act 2009,*
- *Local Law No. 1 (Administration) 2011,*
- *Local Law No. 3 (Community and Environmental Management) 2011,*
- *Subordinate Local Law No. 3 (Community and Environmental Management) 2011.*

In developing the Biosecurity Plan, consideration was also given to compliance with the requirements of other legislation including:

- *Planning Act 2016*
- *Vegetation Management Act 1999*
- *Nature Conservation Act 1992*
- *Water Act 2000*
- *Environmental Protection Act 1994*
- *Animal Care and Protection Act 2001*
- *Agricultural and Veterinary Chemicals (Queensland) Act 1994*
- *Medicines and Poisons Act 2019*
- *Public Health Act 2005*

Consideration was also given to statutory and non-statutory plans and strategies:

- *Central Queensland Sustainability Strategy 2030 (CQSS:2030)*

- *Queensland invasive plants and animals strategy 2019–2024*
- *Queensland Biosecurity Strategy 2024-2029*
- *Queensland wild dog management strategy 2021-2026*
- *Queensland feral deer management strategy 2022-27*

1.5 Council Corporate and Operational Plans

The implementation of the Livingstone Shire Council Biosecurity Plan 2025-2030 is associated with various identified strategies in Council's Corporate and Operational Plans:

Corporate Plan 2020-2030

Theme – NATURAL LIVINGSTONE
Community Plan Goal
3.3 - Conservation of natural assets and green corridors -
3.3.2 Progress and support plans which protect the shire's natural assets, bushland and local eco-systems.
3.3.3 Manage threats by collaborating with traditional owners, agencies, community groups and private landholders about land management, protection methods including hazard reduction strategies and conservation policies to ensure the protection of people, property, and the environment.

1.6 Reviewing the Biosecurity Plan

Livingstone Shire Council will review this Biosecurity Plan

- Annually – at least 3 months before the start of each financial year and
- Full review – in five years or earlier if there is a significant change to State legislation or the State Weed and Pest Animal Management Strategy is amended.

1.7 Stakeholders

Effective engagement of all relevant stakeholders is essential to the success of invasive biosecurity matter management. Stakeholders with interests in pest management in the region include:

Australian Government
The Australian Government provides the framework for weed and pest animal management in Australia and coordinates, facilitates and promotes national weed and pest animal management policies and programs including emergency responses to invasive biosecurity matters of national significance.

Queensland Government
Biosecurity Queensland, within the Department of Agriculture and Fisheries, is responsible for the development and implementation of invasive biosecurity matter management through legislation; invasive species response; research and education programs. Other Queensland Government departments are responsible for managing invasive biosecurity matter on state-managed land and waterways in accordance with agreed local and regional priorities.

Local Government
Local government has the responsibility to develop and enforce local government area biosecurity plans and encourage and assist community groups, land holders and land managers in invasive biosecurity matter management. Local government are also required to manage invasive biosecurity matter on land they control and coordinate local invasive plant and animal surveillance and management programs.

Business and Industry organisations
Commercial entities and representative bodies promote and facilitate invasive plant and animal management and identify and fund research priorities to enable continued improvement in the management of invasive plants and animals.

Education and Research facilities
Universities and research groups undertake research on invasive biosecurity matter and train and educate people in best practice in the management of invasive plants and animals.

Natural Resource Management and Catchment Management groups
Community based regional Natural Resource Management groups promote and facilitate invasive plant and animal management. Local groups include Fitzroy Basin Association and Capricornia Catchments Inc. Not for profit corporations such as Greening Australia, Clean Up Australia and Planet Ark are stakeholders in this space.

Community groups
Community groups such as Landcare and environment based organisations promote awareness of invasive plant and animal issues within the wider community. On-ground demonstration projects and citizen science projects assist the implementation of innovations and assist in integrated management and improvements in techniques.

Land managers (public and private)
The owners and managers of land can implement best practice for invasive plant and animal management on their land in line with relevant legislation, policy, guidelines, management plans and codes of practice.

Residents
All residents have a general biosecurity obligation under the *Biosecurity Act 2014*.

Appendix A contains a list of relevant stakeholder groups in Livingstone Shire.

2.0 Principles for biosecurity planning

The principles and strategies for managing pests provided in the Queensland invasive plants and animals strategy 2019–2024 are considered core elements of biosecurity planning at a state-wide planning level, but are also relevant to biosecurity planning at local and regional levels.

2.1 Principles of effective pest management

Seven principles of pest management are outlined in the State strategy. The principles provide a common basis for management throughout Queensland and align with

national strategies. The consideration of all these principles is critical to the success of any management activity, regardless of scope and scale.
The seven management principles for weeds and pest animals are:

1. Integration, collaboration and coordination
Managing invasive species is an integral part of managing natural resources, biodiversity in our environment, and agricultural systems. It is best when integrated at every level by land managers, the community, industry and government. To achieve a collaborative and coordinated approach to management, we need to establish long-term consultation and partnership arrangements, including the consistent reporting and sharing of agreed datasets between land managers, local communities, industry groups, NRM groups, and federal, state and local governments.

2. Strategic risk-based planning
Planning for management of invasive species is most effective when guided by the latest research and best practice, and when focused on risk-based decisions and greatest return on investment. This will ensure that resources target the priorities identified at local, regional, state and national levels.

3. Shared responsibility and commitment
To effectively manage invasive species, we need shared responsibility and long-term commitment by everyone in the biosecurity network, including land managers, the community, industry groups and government. Everybody should play their part to minimise the impacts of invasive species on the economy, the environment, health and social amenity. Those who create biosecurity risks and those who benefit from management activities will be called upon to contribute to the costs.

4. Capability building through education and awareness
Public education and awareness campaigns on invasive species will increase the community's capability and willingness to participate in management and control. For long-term best practice management, we need ongoing, targeted capability and capacity building within industry, NRM groups, and local, state and federal governments.

5. Prevention and early intervention
Risk-based prevention and early intervention is generally the most cost-effective approach for managing invasive species. This approach can be assisted by:

• developing and implementing early detection, diagnostics and monitoring systems
• preventing spread, especially human-assisted spread.

6. Best practice and research
Management is most effective when following evidence-based practices that protect the environment and the productive capacity of natural resources while minimising impacts on the community. Ongoing research and extension programs will inform the development of best practice management and policies.

7. Monitoring and evaluation
We need regular monitoring and evaluation of control activities, including establishment of baselines and reporting on agreed shared datasets against baselines, to make evidence-based decisions and improve management practices.

2.2 Challenges to effective pest management

The predominant challenges for managing invasive biosecurity matter in the region include:

- Cost and effort required to deliver effective long-term control activities;
- Proximity of urban and peri-urban areas to protected areas (National Parks);
- Mobility of pest animals over a number of tenures;
- The distribution of pest species;
- The distribution of individuals across the large, less populated rural areas limits the ability of individuals to control and manage invasive biosecurity matter;
- Concerns over non-target impacts of control methods;
- Difficulties of control in urban and peri-urban areas;
- Changing land use and social demographics;
- Absentee landholders;
- Animal welfare obligations which may limit the use of some control methods; and
- Stakeholder knowledge.

3.0 Strategies for management of biosecurity matters

3.1 Vision

Weed and pest animal impacts on the environment; the economy; human health and social amenity are cooperatively managed.

3.2 Mission Statement

To facilitate the cooperative management of pest plants and animals, involving all stakeholders within the Livingstone Shire Council area and adjoining local governments.

3.3 Desired Outcomes

The biosecurity plan identifies six desired outcomes and the related key objectives which underpin the strategy:

1. Prevention and preparedness;
2. Monitoring and assessment;
3. Awareness and education;
4. Effective management systems;
5. Strategic planning and management; and
6. Commitment, roles and responsibilities.

3.4 Prevention and preparedness

Prevention and early intervention is generally the most cost-effective management strategy. Once an invasive species is introduced and becomes established, it is often very difficult or even impossible to eradicate and costly to control. Everyone has a role in preventing the introduction and spread of invasive plants and animals into and around our region.

Aim:

Prevent establishment and spread of new weeds and pest animals.

Objectives:

- Educate public about the potential for new invasive species to infest the shire
- Pursue compliance measures for illegal dumping
- Encourage use of local native plants in landscaping
- Maintain hygiene protocol for Council's equipment to prevent and reduce the movement of invasive plants by Council operations.
- Provide vehicle weed seed hygiene inspections /reports on a user pays basis
- Undertake surveillance for new invasive plants and animals by regular visits to sentinel sites. (abattoirs, nurseries, community markets, landfill and transfer stations, illegal dumping sites)
- Encourage stakeholders and public to report sightings of unusual or unknown species
- Monitor and investigate reports/sightings of unusual pest species
- Eradicate new incursions of identified high-risk species on public and private land

3.5 Monitoring and assessment

Reliable data is needed to ensure that weeds and pest animals are managed holistically and for the long term. Weed and pest animal control requires an appropriate balance between prevention, surveillance and management techniques. An increasing amount of information is available on the distribution, abundance and impact of pests. However, there is scope to increase coordination of this information and make better use of existing and new technologies for monitoring and decision-making.

Aim:

Reliable information is the basis for decision-making.

Objectives:

- Utilise current research and engage with relevant stakeholders to ensure best practise management techniques are employed.
- Provide and maintain data collection equipment and data storage systems for relevant Council staff
- Collect and analyse spatial, quantitative and qualitative data to inform strategic planning and on-ground control programmes
- Document management practices and regularly review outcomes to enable the most effective and efficient application of control options.
- Undertake field trials to develop improved management techniques that are more effective, environmentally sustainable and financially efficient.

3.6 Awareness and education

Effective management of weeds and pest animals relies on broad stakeholder knowledge of the problem and the management issues. Often people are not aware of the impacts that weeds and pest animals have on the natural environment or primary production, or that their own actions may be contributing to the problem. Many weed and pest animal problems are increased through lack of community knowledge and awareness. Overall community awareness will improve when stakeholders have accessible, science-based information on weeds and pest animals, their characteristics, their impacts and control methods. This awareness is needed to ensure ongoing public support for weed and pest animal management and research. Building this knowledge within the community will also enable people to take ownership of the issue, increase their confidence and make them more likely to act.

Aim:

Stakeholders are informed and knowledgeable, with the capability and capacity to take ownership of weed and pest animal management.

Objectives:

- Provide accurate, accessible and timely information material to stakeholders and the public
- Undertake awareness programs such as Weedbusters Week, community meetings, Council events and field days
- Provide warnings where human activities create favourable conditions for invasive plants and animals including signage for example tilapia signs at boat ramps
- Alert the public on any new incursion of exotic invasive plants and animals through media releases and web page updates
- Provide advice to land owners and managers regrading invasive biosecurity matter on their land
- Provide invasive plant awareness training to relevant Council staff and contractors
- Ensure pest management officers are appropriately qualified and trained in all aspects of invasive species management
- Provide ongoing professional development opportunities for Council staff

3.7 Effective management systems

To effectively manage the risks and impacts of biosecurity matters, responsible agencies need to develop integrated approaches to address the problem, using multiple strategies over time, including technical knowledge, scientific data, new control methods and technologies, best management practices, monitoring and evaluating. Limited resources are an ongoing constraint and require that local government prioritise the allocation of resources to target the highest priority biosecurity matters.

Aim:

Minimise the impacts of invasive weeds and pest animals using a risk management framework to target the high priority biosecurity matters with the Shire with diverse management approaches.

Objectives:

- Use a risk assessment framework to prioritise invasive species based on current distribution, level of impact, level of threat and feasibility of control.
- Manage invasive species in cooperation with stakeholders and land managers and seek to coordinate control activities for successful long term management.
- Minimise impacts of invasive species on human health and amenity, the environment, agriculture and industry.
- Employ best practice techniques for effective control of pest species in appropriate locations including biological control agents, species competition, mechanical removal, chemical application and fire.
- Ensure pest control techniques to not adversely impact human health and amenity, the environment, agriculture or industry.
- Facilitate community compliance with obligations under the Biosecurity Act 2014 and Council's Local Laws, in line with the priorities and strategies of the biosecurity plan.

3.8 Strategic planning and management

A strategic approach will only achieve common goals and priorities if there is effective communication and cooperation between key stakeholders such as land managers, natural resource management and community groups, industry, local governments and state government departments. Local government biosecurity plans offer a 'partnership' mechanism to achieve this level of coordination and efficiency, and the Biosecurity Act facilitates a risk-based approach to weed and pest animal management. To ensure resources are used as efficiently as possible a risk assessment is used to identify the high priority species and actions.

Aim :

Stakeholders are involved in setting and implementing strategic directions for weed and pest animal management and are informed by a risk management approach.

Objectives:

- Establish a working group with key stakeholders to prioritise invasive species management actions and foster partnerships to address invasive species impacts
- Develop individual and/or multi-species invasive plant and animal management plans to assist the implementation of co-ordinated and strategic actions using a nil-tenure approach
- Contribute to regional planning and strategic projects through the Regional Biosecurity Committee and State-wide Oversight Group.
- Facilitate partnerships to research, monitor, remove and replace invasive species at the local site level to regional and state level
- Investigate funding opportunities and apply for funding to support invasive species management programmes

3.9 Commitment, roles and responsibilities

Management of weeds and pest animals is the shared responsibility of land managers, owners and occupiers, industry, the community and all levels of government. Under the *Biosecurity Act 2014* everyone has an obligation to take all reasonable and practical measures to prevent or minimise a biosecurity risk.

The broad scope and nature of invasive plant and animal problems demands a long-term commitment by all stakeholders. Council's Biosecurity Plan is crucial to the success of invasive plant and animal management and provides an opportunity to foster commitment to roles and responsibilities.

Aim:

All stakeholders understand, are committed to, and undertake coordinated pest management. The cost of this management is borne by the risk creators and those who benefit from the management.

Objectives:

- Communicate roles and responsibilities for invasive plant and animal management including making the Biosecurity Plan widely available to stakeholders and the public via a range of communication channels and information sharing
- Maintain working relationships with diverse stakeholders to generate a holistic approach to invasive plant and animal management and a sense of community ownership of the problem
- Lead by example and ensure the objectives of the plan are implemented to generate trust and co-operation in the wider community
- Implement a compliance strategy, in line with the priorities and strategies of the Biosecurity Plan, to inform, educate and if necessary enforce the obligations under the Biosecurity Act 2014 and Council's Local Laws, as a last resort.

4.0 Invasive Species in Livingstone Shire

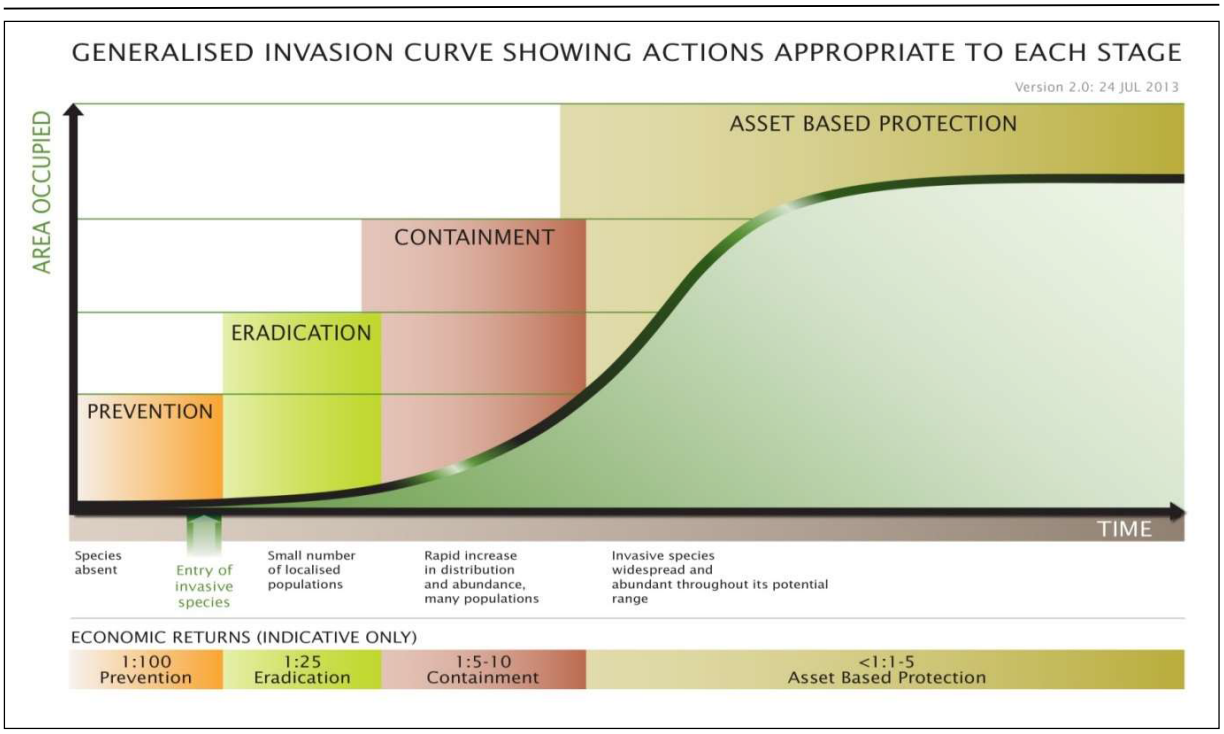
4.1 Risk Based Prioritisation

Invasive plants and animals present different levels of risk and hazard in different areas within the region. Determining risk and hazard is essential in defining priorities for prevention and management. The restriction category given to the invasive species under the regulations of the *Biosecurity Act* and the listing of pest plants as Weeds of National Significance (WoNS) assist to identify high risk species.

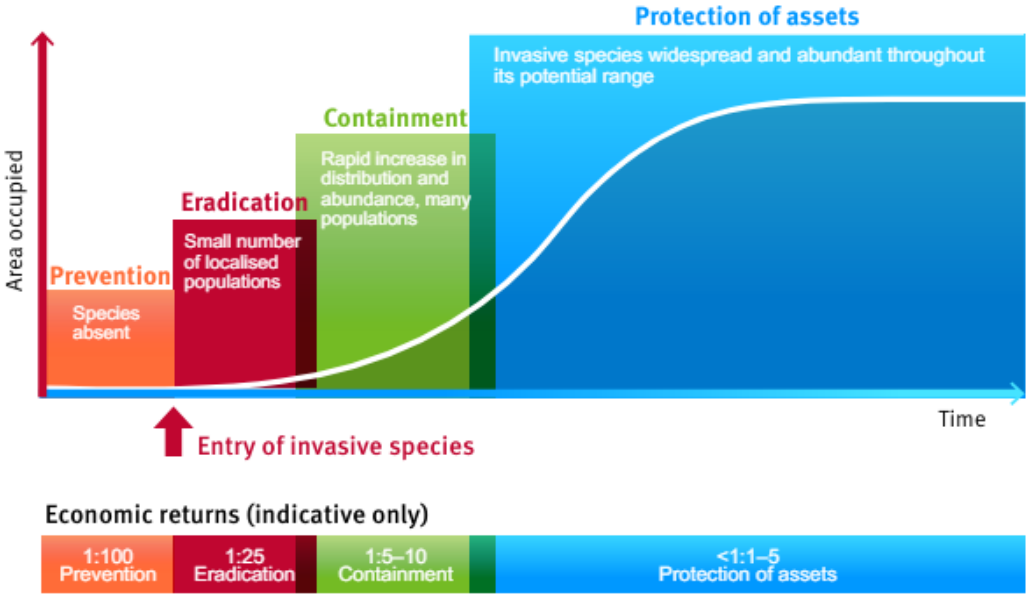
Weeds and pest animals are prioritised using a risk assessment framework based on current distribution, level of impact, level of threat and feasibility of control.

4.2 Strategic management actions

The invasive species management programme contains strategic management categories such as Prevention, Eradication, Reduction, Containment, and Asset Protection.



Source: Queensland Weed and Pest Animal Strategy, Department of Agriculture and Fisheries, 2016



Generalised invasion curve showing actions appropriate to each stage

Source: *Biosecurity strategy for Victoria* (2009)

Source: Queensland invasive plants and animals strategy 2019–2024, Department of Agriculture and Fisheries, 2019

PART B: INVASIVE SPECIES MANAGEMENT PROGRAMME

5.0 STRATEGIC MANAGEMENT CATEGORIES

5.1 Prevention

Management objective - Maintain pest-free status by monitoring and detecting any new incursions before they become established.

Common Name	Scientific Name	*Biosecurity Act 2014* Category Numbers	WoNS	Distribution
Plants				
African Boxthorn	*Lycium ferocissimum*	3*		Present in State
Alligator Weed	*Alternanthera philoxeroides*	3		Borders region
Annual Ragweed	*Ambrosia artemisiifolia*	3		Borders region
Balloon Vine	*Cardiospermum grandiforum*	3		Present in State
Bitou Bush	*Chrysanthemoides monilifers* spp. *rotundifolia*	2*, 3, 4*, 5*		Present in State
Blackberry	*Rubus anglocandicans, Rubus fruticosus aggregate*	3	✓	Present in State
Boneseed	*Chrysanthemoides monilifera ssp. monilifera)*	2, 3, 4, 5		Present in State
Bridal Creeper	*Asparagus asparagoides*	2, 3, 4, 5	✓	Present in State
Cabomba	*Cabomba caroliniana*	3	✓	Borders Region
Candyleaf	*Stevia ovata*	4		Present in State
Chilean Needle Grass	*Nassella neesiana*	3	✓	Present in State
Chinese Celtis	*Celtis sinensis*	3		Present in State
Chinese violet	*Asystasia gangetica ssp. micrantha*			Present in State
Cholla Cacti with the following names:				
Coral Cactus	*Cylindropuntia fulgida*	3		Borders region
Devil's Rope Pear	*C. imbricata*	3		No mapping
Hudson Pear	*Cylindropuntia rosea* and *C. tunicata*	2,3,4,5		Borders region
Jumping Cholla	*C. prolifera*	2,3,4,5		No mapping
Snake Cactus	*C. spinosior*	3		Present in State
Elephant Ear Vine	*Argyreia nervosa*	3		Present in State

Willows Cactus		3		Isolated Keppel Sands
Fireweed	*Senecio madagascariensis*	3	✓	Present in State
Giant Sensitive Plant	*Mimosa diplotricha var. diplotricha*	3		Present in State
Gorse	*Ulex europaeus*	3	✓	Not in State
Harungana	*Harungana madagascariensis*	3		Present in State
Honey Loctus	*Gleditsia triacanthos including cultivars and varieties*	3		Present in State
Hygrophilia	*Hygrophila costata*	3		Present in State
Koster's Curse	*Clidemia hirta)*	2, 3, 4, 5		Present in State
Kudzu	*Pueraria montana var. lobata syn. P. lobata, P. triloba other than in the Torres Strait Islands)*	3		Present in State
Limnocharis, yellow burrhead	*Limnocharis flava*	3		Present in State
Madras Thorn	*Pithecellobium dulce*	2, 3, 4, 5		Present in State
Mesquites (honey mesquite, mesquite or algarroba, Quilpie mesquite)	*Prosopis flandulosa, P. pallida, P. velutina*	3	✓	Borders region
Mexican Bean Tree	*Cecropia pachystachya, C. palmata and C. peltata*	2, 3, 4, 5		Present in State
Mexican Feather Grass	*Nassella tenuissima)*	2, 3, 4, 5		Present in State
Miconia	*Miconia calvescens, M. cionotricha, M. nervosa, M. racemosa*	2, 3, 4, 5		Present in State
Mikania Vine	*Mikania micrantha*	2, 3, 4, 5		Present in State
Mimosa Pigra	*Mimosa pigra*	2, 3, 4, 5	✓	Present in State
Ornamental Gingers (Kahili ginger, white ginger, yellow ginger)	*Hedychium gardnerianum, H. coronarium, H. flavescens*	3		Present in State
Pond Apple	*Annona glabra*	3	✓	Present in State
Prickly Pears:				
Bunny Ears	*Opuntia microdasys*	2,3,4,5		Present in State
Drooping Tree Pear	*O. monacantha* syn. *O. vulgaris*	3		No mapping
Prickly Pear	*O. elata*	2,3,4,5		No mapping
Tiger Pear	*O. aurantiaca*	3		No mapping
Privets (broad-leaf privet, tree privet,	*Ligustrum lucidum, L. sinense*	3		Borders region

small-leaf privet, Chinese privet)				
Sengal Tea	*Gymnocoronis spilanthoides*	3		Present in State
Sicklepods (foetid cassia, hairy cassia, sicklepod)	*Senna tora, S. hirsute, S. obtusifolia*	3		Borders region
Telegraph Weed	*Heterotheca grandiflora*	3		Present in State
Tobacco Weed	*Elephantopus mollis*	3		Present in State
Water Mimosa	*Neptunia oleracea* and *N. Plena*)	2,3,4,5		Present in State
Westwood Pear	*O. streptacantha*	3		Borders region
Willows	all *Salix* spp. other than *S. babylonica*, *S.* x *calodendron* and *S.* x *reichardtii*	3	✓	Present in State
Animals				
Asian Honey Bee	*Apis cerana javana*	1*		Present in State
Asian Tiger Mosquito	*Aedes albopictus*			Borders State
Barbary Sheep	*Ammotragus lervia*	2, 3, 4, 5, 6*		Present in State
Blackbuck Antelope	*Antilope cervicapra*	2, 3, 4, 5, 6		Present in State
Electric Ant or Little Fire Ant	*Wasmannia auropunctata*	1		Present in State
Feral Red deer	*Cervus elaphus*	3, 4, 6		Borders Region
Hog Deer	*Axis Porcinus*	2, 3, 4, 5, 6		Present in State
Red Eared Slider Turtle	*Trachemys scripta elegans*	2, 3, 4, 5, 6		Present in State
Red Imported Fire Ant	*Solenopsis invicta)*	1		Present in State
Sambar Deer	*Rusa unicolor, syn. Cervus unicolor*	2, 3, 4, 5, 6		Present in State
Yellow Crazy Ant	*Anoplolepis gracilipes*	3		Present in State

*Category
1 – Must report the presence of category 1 matter to an DAF inspector within 24 hours
2 – Must report the presence/sighting of category 2 matter to Biosecurity Queensland within 24 hours
3 – Must not distribute or dispose of unless under a regulation, restricted matter permit or by an authorised officer
4 – Must not move or cause or allow to be moved
5 – Must not keep in the person's possession or under the persons control
6 – Must not feed

Biocontrol – Rubbervine Rust

5.2 Eradicate

Management objective - Return Livingstone Shire to pest-free status by eradicating all known infestations.

Common Name	Scientific Name	*Biosecurity Act 2014* Category Numbers	WoNS	Distribution
Plants				
Gamba Grass	*Andropogon gayanus*	3	✓	Isolated
Grey Leaved Cordia	*Cordia sinensis*	Not declared		Borders region
Log Wood	*Haemaatoxlyon campechianum*	-		Borders region
Siam Weed	*Chromolaena odorata, C. squalida*	3		Isolated
Thunbergias	*Thunbergia grandiflora syn. T. laurifolia*	3		Isolated
White Ball Acacia	*Acaciella angustissima syn. Acacia angustissima, Acacia boliviana*			Isolated

5.3 Reduce infestations/populations

Management objective - To significantly reduce the extent of the invasive plant species in the shire through destroying relevant infestations.

Common Name	Scientific Name	*Biosecurity Act 2014* Category Numbers	WoNS	Distribution
Plants				
Badhara Bush	*Gmelina elliptica*	3		Isolated
Belly-ache Bush	*Jatropha gossypiifolia and hybrids*	3		Isolated
Camphor Laurel	*Cinnamomum camphora*			
Cats Claw Creeper	*Dolichandra unguis-cati*	3	✓	Scattered
Chinee Apple	*Ziziphus mauritiana*	3		Isolated
Groundsel Bush	*Baccharis halimifolia*	3		Isolated
Madeira Vine	*Anredera cordifolia*	3	✓	Isolated
Parkinsonia	*Parkinsonia aculeata*	3	✓	Widespread

Prickly Acacia	*Vachellia nilotica*	3	✓	Isolated/ Scattered
Animals				
Feral Chital Deer	*Axis axis*	3, 4, 6		Isolated
Feral Fallow Deer	*Dama dama*	3, 4, 6		Isolated
Feral Red Deer	*Cervus elaphus*	3, 4, 6		Isolated

5.4 Containment

Management objective - Prevent spread to pest-free areas and minimise the impact on particular assets by containing and managing impacts on, and risk to, surrounding land uses.

Common Name	Scientific Name	*Biosecurity Act 2014* Category Numbers	WoNS	Distribution
Plants				
African Fountain Grass	*Cenchrus setaceum*	3		Isolated Scattered
Coral Creeper	*Baleria repens*			Scattered
Castor-oil Plant	*Ricinus communis*	Locally declared		Widespread
Devil's Apple	*Solanum aculeatissimum*	Locally declared		Widespread
Dutchman's Pipe	*Aristolochia ssp*			Isolated - Scattered
Elephant Grass	*Penisetum purpurem*	Locally declared		Scattered
Harrisia Cactus	*Harrisia martinii, H. tortuosa and H. pomanensis syn. Cereus pomanensis*	3		Scattered
Lion Tail	*Leonotis nepetifloia*	Locally declared		/Scattered widespread
Mother of Millions	*Bryophyllum delagoense syn. B. tubiflorum, Kalanchoe delagoensis*	3		Scattered widespread
Navua Sedge	*Cyperus aromaticus*			Isolated
Parthenium	*Parthenium hysterophorus*	3	✓	Scattered
Rats Tail Grass (American rat's tail grass, Giant Parramatta grass, Giant rat's tail grass)	*Sporobolus jacquemontii, S. fertilis, S. pyramidalis and S. natalensis*	3		Widespread

Rubber Vine (ornamental rubber vine, rubber vine)	*Cryptostegia madagascariensis, C. grandiflora*	3	✓	Widespread
Salvinia	*Salvinia molesta*	3	✓	Scattered/ Widespread
Sisal	*Agave vivipara (var. vivipara and cv. Marginate (sisal)), Agave sisalana (sisal/sisal hemp*	Locally declared		Scattered
Sword cactus	*Acanthocereus tetragonus*			Scattered
Water Hyacinth	*Eichhornia crassipes*	3	✓	Widespread
Water Lettuce	*Pistia stratiotes*	3		Scattered
Wild Sisal	*Furcraea selloa*	Locally declared		Isolated/Scattered
Yellow Bells	*Tecoma stans*	3		Scattered
Yellow Oleander, Captain Cook tree	*Cascabela thevetia syn. Thevetia peruviana*	3		Scattered
Animals				
Cat	*Felis catus and Prionailurus bengalensis x Felis catus* – other than a domestic cat	3, 4, 6	-	Widespread
Dingo	*Canis lupus dingo*	3, 4, 5, 6	-	Widespread
Dog	*Canis lupus familiaris* – other than a domestic dog	3, 4, 5, 6	-	Widespread
European fox	*Vulpes vulpes*	3, 4, 5, 6	-	Widespread
European rabbit	*Oryctolagus cuniculus*	3, 4, 5, 6	-	Widespread
Feral goat	*Capra hircus*	3, 4, 6	-	Isolated
Feral pig	*Sus scrofa*	3, 4, 6	-	Widespread
Feral Horse	*Equus caballus*			Isolated
Feral Rusa deer	*Rusa timorensis, syn, Cervus timorensis*	3, 4, 6	-	Scattered
Pandanus Plant Hopper	*Jamela spp*			Restricted

5.5 Asset Protection

Management objective - Minimise the impact on particular assets by reducing or containing infestations.

Common Name	Scientific Name	*Biosecurity Act 2014* Category Numbers	WoNS	Distribution
Plants				
Agave	*Agave spp*	Locally Declared		Scattered
African Lovegrass	*Eragrostis curvula*			Isolated
African Tulip Tree	*Spathodea campanulata*	3		Scattered
Allaman grass				Widespread
Asparagus Fern	*Asparagus aethiopicus, A. africanus and A. plumosus, A. scandens*	3	✓	Scattered
Athel Pine	*Tamarix aphylla*	3	✓	Isolated
Bamboo	*Bambusa spp.*			Isolated
Blue heliotrope	*Heliotropium amplexicaule*			Scattered
Blue snakeweed	*Stachytarpheta spp*			Widespread
Brazilian cherry	*Eugenia uniflora*			Widespread
Brazilian Nightshade	*Solanum seaforthianum*			Widespread
Broad-leaved Pepper Tree	*Schinus terebinthifolius*			Widespread
Buffel grass	*Pennisetum ciliare*			Scattered
Cadaghi	*Corymbia torelliana*			Widespread
Caltrop	*Tribulus terrestris*			Widespread
Camphor Laurel	*Cinnamomum camphora*	3		Isolated
Ceylon Almond	*Terminalia catappa*			Scattered
Chinese burr	*Triumfetta rhomboidea*			Isolated
Clitoria	*Clitoria ternatea*			Widespread
Chinese violet	*Asystasia gangetica ssp. gangetica*			Widespread
Coconut palm	*Cocos nucifera*			Scattered
Cocos or Queen palm	*Arecastrum romanzoffianum*			Scattered
Coffee	*Coffea Arabica*			Isolated
Common sensitive plant	*Mimosa pudica*			Widespread

Coralberry	*Rivina humilis*			Widespread
Cumbungi	*Typha spp.*			Scattered
Devil's Fig	*Solanum torvum*	Locally declared		Widespread
Duranta Pigeon Berry	*Duranta repens, Duranta erecta*	Locally declared		Widespread
Easter cassia	*Senna pendula var. glabrata*			Widespread
Feral Leucaena	*Leucaena leucocephala*	Locally declared		Widespread
Flea tree, Indian sirus	*Albizia lebbeck*			Widespread
Gazania, Sand daisy	*Gazania spp.*			Sacttered
Glory Lily	*Gloriosa superba*			Scattered
Golden Cane palm	*Dypsis lutescens*			Scattered
Golden rain tree	*Koelreuteria elegans ssp. formosana*			Isolated
Grader Grass	*Themeda quadrivalvis*			Widespread
Green Panic	*Panicum maximum*			Widespread
Guinea grass	*Megathyrsus maximus,*			Scattered Widespread
Guinea Grass Hamil				Scattered
Hymenachne	*Hymenachne amplexicaulis and hybrids*	3	✓	Widespread
Inkweed	*Phytolacca octandra*			Scattered
Japanese sunflower	*Tithonia diversifolia*			Scattered Widespread
Johnson grass	*Sorghum halepense*			Scattered
Khaki weed	*Alternanthera pungens*			Scattered
Lantana creeping lantana and lantana, common lantana	*Lantana montevidensis and Lantana camara*	3	✓	Widespread
Lippia	*Phyla canescens*			Isolated
Mango				Widespread
Mexican Poppy	*Argemone ochroleuce Sweet subsp. Ochroleuca*	-		Widespread
Mission grass	*Pennisetum polystachion*			Scattered
Mock Orange	*Murraya paniculata*			Widespread
Molasses grass	*Melinis minutiflora*			Scattered
Morning Glory Vines	*Ipomea indica, Ipomea. cairica Ipomoea*			Scattered / Widespread

	purpurea, Ipomoea quamoclit			
Moses-in-the-cradle	*Rhoeo discolor*			Widespread
Mossman River grass	*Cenchrus echinatus*			Scattered / Widespread
Mother-in-law's Tongue	*Sansevieria trifasciata*			Scattered / Widespread
Neem tree	*Azadirachta indica*			Isolated
Noogoora Burr	*Xanthium strumarium*			Widespread Scattered
Ochna, Mickey mouse plant	*Ochna serrulata*			Widespread
Oleander	*Nerium oleander*			Widespread
Para grass	*Urochloa mutica*			Widespread
Caribbean pine	*Pinus caribaea*			Scattered
Honduras pine	*Pinus hondurensis*			Scattered
Slash pine	*Pinus elliottii*			Scatterd
Painted spurge, Dwarf poinsettia	*Euphorbia cyathophora*			/ Widespread
Pink periwinkle	*Catharanthus roseus*			Widespread
Pink antignon (pink coral vine	*Antigonon leptopus*			Scattered Widespread
Praxelis	*Praxelis clematidea*			Widespread
Common Pest Pear Spiny Pest Pear	*O. stricta syn. O.inermis*	3		Widespread
Sensitive plant	*Mimosa pudica*	Locally Declared		Scattered
Singapore Daisy	*Sphagneticola trilobata syn. Wedelia trilobata*	3		Widespread
Siratro	*Macroptilium atropurpureum*			Widespread
Sisal/ wild sisal	*Furcraea selloa*	Locally Declared		Scattered / Widespread
Snake Weed	*Stachytarphets spp*	-		Widespread
Spear thistle	*Cirsium vulgare*	Locally Declared		Scattered
Stylo	*Stylosanthes scabra*			Widespread
Thatch grass	*Hyparrhenia rufa*			Scattered
Tropical signal grass	*Urochloa subquadripara*			Scattered/ Widespread
Umbrella sedge	*Cyperus involucratus*			Widespread
Velvety Tree Pear	*O. tomentosa*	3	✓	Scattered

Verbena	*Verbena aristigera, Verbena bonariensis*			Scattered
Wandering Jew	*Tradescantia albiflora*			Widespread
Wild tobacco tree	*Solanum mauritianum*			Isolated
Yellow guava	*Psidium guajava*			Scattered
Animals				
Black rat	*Rattus rattus*			Widespread
Brown hare	*Lepus capensis*			Scattered
Cane toad	*Bufo marinus*			Widespread
Helmeted guineafowl	*Numida meleagris*			Isolated
House Mouse	*Mucus mucus*			Widespread
Indian Myna Bird	*Acridotheres tristis*			Scattered
Norwegian rat	*Rattus norvgicus*			Widespread
Peafowl	*Pavo cristatus*			Isolated
Tilapia	*Tilapia, Oreochromis and Sarotherodon spp*	3, 5, 6, 7		Scattered

Glossary

asset something with environmental, social or economic value, whether publicly or privately owned, that invasive plants and animals may directly or indirectly affect.

biosecurity consideration can be human health, social amenity, the economy or the environment.

biosecurity matter is a living thing other than a human or part of a human, or a pathogen that can cause disease in a living thing other than a human or in a human body, or transmission from an animal to a human, or a disease, or a contaminant.

biosecurity risk is a risk of any adverse effect on a biosecurity consideration. A risk is or may be caused by biosecurity matter, dealing with biosecurity matter or a carrier or carrying out an activity relating to biosecurity matter or a carrier.

carrier anything, dead or alive, biological or inanimate, that is carrying or has the potential to carry biosecurity matter.

general biosecurity obligation an overarching obligation that requires all people who deal with biosecurity matter or a carrier to take all reasonable and practical measures to minimise the risk associated with that biosecurity matter.

incursion an isolated population of an invasive plant and animal recently detected in an area, not known to be established, but expected to survive for the immediate future.

invasive biosecurity matter includes only invasive plant and animals such as those listed as prohibited and restricted matter in Schedules 1 and 2 of the Biosecurity Act.

invasive animal an animal having, or with potential to have, an adverse environmental, economic, or social impact.

invasive plant a plant that requires some form of action to reduce its negative effects on the environment, the economy and human health and amenity.

land manager an individual, company, organisation or government that owns, leases or manages private, commercial or government land.

natural resource management (NRM) group an organisation that acts as a regional delivery agent and focuses on on-ground activities that protect, improve and restore waterways and rangelands by managing weeds and pests, and improving soil, vegetation and water quality at a river-catchment or other landscape level.

nil-tenure approach an approach in which a range of control methods are applied across all tenures by all stakeholders at a 'landscape' (rather than 'property') level in a cooperative and coordinated manner.

peri-urban - landscape that combines urban and rural activities. These areas commonly contain a mixture of land usages including suburban pockets, rural residential lots and small-to-medium agricultural holdings.

predation the killing of one animal (prey) by another animal (predator) for food.

risk management the process of identifying risks and selecting and implementing measures to reduce levels of risk.

Weeds of National Significance (WoNS) weeds that have been identified as among Australia's worst weeds and for which a nationally coordinated management strategy has been developed and implemented, see http://www.weeds.org.au/natsig.htm https://weeds.org.au/weeds-profiles/ for more details.

Appendix A: A list of relevant stakeholder groups in Livingstone Shire.

Commonwealth Government:
- Department of Defence
- Great Barrier Reef Marine Park Authority
- Department of Agriculture and Water Resources

State Government Departments:
- Biosecurity Queensland
- Department of Agriculture, and Fisheries
- Department of Environment, Science and Innovation
- Department of Resources
- Queensland Health
- Department of Transport and Main Roads

Local Governments:
- Central Queensland Regional Organisation of Councils
- Environment and Regulatory Taskforce
- Area Fire Management Group

Community groups:
- Landcare groups
- Environment groups (Capricorn Conservation Council, Capricorn Branch)
- Wildlife Preservation Society of Queensland)
- Wildlife Groups (Birds Capricornia, Plants Capricornia)
- NRM groups (Fitzroy Basin Association, Capricornia Catchments, Healthy Land and Water)

Business and Industry:
- Ergon
- Telstra
- Sun Water
- Queensland Rail
- Hancock Plantations Queensland
- Agforce
- GrowCom
- Leucaena Growers Network
- Retail Plant Nurseries
- Private Land Owners

Suppliers of weed and pest control technologies:
- Vegetation Contractors
- Pest animal contractors

Traditional Owners

Appendix B: Property Biosecurity Plans

Must I prepare a plan?

A biosecurity plan is not a regulatory requirement unless landholders have been issued a control notice under the *Biosecurity Act 2014*, or the land is used in production of stock and producers need to meet the biosecurity requirements of the Livestock Production Assurance (LPA) Program. A property biosecurity plan is an extremely useful management tool.

Having a plan also helps landowners, lessees, licensees or permittees to meet their statutory obligations to:

- Take all reasonable steps to keep their land free of restricted and prohibited invasive weeds and pest animals or prevent spread to neighbouring areas (as required by the *Biosecurity Act 2014*); and

- Maintain a duty of care for, and control pests on, any state land under their control (as required by the *Land Act 1994*).

What are the benefits of having a plan?

Having a plan will help landholders:

- Manage weeds and pest animals on their properties;
- Integrate pest management activities with other components of a whole property plan;
- Improve profitability by ensuring resources are deployed at optimum times;
- Monitor how well control methods are working;
- Set and achieve goals;
- Apply for financial assistance and incentives for pest management; and
- Report progress to funding bodies and local governments.

How do I prepare a property pest management plan?

Detailed information regarding property pest management planning can be found on the Department of Agriculture and Fisheries website: https://www.daf.qld.gov.au/business-priorities/biosecurity/animal-biosecurity-welfare/animal-health-pests-diseases/protect-your-animals/property-biosecurity

Topics presented on the website include:

- Record details of your property;
- Find out how to complete a property pest management plan;
- Landholders' guidelines to property pest management plans;
- Pest management plan template/worksheets; and
- Making a map.