

# Bulloo Shire Council Biosecurity Plan 2022 Onwards

Adopted by Council October 2022



## ACKNOWLEDGMENTS

Bulloo Shire Council working together with all stakeholders to implement and coordinate continuous and effective biosecurity across Bulloo Shire. This biosecurity plan has been reviewed by a stakeholder group including Southern Queensland Landscapes, Department of Agriculture and Fisheries, National Parks and Landholders.

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Version	Adopted	Resolution	Review Date
1	25 October 2022	2022/274	

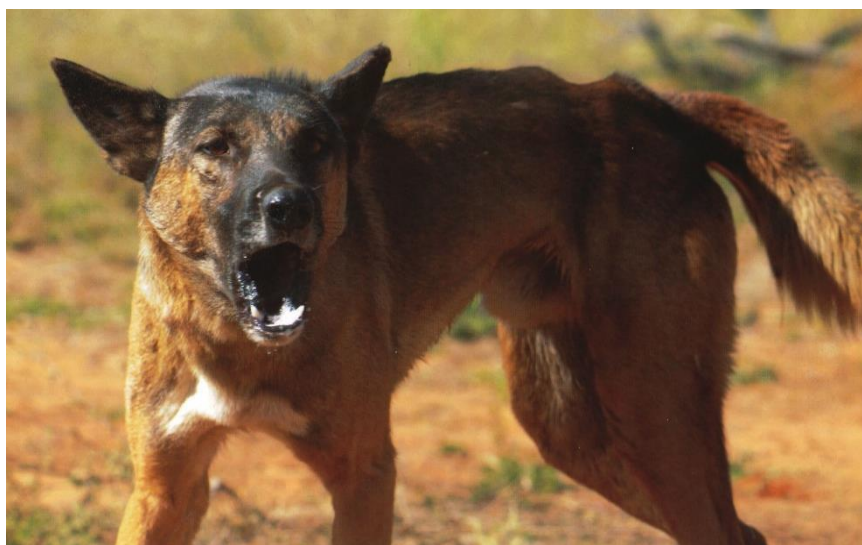
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The Bulloo Shire Council Biosecurity Plan will detail the course of action Bulloo Shire Council intends to take in the future with regard to the control of declared plants and animals. The purpose of this plan is to bring all members of the community together to manage invasive plants and animals. It does this by highlighting the responsibilities of the community and the desired outcomes required under the *Biosecurity Act 2014*.

The goals of this plan are to:

- Ensure stakeholders are informed, knowledgeable and are committed to weed and pest animal management
- Ensure that all stakeholders are strongly committed to implementing effective biosecurity management
- Establish strategic directions that are maintained and owned by all stakeholders
- To prevent the introduction, establishment and spread of new weeds and pest animals
- Ensure integrated systems for managing the impacts of established weeds and pest animals are developed



*(Image courtesy of Department of Agriculture and Fisheries)*

The Bulloo Shire covers almost 74,000 km<sup>2</sup> and is serviced by the main towns and localities of Thargomindah, Hungerford, Noccundra and Cameron Corner. It is located in south west Queensland and has an approximate population of 337 (2021 census). The administrative centre for the council is the township of Thargomindah.

The shire is the third largest in Queensland, with the major industries being beef and sheep grazing, goats, tourism, honey, opals, oil and natural gas. Biosecurity and pest management places a vital role in the protection of agricultural industries and sensitive environmental areas. The mission statement of “Bulloo Shire Council working together with all stakeholders to implement and coordinate continuous and effective biosecurity across Bulloo Shire”, is critical to the protection of our industries for future generations.

Most invasive plants in Bulloo Shire are the result of garden escapees. Original homesteads are often sites of declared weeds. These plants were introduced for their extremely hardy nature in arid environments but either escaped gardens or were deliberately dumped, resulting in widespread infestations. Weeds cost Queensland an estimated \$600 million annually and have significant impacts on our agriculture, our natural environment and human and animal health.

Likewise, most invasive animals in Bulloo Shire have either escaped domestication or were deliberately released for sport (hunting). Most invasive animals are abundant in Bulloo Shire. *“In Queensland, wild dogs are estimated to cause losses of \$24.9 million to the cattle industry, \$16.9 million to the sheep and goat industries, \$5.2 million associated with livestock disease management and \$19.9 million in associated management costs.”* Biosecurity Queensland 5 November 2021. All invasive animals have the potential to adversely alter ecosystem function, reduce primary industry productivity and profitability and threaten human and animal health.

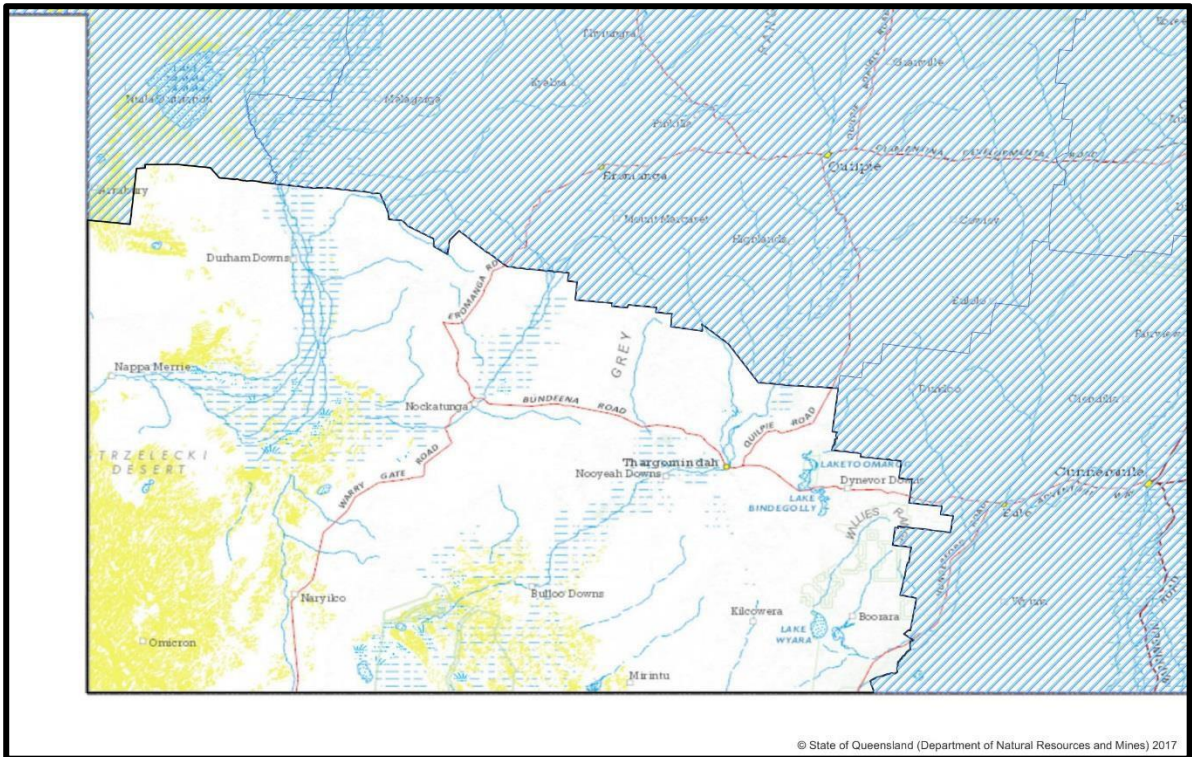
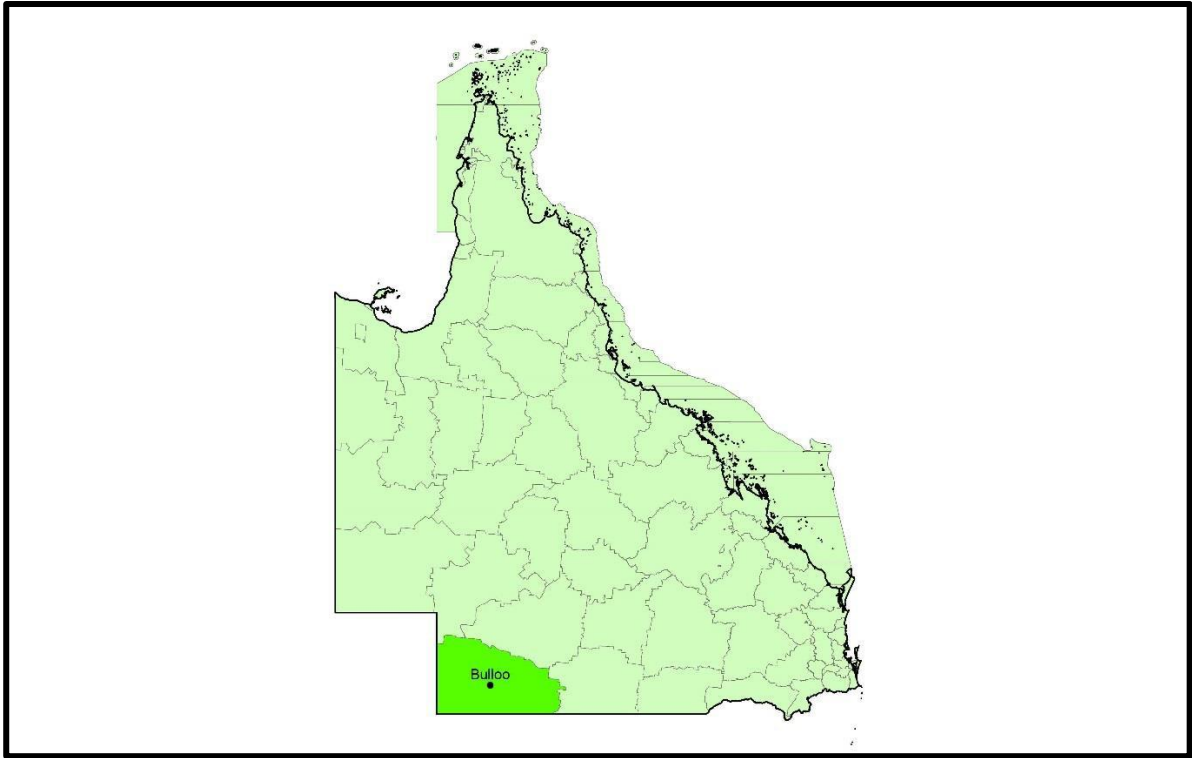
The potential impacts of pest animals is even greater. All cloven-hooved animals have the potential to carry the virus that causes Foot and Mouth Disease (FMD). While feral pigs cost Queensland an estimate of \$12 million in grain production loss, the introduction and multi-state spread of FMD would cost Australia more than \$52 billion over 10 years.

It is ever more important that every resident and every visitor of Bulloo Shire plays their part in the successful management of invasive plants and animals.

The *Biosecurity Act 2014* introduced the General Biosecurity Obligation (GBO). This details that every person has an obligation to take all reasonable and practical measures to prevent or minimise a biosecurity risk, if they know or ought reasonably to know of the particular biosecurity risk.

The Bulloo Shire Council Biosecurity Plan 2022 onwards is written in accordance with the new provisions of the *Biosecurity Act 2014*. The biosecurity plan is subject to a review annually, with necessary updates being made to reflect changes in resources, pest threats, legislation or policy.

# MAP OF BULLOO SHIRE





The Bulloo Shire Council Biosecurity Plan was developed by representatives of the Biosecurity Working Group. The Biosecurity Working Group acts as an advisory body for Council, State agencies, organisations and landholders of Bulloo Shire on invasive plant and animal issues.

The Biosecurity Working Group is comprised of representatives from Council, industry bodies and relevant State Government agencies, as outlined below:

- Rural Lands Officer, Bulloo Shire Council
- Manager of Rural Services, Bulloo Shire Council
- Rural Services Officer, Bulloo Shire Council
- Biosecurity Queensland (Department of Agriculture & Fisheries)
- Queensland Parks and Wildlife Service
- Southern Queensland Landscapes
- NSW Local Land Services

## PEST MANAGEMENT PLANNING

Achieving biosecurity and pest management goals is a long-term practice. Milestones and targets need to be set both short and long-term, and appropriate follow-up is required to ensure success and to eliminate the possibility of pests re-establishing. This will ensure a well-managed, proactive plan rather than reactive, crisis-driven actions.

The guidelines are written to ensure all landholders and managers can develop a clear and comprehensive understanding of what is required of them to meet their General Biosecurity Obligations (GBOs). This Biosecurity Plan is a policy document and reference tool for both council workers and landholders/managers equally.

## LAND MANAGEMENT

Land in the Bulloo Shire Council area is primarily managed for one or more of the following range of values and land uses:

- Grazing
- Beekeeping
- Tourism/recreation
- Nature Conservation
- Residential
- Cultural heritage
- Resource Exploration
- Fossicking/mining

## THE PRINCIPLES OF MANAGING PESTS

The Department of Agriculture and Fisheries defines the principles of Pest Management as follows:

### Integration

- Pest management is an integral part of managing natural resources and agricultural systems.

### **Public awareness**

- Public awareness and knowledge of pests must be raised to increase the capacity and willingness of individuals to manage pests.

### **Commitment**

- Effective pest management requires a long-term commitment to pest management by the community, industry groups and government entities.

### **Consultation and partnership**

- Consultation and partnership arrangements between local communities, industry groups, State government agencies and local governments must be established to achieve a collaborative approach to pest management.

### **Planning**

- Pest management planning must be consistent at local, regional, State and national levels to ensure resources target priorities for pest management identified at each level.

### **Prevention**

- Preventative pest management is achieved by—

Preventing the spread of pests, and viable parts of pests, especially by human activity; and

Early detection and intervention to control pests.

### **Best practice**

- Pest management must be based on ecologically and socially responsible pest management practices that protect the environment and the productive capacity of natural resources.

### **Improvement (research, monitoring and evaluation)**

- Research about weeds and pest animals, and regular monitoring and evaluation of pest control activities, is necessary to improve pest management practices.

More information can be found at: <https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/pest-management-planning/principles>

## **LEGAL REQUIREMENTS REGARDING PESTS**

On the 1<sup>st</sup> of July 2016, the *Biosecurity Act 2014* superseded the *Land Protection Act (Pest and Stock Route Management) Act 2002 (QLD)*. Under section 48(1) of the Biosecurity Act the main function of a Local Government is to ensure prohibited and restricted invasive biosecurity matter are managed within the local government area.



## MAIN FUNCTION OF A LOCAL GOVERNMENT

The main function of a local government is described in Section 48 of the Act:

The main function under this Act of each local government is to ensure that the following biosecurity matter (*invasive biosecurity matter* for the local government's area) are managed within the local government's area in compliance with this Act –

- (a) Prohibited matter mentioned in schedule 1, parts 3 and 4;
- (b) Prohibited matter taken to be included in schedule 1, parts 3 and 4 under a prohibited matter regulation or emergency prohibited matter declaration;
- (c) Restricted matter mentioned in schedule 2, part 2;
- (d) Restricted matter taken to be included in schedule 2, part 2 under a restricted matter regulation

More details on Local Governments' main functions and the listed schedules for prohibited and restricted matter can be found in the Act:

<https://www.legislation.qld.gov.au/view/html/inforce/2017-07-03/act-2014-007>

## LOCAL GOVERNMENT ACT 2009

Councils are given the power under the Local Government Act to declare pest species not declared as Restricted or Prohibited under the Biosecurity Act 2014. The declaration of pests under the Local Government Act is achieved by the adoption of a Local Law and Subordinate Local Law dealing with the control of pests for the Council region. This process must be carried out in consultation with the Department of Agriculture and Fisheries to assess the suitability of the declaration for the local area.

Other relevant legislation

Pest management operations and planning are influenced by various state legislation including:

- Vegetation Management Act 1999 – e.g. clearing native vegetation to control pests;
- Nature Conservation Act 1992 – e.g. protection of conservation status of dingoes in protected areas;
- Water Act 2000 – e.g. the impact of pest management activities in watercourses;
- Environmental Protection Act 1994 – e.g. the release of contaminants when undertaking pest management actions;
- Transport Infrastructure Act 1994 and the Land Title Act 1994 – e.g. managing road reserves that extend beyond identified state-controlled roads;
- Animal Care and Protection Act 2001 – e.g. consistency with animal welfare requirements when dealing with pest animals;
- Agricultural and Veterinary Chemicals (Queensland) Act 1994 – e.g. Chemicals can only be applied in accordance with the manufactures label;
- Agricultural Chemicals Distribution Control Act 1966 (ACDC) and Regulation 1998 – e.g. persons using chemicals on public land are appropriately licensed; (Hazardous Area 2)
- Medicines and Poisons Act 2019 – e.g. pest animal baiting conducted under appropriate approvals and permits the use of Sodium Fluoroacetate (1080) and Strychnine
- Work Health and Safety Act 2011

## GENERAL BIOSECURITY OBLIGATION

Under section 23 of the *Biosecurity Act 2014*, Landholders/managers are obliged to take all reasonable and practical measures to prevent or minimise a biosecurity risk, if they know, or ought reasonably to know of the particular biosecurity risk. This is called a *General Biosecurity Obligation*, or 'GBO'.

The GBO in the context of the Act applies to any person who deals with biosecurity matter or a carrier, or carries out an activity that could potentially pose a biosecurity risk. This includes individuals, industry and government.

A person to whom a GBO applies *must* honour the obligation, and punishment of breaches range from large fines to jail time. For more information see Section 24 of the Act.

Bulloo Shire Council Biosecurity Plan hereby supports the General Biosecurity Obligation (GBO), by providing outcomes and strategies to not only manage current biosecurity threats, but to actively prevent and reduce the risk of further biosecurity threats and will enforce compliance with powers appointed under the Act.

## BIOSECURITY ORDER

The Bulloo Shire Biosecurity Plan provides specific and technical advice on the management of invasive pests in the region. These management requirements set the standard as to what Bulloo Shire Council deem to be reasonable and practical measures to be taken by the community in addressing invasive pests. If an authorised officer, through risk-based decision making, determines that a person or persons have failed to discharge their GBO, then Bulloo Shire Council has the authority to initiate the Biosecurity Order process. The authorised officer must ensure that the person(s) failing their GBO understands that the biosecurity matter must be managed appropriately.

The Biosecurity Order is a tool used by authorities to enforce compliance within the *Biosecurity Act 2014*. It may be issued onto a person(s) if they have failed, or may fail to discharge their GBO and must be directed at ensuring the recipient discharges their GBO at a place and may relate to a specific biosecurity matter. It can direct a person to treat, dispose, destroy, control or eradicate biosecurity matter or carrier in a stated way, clean or disinfect a place or part of a place, stop using the place or part of the place or remove biosecurity matter or a carrier from the place to be destroyed. Prior to the issuing of a Biosecurity Order, Bulloo Shire Council may issue an Advisory Letter and an Action Report that will request compliance within the Act. If the Advisory Letter is not complied with or the Action Report is deemed unsatisfactory, then Bulloo Shire Council may decide to issue a Biosecurity Order.

The action stated in the Biosecurity Order must be complied with. A reinspection following a stated compliance period will be completed and if compliance has not been achieved with a reasonable excuse, then Bulloo Shire Council may at reasonable times enter the place to take the steps stated in the order, at the cost of the person(s) to whom received the order. If the reinspection verifies a satisfactory Action Report, then Bulloo Shire Council will issue an Action Acknowledgment Letter and close the Biosecurity Order.

## BIOSECURITY PROGRAM

Bulloo Shire Council may also authorise and carry out a Biosecurity Program in the form of a surveillance program or a prevention and control program. It may be directed at monitoring compliance within the *Act*, to confirm the presence/absence of biosecurity matter, to monitor the effects of measures taken in response to a biosecurity risk, or to monitor levels of biosecurity matter. It should be designed in a way that directs the prevention of entry, establishment or spread of biosecurity matter in an area, or at managing, reducing or eradicating biosecurity matter.

Through powers authorised in the *Biosecurity Act 2014*, during a Biosecurity Program, council officers may conduct inspections of private lands to ensure adequate control of invasive pests is undertaken by landholders. They may:

- Enter a property for the purpose of identifying the presence or extent of invasive biosecurity matter
- Direct an occupier of the place to take reasonable steps within a reasonable timeframe to remove or eradicate the matter to which the program relates
- Take samples of suspected declared pest(s) for third party identification
- Produce a written and/or electronic note(s) to support program activities
- Take GPS points to ensure the accuracy of location details of invasive declared pests
- Provide advice and information to assist landholders/occupiers to meet their GBO

Bulloo Shire Council may provide a copy of any current Biosecurity Programs in place in the shire at the cost of printing.

## BIOSECURITY PLANS

The Bulloo Shire Biosecurity Plan will guide the management of all invasive biosecurity matter and locally declared pests in the Bulloo Shire as per section 53 of the *Biosecurity Act 2014*.

## DEVELOPMENT, IMPLEMENTATION AND REVIEW

This plan was developed by the Department of Agriculture and Fisheries and South West NRM in collaboration with Bulloo Shire Council in accordance with the Biosecurity Act 2014. In accordance with Chapter 3: Matters relating to local governments, Part 2: Biosecurity plans for local government areas: Sections 53, 54 and 55 of the Act. The review of this plan in 2022 has been carried out by a Biosecurity Working Group.

A review of the 2022 onwards Biosecurity Plan will be carried out on an annual basis. The development and consultation phases of this Biosecurity Plan, has provided opportunity for the local community and other stakeholders, through the Biosecurity Working Group to make valued and informed decisions which will determine the strategic directions and priority pest programs of Council for the future.

## PROHIBITED MATTER

Prohibited matter is detailed under section 20 of the Act as biosecurity matter that is not found in Queensland but would have a significant adverse impact on our health, way of life, the economy or the environment if it entered the state. It can be any of the following:

- Diseases, viruses or parasites
- Invasive animals or plants
- Exotic marine animals, plants or diseases
- Noxious fish
- Insect pests

## IDENTIFYING PROHIBITED MATTER

It is the responsibility of all Queenslanders, as well as visitors from interstate and overseas, to be aware and take steps to prevent prohibited matter from entering our state. You will be expected to know about prohibited matter that you may come across in your environment, or as part of your business or hobby.

## REPORTING PROHIBITED MATTER

If you become aware of prohibited matter or you believe that something is prohibited matter, you need to:

- Report to Biosecurity Queensland on **13 25 23**, within 24 hours
- Take all reasonable steps to minimise the risks



*(Bunny Ears cactus – a notifiable weed. Image courtesy of the Department of Agriculture and Fisheries)*

## RESTRICTED MATTER

There are seven categories of restricted matter. This ensures correct usage and management of restricted matter is upheld and biosecurity threats are reduced.

Categories 1 & 2

Occurrences of Categories 1 and 2 **must be reported** to Biosecurity Queensland within 24 hours of you becoming aware of its presence.

Category 3

Category 3 restricted matter **must not be spread or distributed**, and must not be disposed of into the environment unless given permission through regulation or specific permits.

Category 4

**Must not be moved** so as to prevent the spread into other unaffected areas.

Category 5

Category 5 restricted matter **must not be kept** or may only be kept under a permit of the *Biosecurity Act 2014* or another Act, as it has a high risk of negatively impacting the environment.

Category 6

You **must not feed** this category of restricted matter. Feeding this restricted matter may cause their numbers to increase dramatically and have a negative impact on the economy or the environment. Feeding for the purpose of preparing for or undertaking a control program is exempted.

Category 7

Includes noxious fish including such as carp and tilapia. The restricted matter **must be killed** and disposed of by burying the carcass whole in the ground above high tide water mark or placing in a waste disposal receptacle.

For more information regarding restricted matter visit the Department of Agriculture and Fisheries website at <https://www.daf.qld.gov.au/biosecurity/about-biosecurity/biosecurity-act-2014/biosecurity-matter/restricted-matter>

## KEY STAKEHOLDER ROLES AND RESPONSIBILITIES

Key stakeholder responsibilities for implementing the Bulloo Shire Council's Biosecurity Plan are below. All stakeholders are requested and encouraged to work with Council in achieving the outcomes required of the Biosecurity Plan. During the life of this Biosecurity Plan, Council will engage and consult with all stakeholders to ensure that clear communication paths are maintained and joint visions are achieved.

Stakeholder	Restricted	Prohibited	Other
Bulloo Shire Council	Compliance, monitoring and early detection, destruction of infestations, local	Compliance, monitoring, local planning, mapping and raising awareness	Promote, adopt and implement best practice weed management.

	planning, mapping and raising awareness and reporting to BQ.	Implementation of PMAP, communication and monitoring.	Local law compliance. Contribute financially through the precept system for pest extension and research services.
Biosecurity Queensland	Compliance, monitoring and early detection, destruction of infestations, state wide planning, mapping, coordination, raising awareness and research.	Compliance, monitoring, state/regional planning, mapping, raising awareness and research, 1080 supply and administration	Research control techniques. Support local government planning, extension and education services.
Queensland Parks and Wildlife Service	Within QPWS managed areas - monitoring, planning, mapping, control or eradication.	Within QPWS managed areas - monitoring, planning, mapping, control or eradication.	Ensure the conservation of biodiversity, monitor and regulate environmental impact of pest plant and animal management.
Queensland Health	Poisons licencing and landholder endorsements.	Poisons licencing and landholder endorsements.	Lead role in maintaining public health and safety in issues associated with poisons.
Southern Qld Landscapes	Early detection, Landholder support, field days, funding opportunities.	Early detection, Landholder support, field days, funding opportunities, Weed control in environmentally significant areas.	Regional planning/funding support for pest management programs.
Industry (AgForce, etc)	Landholder support, participation in raising awareness and funding opportunities.	Landholder support, participation in raising awareness and funding opportunities.	Landholder support, participation in raising awareness and funding opportunities.
Landholders (including Council and Native title areas)	Early detection, destruction of infestations. Ensuring all declared pests are controlled on land under their management.	Reporting the presence to BQ. Destruction of infestations.	Compliance with local laws by destroying and controlling of declared weeds and pest animals.



## PERMITS

Restricted and prohibited matter permits may be required for uses such as commercial use (restricted matter only), biological control, educational purposes and scientific research. To obtain a permit you are required to submit an application accompanied by a 'Permit Plan', which can be found on the Department of Agriculture and Fisheries website:

<https://www.daf.qld.gov.au/business-priorities/biosecurity/policy-legislation-regulation/biosecurity-act-2014/biosecurity-matter-report/restricted-matter>

## RESPONDING TO NEW AND EMERGING RISKS

The management of invasive species and biosecurity matters requires adaptation and ongoing evaluation to respond to new incursions, new species and unexpected impacts of matters currently under management. Where there are threats of serious environmental damage, or impacts to human health, social amenity or the economy, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

The application of the GBO will require the ongoing consideration of new and emerging risks and the monitoring of impacts of invasive species across the Bulloo Shire Council's Local Government Area. Where circumstances change, or new species emerge as priorities for management, the prioritisation process described will be utilized.

To deliver this obligation, Council will continue to monitor species that have been detected in Queensland. Information on specific potentially high-risk species will be made available to assist the early detection of these species and be complemented by ongoing monitoring of the risk posed.

### WILD DOG MANAGEMENT

**Goal:** To implement a Shire-wide wild dog management program that minimises the environmental, social and economic impacts of wild dogs and promotes integrated approaches to wild dog management.

**Performance Indicator:** A reduction in impacts caused by wild dogs and an increase in participation in coordinated approaches to wild dog control.

**Strategic Actions:**

- To coordinate effective 1080 baiting campaigns twice annually
- To provide ad-hoc 1080 baiting upon reasonable request
- Continued operation of scalp bounties to promote wild dog control
- To provide advice on best management practices to the community
- To promote individual landholders and other departments to monitor populations and reduce the impacts of wild dogs on their land
- To carry out compliance procedures as required

**Project Partners:** Department of Agriculture and Fisheries, SQ Landscapes, Landowners, NSW Local Land Services.

### MOTHER OF MILLIONS

**Goal:** To locate and contain large infestations within Bulloo Shire and minimise the environmental and economic impacts of Mother of Millions.

**Performance Indicator:** A reduction in the size of significant populations and prevention of further spread of Mother of Millions into agricultural lands and environmentally sensitive areas. Landowners actively involved in managing Mother of Millions on their lands.

**Strategic Actions:**

- Promote landholder and other organisation's participation in control
- Map and delimit the extent of existing populations
- Survey at-risk locations for improved future management practices
- Implement best practice management for adequate control
- Clear access pathways through vegetation for improved management
- Utilise available resources to limit the spread of the weed
- To promote any Government weed initiatives

**Project Partners:** Department of Agriculture and Fisheries, Department of Natural Resources, Mines and Energy, Queensland Parks and Wildlife, SQ Landscapes, Landowners, NSW Local Land Services.

## CORAL CACTUS

**Goal:** To locate and contain large infestations within Bulloo Shire and minimise the environmental and economic impacts of Coral Cactus.

**Performance Indicator:** A reduction in the size of significant populations and prevention of further spread of Coral Cactus into agricultural lands and environmentally sensitive areas. Successful distribution of biological control across Bulloo Shire. Landowners actively involved in managing Coral Cactus on their lands.

### Strategic Actions:

- Promote landholder and other organisation participation in control
- Map and delimit the extent of existing populations
- Survey at-risk locations for improved future management practices
- Implement best practice management for adequate control
- Utilise, spread and promote the use of biological control
- Clear access pathways through vegetation for improved management
- Utilise available resources to limit the spread of the weed
- To promote Government weed initiatives
- Identify and secure additional funding to support this project
- To carry out compliance procedures as required

**Project Partners:** Department of Agriculture and Fisheries, Department of Natural Resources, Mines and Energy, Qld Parks and Wildlife Service, SQ Landscapes, Landowners, NSW Local Land Services

## PARTHENIUM WEED

**Goal:** To locate and manage infestations within Bulloo Shire as they arise and minimise the environmental, social and economic impacts of Parthenium weed.

**Performance Indicator:** A reduction in detections of Parthenium weed and the prevention of spread into other agricultural lands and environmentally sensitive areas of Bulloo Shire. Landowners actively involved in managing and reporting Parthenium weed on their lands.

### Strategic Actions:

- Promote landholder and other organisation participation in control
- Map and delimit the extent of existing populations
- Survey at-risk locations for improved future management practices
- Implement best practice management for adequate control
- Utilise, spread and promote the use of biological control
- Clear access pathways through vegetation for improved management
- Utilise available resources to limit the spread of the weed
- To promote Government weed initiatives
- To carry out compliance procedures as required

**Project Partners:** Department of Agriculture and Fisheries, Department of Natural Resources, Mines and Energy, Department of Qld Parks and Wildlife Service, SQ Landscapes, Landowners.

## DESIRED OUTCOMES

The desired outcomes proposed for this plan are consistent with those of the state weeds and pest animal strategies (developed in accordance with the requirements of the *Biosecurity Act 2014* and are central to the success of biosecurity management activities.

***Desired Outcome 1 – Stakeholders are informed, knowledgeable, and are committed to weed and pest animal management.***

***Desired Outcome 2 – All stakeholders are strongly committed to implementing effective biosecurity management.***

***Desired Outcome 3 – Strategic directions are established, maintained, and owned by all stakeholders.***

***Desired Outcome 4 – To prevent the introduction, establishment, and spread of weeds and pest animals.***

***Desired Outcome 5 – Integrated systems for managing the impacts of established weeds and pest animals are developed.***



*(Hudson Pear – a notifiable weed. Image courtesy of the Department of Agriculture and Fisheries)*

## DESIRED OUTCOME 1

### *“Stakeholders are informed, knowledgeable, and are committed to weed and pest animal management”*

Objective – To increase community, industry and agribusiness awareness and knowledge of pests and their impacts, ensure information is available to all stakeholders and improve their skills in pest management.

Principle	Strategic Actions	Success Indicator
<b>Education, Awareness and Extension</b>	Council adopts Biosecurity Plan and provides public access to the document.	Document is uploaded to website and advertise on appropriate platforms such as social media and newsletters.
	Ensure all relevant staff are aware of the objectives and their GBO.	Current staff are made aware and all new staff are provided with information/training as part of their induction process if it is relevant to their role.
	Relevant field days and other agricultural events are attended to educate the public about their GBO and the BSC Biosecurity Plan.	General community awareness is increased and landholders understand the GBO.
	Ensure appropriate staff have relevant training, qualifications and resources.	HR to keep record of training undertaken and competency maintenance.
	Landholders/managers and staff are provided with opportunities to present and attend workshops, conferences and forums.	Number of attendees to events.

## DESIRED OUTCOME 2

*“All stakeholders are strongly committed to implementing effective biosecurity management”*

Objective –

Principle	Strategic Actions	Success Indicator
<b>Partnerships, Commitment, Support and Compliance</b>	Council’s Rural Services Department to build and maintain working relationships with relevant stakeholder groups, including but not limited to, Collaborative Area Management groups, Weed Busters, Landcare groups, Traditional Owners and cross-border organisations.	Sound relationships established.
	Develop, maintain and promote a surveillance, prevention and control program for key projects and priorities.	Programs are established and pest identification and control are considered.
	Support State and Commonwealth pest management projects.	State/Commonwealth projects supported.
	Participate in Regional baiting programs.	Baiting programs successful.



### DESIRED OUTCOME 3

*“Strategic directions are established, maintained, and owned by all stakeholders”*

Objective –

Principle	Strategic Actions	Success Indicator
<b>Planning and Integration</b>	Map all pests in the Shire, updated as appropriate (e.g. new infestation identified, infestations eradicated).	Accurate, current and legible maps made available to the public.
	Annual review of action plan and management objectives.	Timely review of action plan.
	Council is to utilise available GPS mapping technologies, or maintain a weed/pest animal database recording new infestations.	Accurate records maintained and provided to the public.
	Council is to encourage all stakeholders to develop a property Pest Management Plan including plants <i>and</i> animals, and utilise technologies or a similar database system.	Accurate records maintained.
	Pest animal and plant management across council boundaries is considered.	Regular contact with cross border organisations such as Local Land Services and neighbouring shires.  Rural Services staff attend the Shire Rural Lands Officers Group of Western Qld Meeting & NSW Local Land Services bi-annual meetings.

#### DESIRED OUTCOME 4

*“To prevent the introduction, establishment, and spread of weeds and pest animals.”*

Objective –

Principle	Strategic Actions	Success Indicator
<b>Prevention and Education</b>	Promote weed hygiene measures for movement of harvesting and construction machinery and fodder.	Spread of pests minimised/prevented.
	Encourage landholders and community to report pests, especially emerging biosecurity threats, and respond to reports promptly.	Working relationship between council and community established and biosecurity threats identified.
	Ensure landholders/managers are educated in the identification of priority weeds and pest animals and are aware of their GBO to minimise and prevent the biosecurity risk, and the best practice control methods to do so.	Landholders/managers have increased knowledge and report biosecurity risks.

## DESIRED OUTCOME 5

*“Integrated systems for managing the impacts of established weeds and pest animals are developed”*

Objective –

Principle	Strategic Actions	Success Indicator
<b>Integrated Control and Best Practice Management</b>	Consider all factors during planning including, but not limited to animal welfare, utilisation of multiple techniques and workplace health and safety.	Plans can be implemented with minimal risk and high success rate.
	Provide the community and relevant staff access to Best Practice Manuals and educational resources.	Community/staff are aware of Best Practice Management for a biosecurity risk.
	Promote awareness and integration of surrounding Shires’ Biosecurity Management Plans and State/Commonwealth strategies to ensure consistency and best possible management practices.	All Shires deliver the best possible pest animal and weed management.

## MANAGEMENT OF STOCK ROUTES

Bulloo Shire Council acknowledges Section 23 of the *Biosecurity Act 2014*, by addressing biosecurity risks within its managed stock routes (*currently classed as inactive and secondary*) and strategising to actively prevent and reduce the risk of further biosecurity threats.

Bulloo Shire Council acknowledges the Johnes Beef Assurance Score (JBAS) and declares that all permit holders must determine the potential risks associated with moving cattle along stock routes prior to application. Permit holders must ensure that waste and carcasses are disposed of appropriately and will not present biosecurity risks to further applicants.

Bulloo Shire Council will continue to manage stock routes effectively by implementing best practice management procedures for adequate control of declared pests. The council will also ensure that departmental vehicles and equipment are cleaned prior to moving from high disease/pest risk areas to lower disease/pest risk areas. Land clearing on stock routes for the construction of exclusion fencing will be analysed on a case by case basis with environmental, agricultural and other concerns taken into consideration.

Bulloo Shire Council will maintain a record of cattle health declarations for permits issued to stock routes under its management and reserves the right to refuse permission to applicants in order to maintain a low biosecurity risk.

Bulloo Shire Stock routes are classed as “inactive” due to the very low use and lack of useable infrastructure on them over the past 25 years.

## MANAGEMENT OF COUNCIL OPERATIONS IN HIGH RISK ZONES

Section 23 of the *Biosecurity Act 2014* declares the requirements of the General Biosecurity Obligation that are imposed upon any person who deals with biosecurity matter or a carrier, or carries out an activity that could potentially pose a biosecurity risk. This includes all individuals, industry and government.

Bulloo Shire Council supports the General Biosecurity Obligation (GBO) and has procedures in place to minimise adverse effects caused by their operations. Council provides a free wash down bay and signage that provides procedures for vehicles and equipment being used in the area.

Bulloo Shire Council advises the public that there are many possible sources of weed contamination in the shire and that weed infestations may occur anywhere and at any time. Under Queensland legislation, owners or operators are required to ensure their vehicles and machinery are free of reproductive material of declared plants.

Tips for reducing the risk of spread are:

- Avoid driving off-road in areas known to contain declared plants or in other areas that present a risk of vehicle or machinery contamination
- Do not drive through infested paddocks
- Ensure clothing and footwear is free of soil and plant material before stepping into vehicles
- Avoid driving or working in contaminated areas in wet or dewy conditions
- Clean vehicles and machinery suspected of carrying soil or plant material
- Begin work in clean areas or in areas with the least amount of infestation and work towards infested or high-density areas

- Keep roads, laneways and buffer zones free of weeds
- Where possible, work infested areas separately and clean down equipment thoroughly before moving to another area
- Avoid slashing and other work in infested areas during peak seed production times
- Secure loads (e.g. grain, fodder) if you suspect they contain weed seeds

For more information on clean-down procedures please visit:

[https://www.daf.qld.gov.au/\\_\\_data/assets/pdf\\_file/0011/58178/cleandown-procedures.pdf](https://www.daf.qld.gov.au/__data/assets/pdf_file/0011/58178/cleandown-procedures.pdf)

## PEST MANAGEMENT PRINCIPLES

Text adapted with kind permission from Matt Birch, Cairns Regional Council Pest Management Plan 2012.

An understanding of management techniques and tools as well as the biology of the pest are important knowledge for all people involved in pest management. The following pages describe the key control methods and modes of dispersal which pest managers need to be aware of.

## CONTROL METHODS

Using an integrated approach to control pests usually yields the best results, and involves using multiple control methods over an extended period.

### Drill Stem Injection

Herbicide may be directly applied to the vascular system of the plant by way of drilling or stem injection. Holes are drilled in the bark of a tree or woody section of a vine so that access is opened to the cambium tissue. This technique is also used with tuberous vines.

Operators must ensure that the holes are drilled low to the ground and there are sufficient number of holes to kill the target species. Generally, holes are drilled 5-10 cm apart all the way around the trunk. As with frilling (see below), holes are drilled downwards to hold the chemical and when used with a 5ml injection gun, this technique results in less wasted chemical. Conversely, the drill and inject method is more time consuming and requires access to cordless drills and spare batteries which may not always be appropriate.

Stem injection is beneficial when trees are best left standing for follow up access, if felling is too complicated or restricted by resources. Note that dead trees and falling limbs can become a safety hazard during follow up work and during flood events. Chemical can be applied with an injection gun or low-pressure spray pack. Some trees that are known to sucker after felling can be killed this way several weeks before felling to ensure that the entire plant is killed.

Always check label for permitted herbicide use or contact your Local Government Land Management Officer for advice regarding chemical application, permits and best practice.

### Frill Stem Injection/ Axe cut method

Similar to drill stem injection, this method works to inject herbicide directly into the plant's vascular system, with the 'frill' referring to axe cuts made the entire way around the trunk of the tree whereby poison is administered inside the cuts.

### Basal Bark

Spraying around the entire base of a thinly barked woody weed or tree/sapling with an oil-based herbicide suspended in diesel. Instructions from the manufacturer must be followed to ensure safe and effective application and use of this method around water is not permitted.

### Chainsaw/Cut Stump

Felling trees or cutting woody weeds/vines, followed promptly by suitable herbicide application to the stump (within 10 seconds) to prevent re-growth. Always check the label for permitted herbicide use or contact your Local Government LMO (Land Management Officer) for advice.

### Chop/Grub

Due to its labour intensiveness, chopping or grubbing is often overlooked as a weed management practice. However, it remains an effective way of selectively removing weeds without chemicals. Using machetes, cane knives or hoes, operators can remove seed, flowers or even kill entire woody weeds or grasses. Many vines require chopping to gain access to roots and tubers where other methods can be deployed such as stem injection.

### Improved Grazing Practices

Overgrazing can lead to depletion of desirable species and create other issues such as compaction and bare ground which provide opportunities for weeds to establish. Weeds can invade pastures and often stock avoid these species leading to a dominance of woody weeds or unpalatable grasses. Continued intensive grazing or overgrazing can lead total destruction of pastures or complete domination by woody weeds i.e. mesquite. Careless weed hygiene practices can lead to movement of seeds with stock and trucks to other properties over long distances. Yarding stock for several days can minimise this problem when stock is exposed to major pastoral weeds. Washing down equipment is recommended prior to movement. Spelling paddocks and slashing weeds prior to seed set, spot spraying and grubbing can all be effective in controlling pastoral weeds. For property pest management planning contact your Local Government LMO for information regarding grazing and pasture management.

### Hand Removal

Many weeds can be controlled by simple hand removal. This method can be used on small-scale infestations and/or in places where equipment cannot be accessed. Hand removal may be the only option where chemical use is not legal or appropriate i.e. hand removing rubber vine in cases where it is isolated/scattered. On removal, it is important to dispose of the living plant material appropriately. This may involve bagging the waste, composting on site, or ensuring that the roots of the plants cannot access soil/water and re-shoot.

### Foliar Spray

There are many herbicides registered for weeds and the most common method of application is spraying. Chemicals can be sprayed on the ground by hand, from a boom or from an aircraft or boat. Common methods of ground application include:

- 1) Low pressure application i.e. 20L pump up spray bottle.
- 2) 12v and petrol mechanised spray units i.e. PTO driven tractor spraying.
- 3) Controlled droplet application i.e. boom spraying

The practice of spraying is complex and heavily regulated. Council employees must be licensed to spray herbicides on private and public lands and spray records must be kept in accordance with the *Agricultural Chemical Distribution Control Act 1966* (QLD) (ACDC Act). Herbicides, target species and



situations for spraying are controlled by permitted uses listed on product labels. There are also off label permits available that operators may observe under particular qualification. The Australian Pesticides and Veterinarian Medicines Authority (APVMA) administer all permits that relate to pest management related herbicides, fungicides, adjuvants and toxins. Always check label for permitted herbicide use or contact your Local Government LMO for advice regarding chemical application, permits and best practice.

### Biocontrol

Biocontrol refers to the release of carefully selected natural pests of weeds and pest animals to assist in their management. They can be insects or diseases that target a certain part or lifecycle stage. Biocontrol can be a useful long-term and low-cost strategy to either control or reduce the vitality of a pest and is best used in conjunction with other management techniques. Some common biocontrol agents present in the region include the *Dactylopius tomentosus* bug targeting cacti, water lettuce weevil and rabbit calicivirus.

### Slashing

Slashing can be an effective tool in pasture management. Woody weeds, herbs and some grasses may be prevented from seeding by slashing at opportune times. For example, slashing some plants may be effective before setting seed to manage the potential seed bank. Using blunt blades or chains will smash stems minimising regrowth or recovery of the plant. Following up with spot spraying will minimise the use of expensive chemical and stop the annual seed cycle. It must be noted that this method can potentially spread seeds, so always carry out weed hygiene practices when moving machinery. i.e. Always wash down machinery and slasher decks.

### Mechanical/Machinery Removal

Large-scale infestations sometimes call for mechanised removal or control. Excavators, backhoes, mulching bobcats, aquatic harvesters or even bulldozers may be employed where funding permits. With large tree species, machinery may be required to clean up after chainsaw work. Often, weed infestations are associated with eroded creek and riverbanks so best practice repair work often requires earthworks bank reinstatement, rock works and revegetation. Note: always wash down machinery to prevent the spread of seed and stem fragments.

### Fire

Despite being labour, risk and planning intensive, fire can be a useful pest management tool. Fire can be used to:

- 1) Remove spoils from weed treatments including felled trees. Burn heaps may require attendance by earthworks machinery and fire crews.
- 2) Stimulate seed regeneration in certain seed banks.
- 3) Kill certain species where fuel loads allow a hot fire.
- 4) Kill dormant seeds.

Agricultural landholders and State Government land managers know the value of fire for broad acre weed control.

There is generally a limited window of opportunity for use of fire. Site preparation, permits, public notification and resources may limit its widespread use.

### Exclusion Fencing/netting

Fencing is used to exclude animal pests throughout world, particularly to mitigate pest damage to agriculture. Although often considered an expensive option, fencing is sometimes a sound investment to:

- 1) Contain livestock or exclude predators.
- 2) Protect Crops and ground pasture from terrestrial pests such as pigs and rabbits.
- 3) Protect fruit orchards with netting where it is not viable to control the birds/bats that may try to eat the fruit.
- 4) Prevention or containment of pest animals and plants

Eradication of most naturalised vertebrate pests is not viable or cost effective, so exclusion is considered a logical control option. An experienced agricultural fencer can advise and cost a suitable fence design that will exclude pests ranging from snails to horses. Fencing includes netting, exclusion or electric.

### Poison

Strict regulations are in place regarding poisons for larger pest animals such as wild dogs and feral pigs. 1080 or fluoroacetate is approved to be used (under strict guidelines, permits and procedures) for practices such as on-ground baiting, aerial baiting and use of canid pest ejectors.

### Trapping

Trapping is a widely used control method for feral pigs, wild dogs and feral cats, particularly problem individuals that have avoided other control attempts. Trapping is done in accordance with well established guidelines relating to off target minimisation, firearms policy, humane treatment of animals, public/workplace health and safety and efficiency.

All queries regarding management of native wildlife should be directed to Queensland Parks and Wildlife Service (QPWS).

### Shooting/hunting

Hunting is a popular sporting pursuit in the region. Despite its recreational appeal and popularity, hunting has generally proved to be an ineffective and at times, a disruptive pest management practice. Hunting either with dogs or firearms can, however, be an effective complement to an integrated property pest management strategy. Some landholders use hunting as their primary animal control option to good effect, but usually only when a population is very small. However, hunting is best utilised after effective trapping/baiting programs to remove any remaining individuals. More often though, uninvited hunters will target the biggest pigs and/or scatter them throughout an area making the whole population nervous and unpredictable. Aerial shooting is noted to be very effective in region.

Note: Council does not condone, practice or contract any form utilising dogs for hunting, but recognises that it is a very common practice in agricultural and rural residential areas in the region.

## METHODS OF SPREAD

Text adapted with kind permission from Matt Birch, Cairns Regional Council Pest Management Plan 2012.

### Cuttings- Vegetative

Further to normal seed reproduction, many plants will reproduce from cuttings, stem or root fragments or even by leaf fragments. Some species reproduce only vegetatively.

Many aquatic and riparian weeds reproduce from cuttings washed downstream with flood water.

### Irresponsible and illegal dumping

A common way for plants and animals to escape and colonise natural areas is by accidental or at times intentional release and cultivation by people. Often people will travel long distances to dump vegetation to avoid a small tipping fee. Others will throw exotic cuttings and weeds over their back fence and into creeks.

### Machinery and vehicles

Machinery of many forms can move plant material and pest animals. Slashers and earthworks equipment are most commonly blamed, however cars, 4wds, motorcycles, boats and caravans are all capable of moving pest plants and animals' great distances.

### People/animals

Seeds and other plant material can be transported and spread from the initial infested area as many weed species can stick to clothing, fur, tails and vehicles and become dislodged in a new area where they can then regrow and establish.

### Droppings

Many seeds have evolved as a food source for animals with the advantage of being relocated and dispersed in droppings. This can result in very difficult to predict and often relatively long-distance dispersal patterns as pigs, emus, cockatoos and bats all move certain fruits in various directions.

### Water

South West QLD is home to multiple HEVAE (High Ecological Value Aquatic Ecosystems) and important wetlands. Many weeds are adapted to benefit from annual floods to spread down a catchment, as such seeds may float or may send vegetative material and fragments with normal river-flow during flood events. Aquatic plants can also move across catchments attached to birds or boats.

### Wind

Many plant species use wind as a seed dispersal mechanism. Seeds are lightweight and either wing shaped or adorned with hairs to ensure that upon release they will travel away from the parent plant. Light weight seeds often get caught on vehicles.

## ASSESSMENT PROCESS FOR THE PRIORITISATION OF PESTS

To prioritise the management of invasive pests, an evaluation process was designed to classify species according to their risk to cause economic, social or environmental harm in Bulloo local government area. This allows resources to be targeted at species that pose the greatest threat, by considering the following:

- The relevant declaration from a national, state and local government perspective
- The social, economic and environmental consequences of the species with the Bulloo Shire area, including costs associated with treatment or eradication and the costs associated with not managing a species at all
- The concerns of land managers and invasive species specialists (technical assessment) including observations of change, new incursions and on-ground information that may have not yet translated into science or publications
- The level of concern across south west Queensland of the potential impact of invasive species including considering the priorities of neighbouring local governments to ensure cooperation and coordination in invasive species management (good neighbour principle)








- The capacity and the feasibility of treatment options for each species including the cost of treatment, the availability of biological and natural controls and the population density and distribution.
- The current distribution of the invasive species



The Biosecurity Act 2014 outlines expectations to manage risks and impacts associated with invasive species across Queensland and details declared species in Queensland. These are listed in Schedule 1: Parts 3 and 4; and in Schedule 2: Part 2 of the Act. This plan focuses on biosecurity matter relevant to Bulloo Shire Council's local government area. To ensure species that post the greatest risk across Queensland are appropriately managed the prioritisation framework matrix allows the application of risk-based methodology that considers current and inherent risks to identify priorities for management.

To consider broader threats and potential invasive species, a further assessment was undertaken to determine risks posed by other species not included in the Queensland Government's biosecurity framework. This included consideration of species listed by the Australian Government as 'weeds of national significance' or included in the Environment Protection and Biodiversity Conservation Act 1999.

## PRIORITISATION OF INVASIVE PLANTS




The prioritisation framework matrix that has been used in this biosecurity plan has been adapted from the FNQROC matrix to suit arid regions. The process of determining priorities was conducted by members of the biosecurity working group and circulated for consultation.




Bulloo Shire Council Pest Prioritisation		Existing Plans and Priorities			Impacts and Threats				Capacity to Manage			Total Score
		National	State	Local	Conservation	Riparian/ Aquatic	Agricultural	Community Priority	Rate of Spread	Achievability	Current Distribution	
		#/5	#/5	#/5	#/5	#/5	#/5	#/5	#/5	#/5	#/5	
	Mother of Millions	0	0.5	5	5	4	5	5	5	4	4	37.5
	Mesquite	5	0.5	3	5	3	4	3	3	5	5	36.5
	Parkinsonia	5	0.5	3	5	3	4	3	3	4	5	35.5
	Coral Cactus	5	0.5	3	5	3	4	3	3	4	4	34.5
	Devil's Rope Pear	5	0.5	1	5	3	4	1	3	5	5	32.5
	Snake Cactus	5	0.5	1	5	3	4	1	3	5	5	32.5
	Rubber Vine	5	0.5	1	4	5	3	1	2	5	5	31.5

	Velvety Tree Pear	5	0.5	1	3	2	2	1	2	5	5	26.5
	Prickly Pear	5	0.5	1	2	2	1	1	2	5	5	24.5

## PRIORITISATION OF INVASIVE ANIMALS





The prioritisation framework matrix that has been used in this biosecurity plan has been adapted from the FNQROC matrix to suit arid regions. The process of determining priorities was conducted by members of the biosecurity working group and circulated for consultation.

Bulloo Shire Council Pest Prioritisation		Existing Plans and Priorities			Impacts and Threats				Capacity to Manage			Total Score
		National	State	Local	Conservation	Riparian/ Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	
		#/5	#/5	#/5	#/5	#/5	#/5	#/5	#/5	#/5	#/5	
	Wild Dogs	0	1.5	5	5	2	5	5	1	2	1	27.5
	Feral Pigs	5	1.5	3	5	5	3	1	2	2	0	27.5
	European Rabbit	5	2	1	5	2	4	1	3	2	1	26






	European Fox	5	2	1	5	2	3	1	1	2	2	24
	Feral Cats	5	1.5	1	5	2	1	1	1	2	2	21.5
	Feral Horse	0	0	1	2	2	3	1	1	4	4	18

#### WATCH LIST OF INVASIVE PLANTS AND ANIMALS

If you suspect you have sighted any of the below weeds in Bulloo Shire, please report to Bulloo Shire Council on **(07) 4621 8000** or Biosecurity Queensland on **13 25 23**. For further information, please visit <https://www.daf.qld.gov.au/biosecurity>

Watch List		Where to find	Likely source and method of spread
	Water Lettuce <b>(report to 13 25 23)</b>	Waterways, Paroo Shire	Dumped aquarium contents, unclean equipment, unclean machinery, boats and vehicles
	Bunny Ears <b>(report to 13 25 23)</b>	Pastures, old homesteads	escaped garden plants, unclean machinery, wildlife/livestock, water
	Karoo Thorn <b>(report to 13 25 23)</b>	Pastures, road sides	Unclean machinery, wildlife/livestock
	Jumping Cholla <b>(report to 13 25 23)</b>	Pastures, old sites	Unclean machinery, wind, water, wildlife/livestock



	Sticky Florestina	Pastures	Unclean machinery, wind, water, wildlife/livestock
	Cottontails	Pastures	Unclean machinery, wind, water, wildlife/livestock
	Lovegrasses	Pastures	Unclean machinery, wind, water, wildlife/livestock
	Giant Rat's Tail Grass	Pastures	Unclean machinery, wind, water, wildlife/livestock
	Plague Locusts	Most environments	Natural migrations

## MANAGEMENT ZONES

A management zoning approach has been adapted from the invasion curve chart to communicate the management aims of this plan across the whole range of stakeholders that will need to be involved. The zoning approach is a graphics-based hierarchy of actions that identifies the management and biological target for each management area. It is important that stakeholders understand both their role and their responsibilities in regard to the delivery of this pest management plan.

The management zoning approach identifies four management zones. The first two are aimed at detecting, preventing and removing the target pest from the designated zone and are specifically targeted at managing the seeds and seed bank (or reproductive capacity in animals). The final two identify the options for managing established infestations to reduce their impacts and opportunities for further spread.

Management Zone	Management Target	Biological Target
Managing incursions and new introductions		
Prevention	Come Clean Go Clean – keep weed and pest animal free areas clean	Prohibit introduction or reproduction
Intensive Control	Be vigilant – remove all seeds (seedbank), plants and pest animals from the zone.	
Managing existing infestations and outbreaks		
Containment	Think big and plan for the long term – reduce infestation to a size that can be removed	Limit infestation growth, spread and impacts
Asset Protection	Maintain buffers and protect important places – protect assets and minimise the risk of spread	

## USING A PEST PLAN TEMPLATE

The pest plan template summaries the key information on each of the priority pests for the local government area pest management plan. More information on each of the fields within the template is included within the management principles sections of this pest management plan or in the further information and links section.

**Priority scores:** The results of the prioritisation process from the pest management work.

**Management aims:** The key aims for management within each of the management zones.

**What can I do?:** What you can do to play your part within each management zone.

**Details:** A brief description of the pest, impacts and distribution.

**Distribution and zoning map:** Designated management zones as described in the legend and 2km resolution distribution map.

**Declaration status:** State declaration.

**Identification:** Photos to assist you in identification

**Control methods calendar:** Identifies the recommended methods of control and the best timing for each method.

**Recommended herbicides:** A table that identifies recommended herbicides for the various chemical applications.

# Coral Cactus (*Cylindropuntia fulgida*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	3/5	5/5	3/5	4/5	3/5	3/5	2/5	3/5	31.5/50

## Details

**Description:** Coral cactus grows as a branching shrub 1 – 1.5m high. The stems of the plant are divided into green, cylindrical cladodes or pads. Mature cladodes often become twisted and distorted, resembling a piece of coral. The areoles of the cladode grow short white spines. Coral cactus is also known as Boxing Glove cactus.

**Impacts:** Dense infestations compete with native vegetation and pasture and may prevent access to water. The plant's sharp spines can cause injury to native animals and livestock, which may lead to a reduction in productivity.

**Distribution:** Common in select areas of Bulloo Shire.

## Distribution

Legend	Management
Common	Containment
Absent/Unknown	Prevention



Category 3 Invasive Plant

Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Coral Cactus (*Cylindropuntia fulgida*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Coral Cactus on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Coral Cactus is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment without a permit.

#### Containment


The best approach always involves a combination of different methods. Herbicide can be applied through foliar spraying. Physical removal of the entire plant including the roots and burning the removed material will also be effective for small plants. For large and dense infestations, a biological control agent is highly effective and available for use. A combination of the above methods will be effective in controlling Coral Cactus. Mechanical control is not recommended as it can facilitate the spread of the plant.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent accidental spread.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar Spray												
Biological												

 Optimal timing

Chemical Application	Recommended herbicide
Foliar Spray	Access

# Devil's Rope Cactus (*Cylindropuntia imbricata*)

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	3/5	5/5	3/5	4/5	3/5	3/5	2/5	3/5	31.5/50

## Details

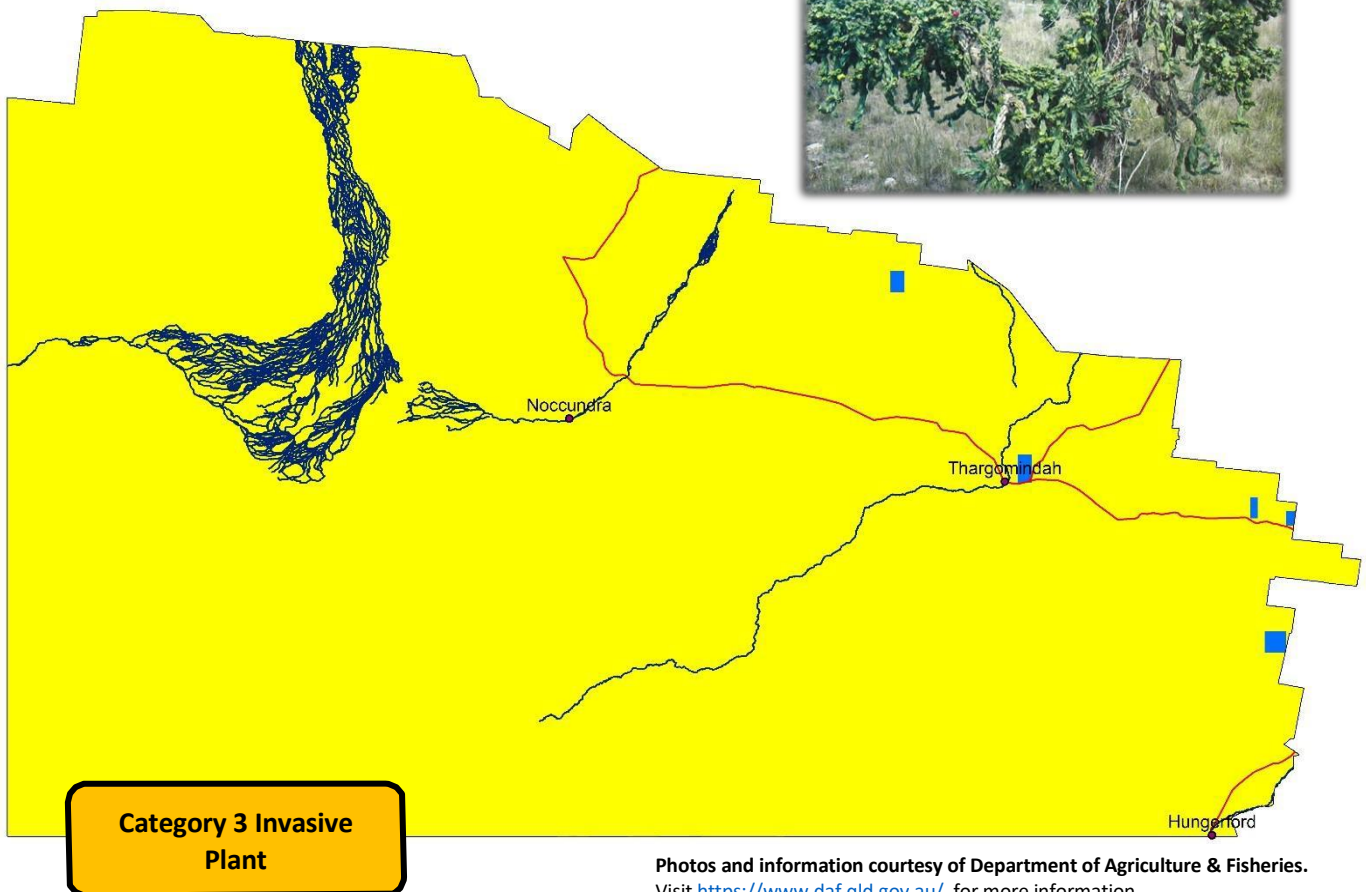
**Description:** Devil's Rope Cactus is a shrub that grows 1.5 to 3m tall. The stems appear as cylindrical, dark green pads which can be almost 40cm in length. These pads have a series of short raised ridges that give them a rope-like appearance. The areoles produce 3-11 spines up to 2.5cm long. The flowers are a red-purple colour and the fruits are yellow.

**Impacts:** Dense infestations compete with native vegetation and pasture and may prevent access to water. The plant's sharp spines can cause injury to native animals and livestock, which may lead to a reduction in productivity.

**Distribution:** Common in some areas of Bulloo Shire.

## Distribution

Legend	Management
Common	Containment
Absent/Unknown	Prevention



Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Devil's Rope Cactus (*Cylindropuntia imbricata*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Devil's Rope Cactus on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Coral Cactus is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment without a permit.

#### Containment

The best approach always involves a combination of different methods. Herbicide can be applied through foliar spraying. Physical removal of the entire plant including the roots and burning the removed material will also be effective for small plants. Mechanical control is not recommended as it can facilitate the spread of the plant.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent accidental spread.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar Spray	[Red bar indicating optimal timing]											

[Red bar] Optimal timing

Chemical Application	Recommended herbicide											
Foliar Spray	Access											



# Feral Horse (*Equus caballus*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	<b>Total Score</b>
0/5	0/5	1/5	2/5	2/5	3/5	1/5	1/5	4/5	5/5	<b>19/50</b>

## Details

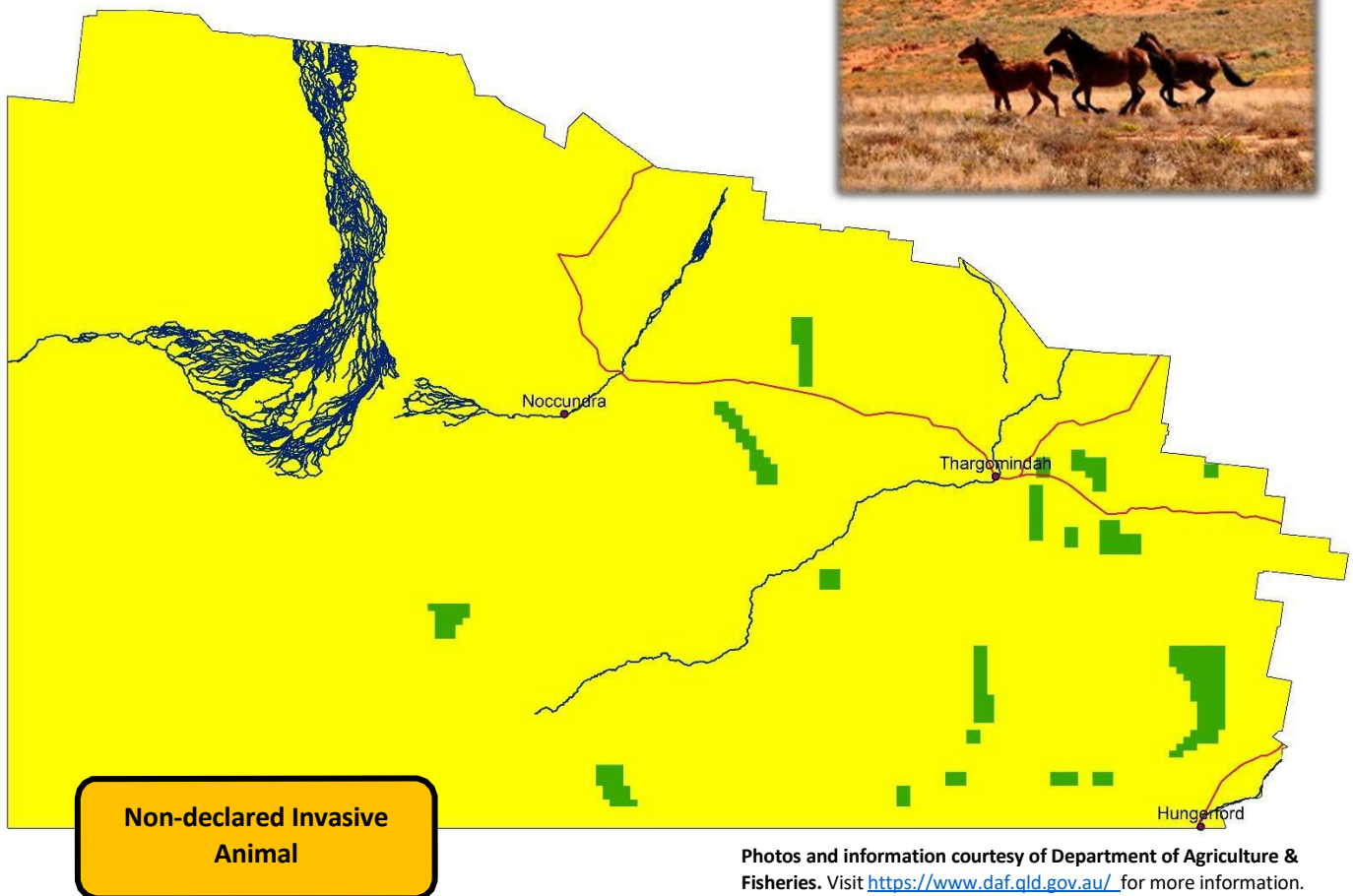
**Description:** Feral horses are large herbivores with strong legs well adapted to long-distance travel. Feral horses are domesticated horses that have either escaped or have been deliberately released.

**Impacts:** Feral horses compete with livestock and native wildlife for food and water. They degrade soil by overgrazing and trampling and often damage ground near watering points and along creek banks. In some populated areas of Australia they can pose a threat to traffic on roads.

**Distribution:** Occurs occasionally in patches of eastern Bulloo Shire.

## Distribution

Legend	Management
Occasional	Intensive Control
Absent/Unknown	Prevention



Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Feral Horse (*Equus caballus*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Feral Horses on their land. Feral horses are non-declared invasive animals, however, the Biosecurity Act 2014 requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control.

#### Intensive Control

When in large numbers, feral horses are best controlled by aerial shooting, provided the marksman has the necessary licence and skills to ensure a single lethal and humane shot. Ground shooting is not recommended unless it is quick and easy to follow up on wounded horses. Lactating females should not be shot.


Feral horses may also be mustered or trapped in yards and domesticated or dispatched humanely.

#### Prevention

The best form of pest control is prevention. Managing risk of spread by controlling populations of feral horses through an integrated pest management program before they establish in new areas is paramount to successful management.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Shooting												
Trapping												

 Optimal timing



# Feral Pig (*Sus scrofa*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	1.5/5	1/5	5/5	5/5	3/5	1/5	2/5	2/5	0/5	25.5/50

## Details

**Description:** Feral pigs are typically leaner and more muscular than domestic pigs and tend to have larger, longer snouts and longer tusks. The body is usually covered in sparse, coarse hair that is mostly black, buff-coloured or spotted black and white. They are generally nocturnal, omnivorous and extremely opportunistic.

**Impacts:** Pigs will cause extensive damage to crops and pastures by uprooting plants to get at green feed, seeds, seedlings, fruit, tubers and soil invertebrates. They have also been shown to significantly impact lambing, with some reports showing a reduction of 40%. Pig activity also degrades water quality and facilitates bank erosion.

**Distribution:** Abundant across Bulloo Shire.

## Distribution

Legend	Management
Abundant	Asset Protection



Category 3, 4 & 6 Invasive Animal

Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Feral Pig (*Sus scrofa*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Feral Pigs on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Feral pigs are Category 3, 4 and 6 restricted invasive animal and must not be given away, sold or released into the environment without a permit, must not be moved and must not be fed.

#### Asset Protection

It is recommended that landholders protect high value assets from feral pig damage.

Feral pigs are considered abundant in Bulloo Shire. Effective control requires an integrated and collaborative approach where all stakeholders participate in planning, implementation and evaluation of the actions taken.

Fencing is an expensive option but is proven to be the most effective long-term measure. Shooting and trapping is effective in the short term but populations recover very quickly.

Bulloo Shire council provides landholders with 1080 (sodium fluoroacetate) for control of feral pigs and can provide advice on other management strategies. Landholders wishing to target feral pigs with 1080 poison, are advised to contact Bulloo Shire Council.

A combination of the above methods will have the most effective control on feral pigs.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Shooting												
Trapping												
Fencing												
Baiting												

	Optimal timing
	Good timing





# Mesquite (*Prosopis sp.*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	3/5	5/5	3/5	4/5	3/5	3/5	4/5	5/5	35.5/50

## Details

**Description:** Mesquite can grow in a variety of ways. It is often seen as a multi-stemmed shrub 3 – 5m tall with branches drooping to the ground, or as a single-stemmed tree up to 15m tall with a spreading canopy. Old bark is rough and grey/brown, while younger bark is smooth and dark red or green in colour. Leaves are fern-like with paired thorns usually occurring just above each leaf axil. Flowers appear in a creamy-yellow “lamb’s tail” shape. Seed pods are 10-20cm long, mostly straight, smooth and with slight constrictions between seeds.

**Impacts:** Dense infestations will often form impenetrable thickets along waterways. It can out-compete other vegetation, interfere with mustering and will quickly invade pastures.

**Distribution:** Common occurrence in an isolated patch south west of Thargomindah.

## Distribution

Legend	Management
Common	Containment
Absent/Unknown	Prevention



Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Mesquite (*Prosopis sp.*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Mesquite on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Mesquite is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment, without a permit.

#### Containment

The best approach always involves a combination of different methods. Mechanical control methods such as stick raking and blade ploughing can be used in relatively dense infestations. Blade ploughs must be set at a depth of 30cm to ensure roots are severed below the bud zone. Fire is often necessary as a follow-up measure to control germinated seedlings.

There are 4 biological control agents available with varying success.

Foliar herbicide spraying is most effective on plants under 1.5m tall. Basal bark is recommended for most plants. Smaller plants (<5cm trunk diameter) should be sprayed to 30cm above ground level, while larger plants (>5cm trunk diameter) should be sprayed to 1m above ground level. For cut stump treatments, ensure herbicide is applied with 15 seconds of cutting.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Livestock readily eat seed pods and facilitate the spread. Keep livestock away from infestations to prevent accidental

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar spray	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Basal bark	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Cut stump	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Mechanical	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good

Optimal timing
Good timing

Chemical Application	Recommended herbicide
Foliar spray	Conqueror
Basal bark	Access; Grazon Extra
Cut stump	Access; Grazon Extra

# Mother of Millions (*Bryophyllum sp.*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
0/5	0.5/5	5/5	5/5	5/5	5/5	5/5	5/5	2/5	3/5	34.5/50

## Details

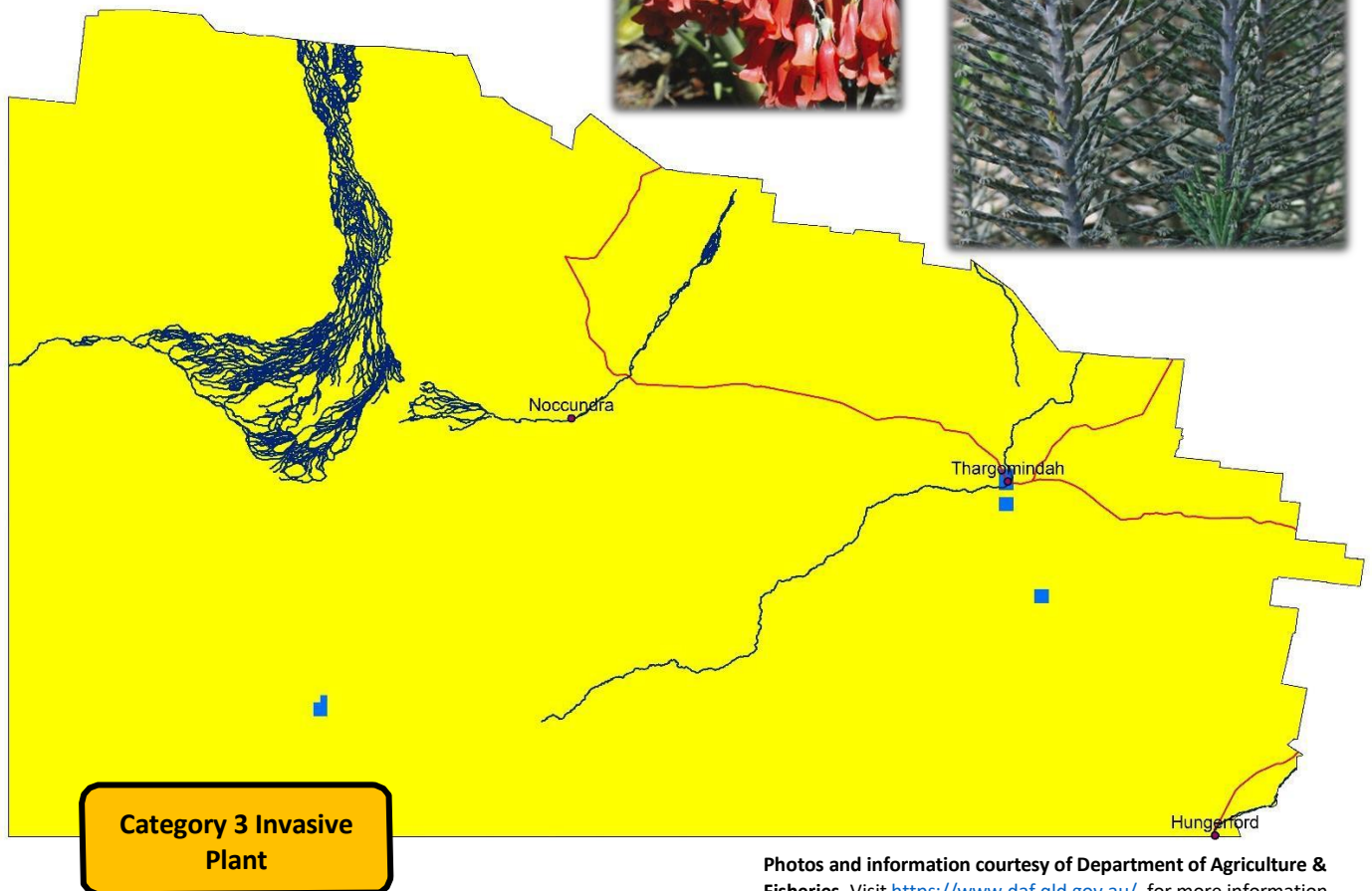
**Description:** Mother of Millions are native to Madagascar and are escaped ornamental plants. They are erect, smooth, fleshy and succulent plants that can grow up to 1m in height. They form tall flower spikes in winter with a cluster of bell-shaped, orange-red flowers.

**Impacts:** Dense infestations will outcompete pastures and are highly adapted to dry conditions. Mother of Millions is toxic to livestock and occasionally causes a number of cattle deaths.

**Distribution:** Common in isolated areas of Bulloo Shire.

## Distribution

Legend	Management
Common	Containment
Absent/Unknown	Prevention



Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.



# Mother of Millions (*Bryophyllum sp.*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Mother of Millions on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Mother of Millions is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment, without a permit.

#### Containment

The best control program would involve a combination of the following strategies. Fire is a suitable control tool in thicker infestations where there is sufficient fuel. This is the most economical and also encourages grass competition.

Herbicide can also be used to control Mother of Millions at any time of the year.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent poisoning.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar spray												
Fire												

	Optimal timing
	Good timing

Chemical Application	Recommended herbicide
Foliar spray	Affray 300, Amicide Advance 700, Conqueror, Grazon Extra, Flagship 200, Starane Advanced, Comet 400

# Parkinsonia (*Parkinsonia aculeata*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	3/5	5/5	3/5	4/5	3/5	3/5	4/5	5/5	35.5/50

## Details

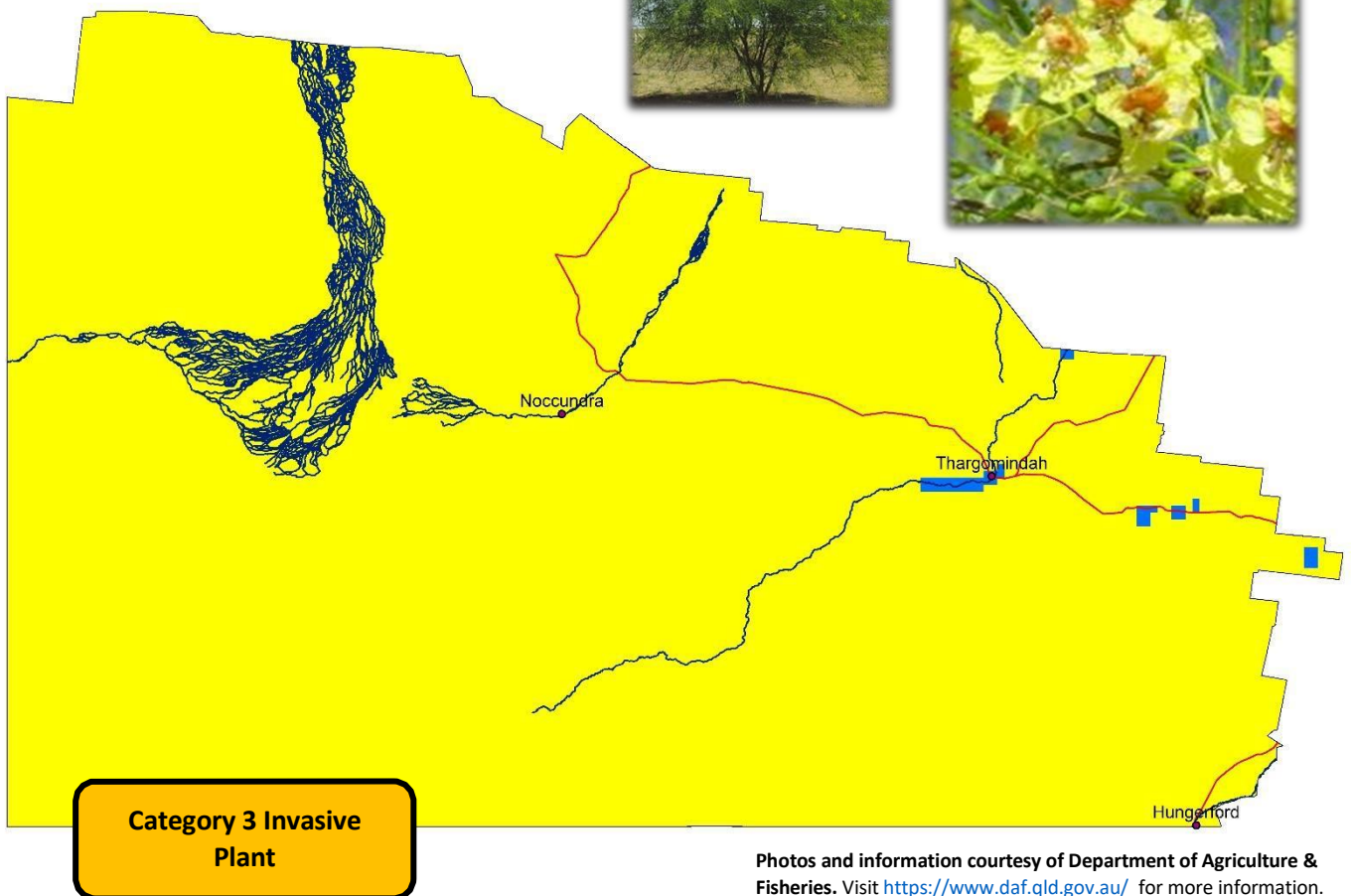
**Description:** Parkinsonia is shrub or small tree that has distinctly green stems and branches with sharp spines. Its leaves are typically 20-40cm long and flattened with small, oblong leaflets on each edge. The flowers contain 5 petals and are bright yellow, except for one that has an obvious orange spot. The seed pods are 5-10cm long.

**Impacts:** Dense infestations can dominate landscapes and suppress more desirable plants. It has the potential to block access to waterways and the spines can cause significant injury to livestock, leading to a loss in productivity. The seed pods can easily float on water and are often spread by livestock, vehicles and footwear.

**Distribution:** Common occurrence in areas close to Thargomindah and along the Cunnamulla road.

## Distribution

Legend	Management
Common	Containment
Absent/Unknown	Prevention



Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Parkinsonia (*Parkinsonia aculeata*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Parkinsonia on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Parkinsonia is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment, without a permit.

#### Containment

Mechanical control is suitable for Parkinsonia, however, follow up treatment is required due to the high rate of seedling germination. Fire is a suitable control tool for controlling seedlings in infestations where there is sufficient fuel.

Various herbicide treatments can also be used to control Parkinsonia, preferably when it is actively growing. Foliar spray is recommended for plants less than 2m tall. A wetting agent is required. Basal bark, cut stump and soil application are other suitable methods for larger plants. Care is a must when using chemicals near waterways.

There are four biological control agents available for use on Parkinsonia. However, these are more suited to thicker infestations.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent accidental spread.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar spray												
Basal bark												
Cut stump												
Soil application												
Mechanical												
Fire												
Biological												

	Optimal timing
	Good timing

Chemical Application	Recommended herbicide
Foliar spray	Grazon Extra; Conqueror
Basal bark	Access
Cut stump	Access
Soil Application	Clearview 200GR; Tebulan 200GR; Graslan

# Prickly Pear (*Opuntia stricta*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	1/5	2/5	2/5	1/5	1/5	2/5	3/5	1/5	18.5/50

## Details

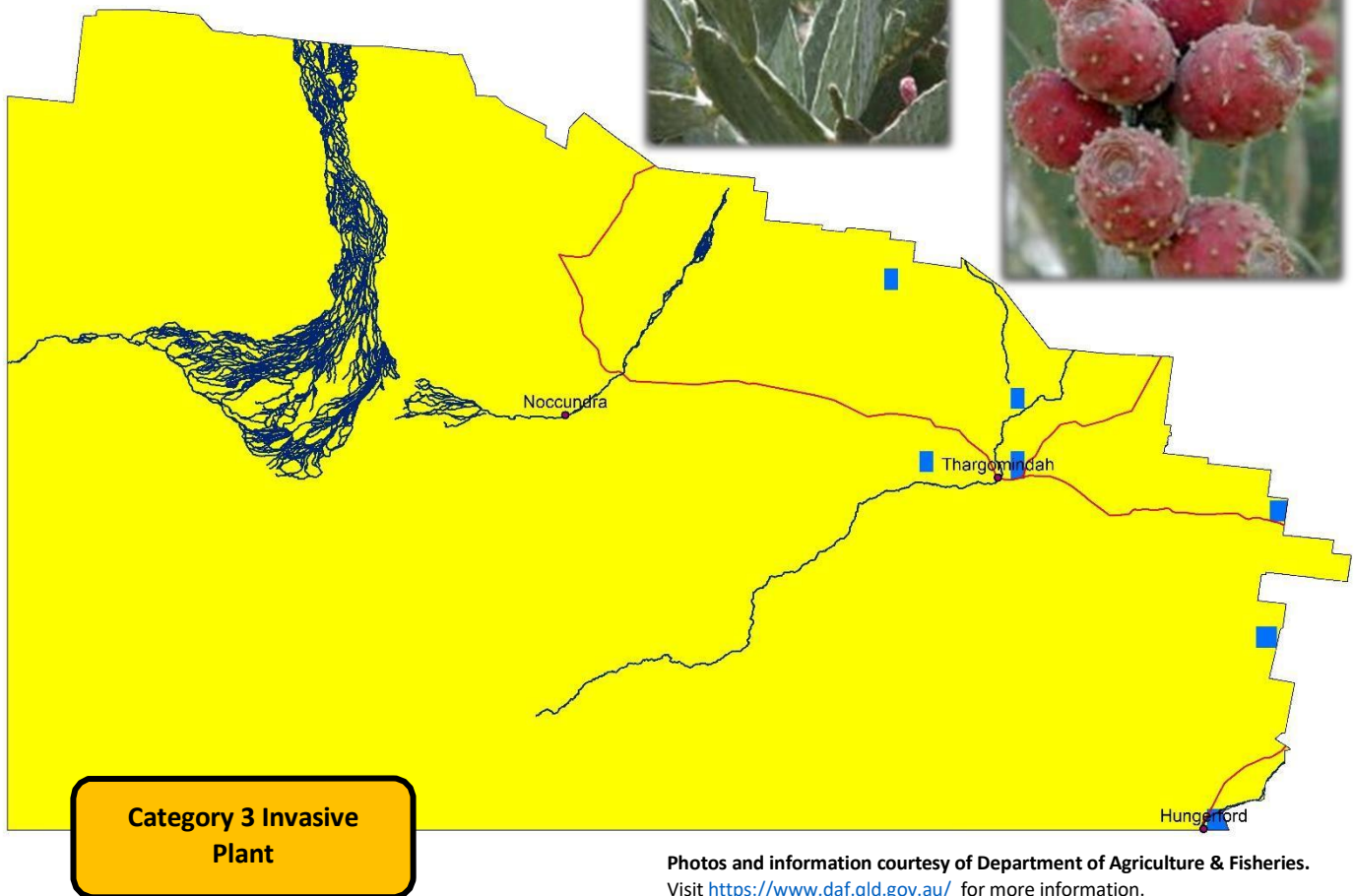
**Description:** Prickly Pear is a common cactus throughout Queensland. It can grow to 1.5m tall, it tends to bush out and form large clumps. The stems are divided into oval, light-green pads up to 20cm long and 10cm wide. It usually has no spines but sharp bristles. The flowers are 7.5cm wide and bright yellow. The fruit is oval shaped and purple.

**Impacts:** Dense infestations compete with native vegetation and pasture and may prevent access to water.

**Distribution:** Common in some areas of Bulloo Shire near Thargomindah and Hungerford.

## Distribution

Legend	Management
<span style="background-color: blue; color: white;">■</span> Common	Containment
<span style="background-color: yellow;">■</span> Absent/Unknown	Prevention



Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Prickly Pear (*Opuntia stricta*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Prickly Pear on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Prickly Pear is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment without a permit.

#### Containment


The best approach always involves a combination of different methods. Herbicide can be applied through foliar spraying. Physical removal of the entire plant including the roots and burning the removed material will also be effective for small plants. Mechanical control can be effective if using the right equipment however in general, it is not recommended as it can facilitate the spread of the plant.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent accidental spread.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar Spray												
Physical												

 Optimal timing

Chemical Application	Recommended herbicide
Foliar Spray	Access

# Rabbits (*Oryctolagus cuniculus*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	2/5	1/5	5/5	2/5	4/5	1/5	3/5	2/5	1/5	26/50



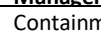
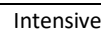
## Details

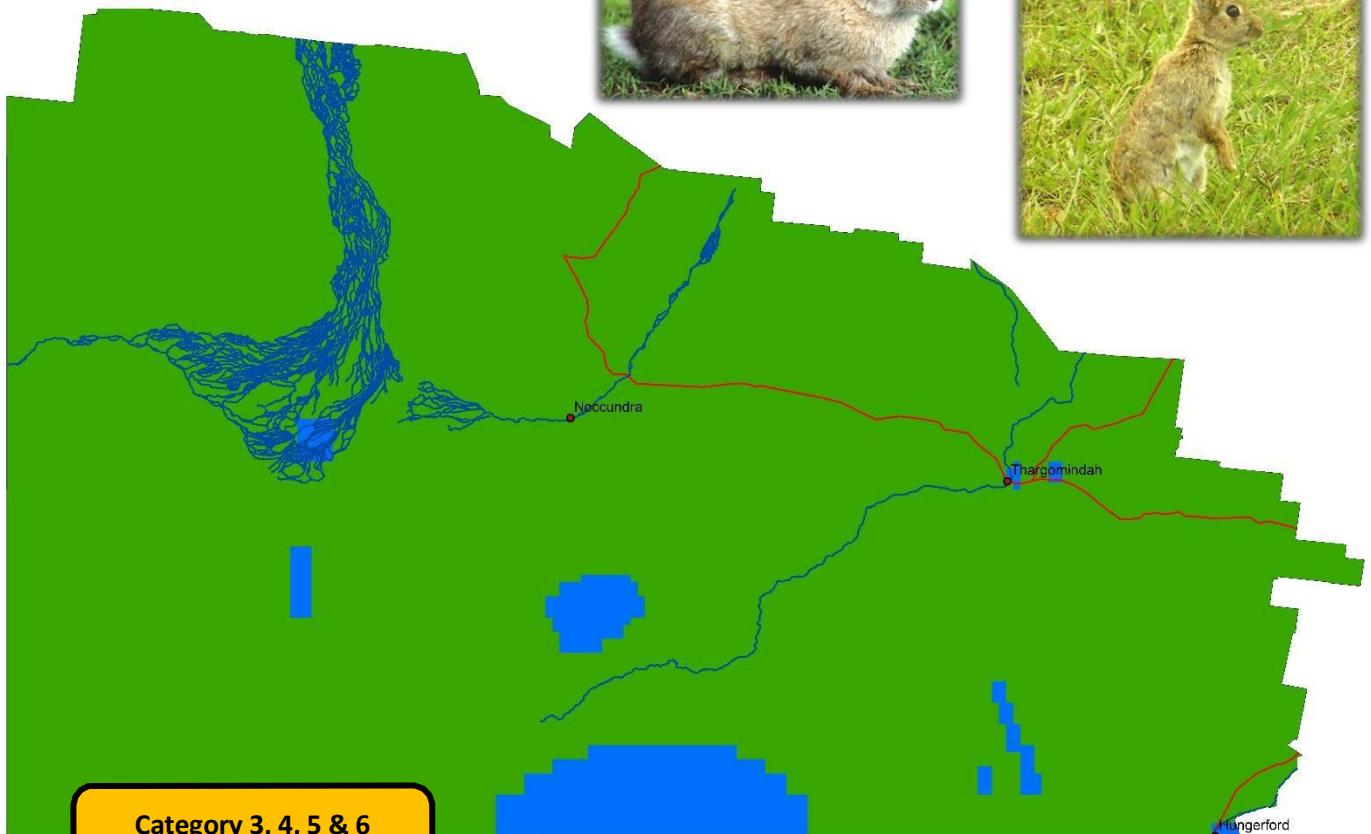
**Description:** Rabbits are small mammals up to 45cm in length and are usually covered in grey-brown fur. They have long ears, big eyes and large hind feet. They prefer to live in underground warrens but will survive in above-ground harbours (e.g. logs, thickets or under buildings).

**Impacts:** Rabbits are one of the most devastating pests to the environmental and agricultural sectors of Australia. They compete with native animals for food and shelter, destroy the landscape and cause soil erosion.

**Distribution:** Common in some areas of Bulloo Shire. Occasional elsewhere.

## Distribution

Legend	Management
	Common
	Occasional
	Containment
	Intensive Control



Category 3, 4, 5 & 6  
Invasive Animal

Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.



# Rabbits (*Oryctolagus cuniculus*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Rabbits on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Rabbits are Category 3, 4, 5 and 6 restricted invasive animals and must not be given away, sold or released into the environment without a permit, must not be moved, must not be kept and must not be fed.

#### Containment

Harbour destruction is one of the best measures that can be taken for long-term rabbit control. Burning of windrows and log piles, etc., are necessary where rabbits are residing above ground. While warren ripping is extremely effective for rabbits living below ground. For containing small, high-value areas, exclusion fencing is also an effective measure, although expensive.

There are 4 biological control agents for rabbits which flow through populations from time to time: Myxomatosis; RHDV1; RHDV2; RHDV1-K5. These are effective in knocking populations down, however, they recover quickly so other control strategies need to be implemented.

Poison baiting and fumigation are not techniques that should be relied upon solely, however, they can be effective when used in conjunction with other methods. Trapping and shooting are best used as “mop-up” methods after other control measures have been used.

#### Intensive Control

For areas where rabbits are only occasionally seen, it is a great opportunity to implement a control program to reduce the extent and potentially eliminate the infestation. Control strategies as per Containment, apply

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Harbour destruction	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Fencing	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Biological	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Baiting	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Fumigation	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Trapping	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Shooting	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal

Optimal timing
Good timing



# Rubbervine (*Cryptostegia grandiflora*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	1/5	4/5	5/5	3/5	1/5	2/5	4/5	5/5	30.5/50



## Details

**Description:** Rubbervine is a vigorous climbing plant that grows up to 2m high. The leaves are dark green and glossy in opposite pairs. The flowers are large with five white/pale purple petals arranged in a funnel shape. The seed pods are rigid and grow in pair at the end of a short stalk. The stems and leaves exude a milky sap when broken.

**Impacts:** Rubbervine will invade waterways, forming dense impenetrable thickets that smother riparian vegetation. Rubbervine is also poisonous to livestock.

**Distribution:** Occurs occasionally in Bulloo Shire, north of Thargomindah along the Bulloo River.

## Distribution

	Legend	Management
	Common	Containment
	Absent/Unknown	Prevention



Category 3 Invasive Plant

Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Rubbervine (*Cryptostegia grandiflora*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Rubbervine on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Rubbervine is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment, without a permit.

#### Containment

Fire can be an effective tool for destroying Rubbervine infestations, provided that there is sufficient fuel load. Two burns will be the most effective, first to kill existing plants and then to kill the regrowth. For scattered or medium density infestations, repeated slashing will achieve good control. Dense infestations require blade ploughing or stick-raking and follow-up treatment.

Two biological agents are available for Rubbervine but as with most bio-agents, their success is dependent on the size of the infestation. Herbicide can be applied through foliar spray, basal bark, cut stump. Soil application can be used but with care around waterways.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent accidental spread.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar spray												
Basal bark												
Cut stump												
Soil application												
Fire												
Mechanical												

	Optimal timing
	Good timing

Chemical Application	Recommended herbicide
Foliar spray	Grazon Extra; Conqueror; Associate; Tordon 75-D; Unimaz 250GL; Stinger; Zelam Brush Weed
Basal bark	Access; Garlon 600
Cut stump	Access; Amicide Advance 700
Soil application	BobcatSL; Velpar L; Graslan

# Snake Cactus (*Cylindropuntia spinosior*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
5/5	0.5/5	3/5	5/5	3/5	4/5	3/5	3/5	2/5	3/5	31.5/50



## Details

**Description:** Snake Cactus is a branching shrub that can grow 1-2m high. The stems are divided into dull green-purple cylindrical pads that can be up to 20cm long and 5cm thick. The pads have a series of raised ridges that appear similar to that of Devil's Rope Cactus. The areoles produce 5-10 pale-yellow spines. The flowers are usually red and the fruit is yellow.

**Impacts:** Dense infestations compete with native vegetation and pasture and may prevent access to water. The plant's sharp spines can cause injury to native animals and livestock, which may lead to a reduction in productivity.

**Distribution:** Considered common in few areas of Bulloo Shire.

## Distribution

	Legend	Management
	Common	Containment
	Absent/Unknown	Prevention



**Category 3 Invasive Plant**

Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.

# Snake Cactus (*Cylindropuntia spinosior*)

## Management Requirements

### What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Snake Cactus on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Snake Cactus is a Category 3 restricted invasive plant and must not be given away, sold or released into the environment without a permit.

#### Containment

The best approach always involves a combination of different methods. Herbicide can be applied through foliar spraying. Physical removal of the entire plant including the roots and burning the removed material will also be effective for small plants. A combination of the above methods will be effective in controlling Snake Cactus. Mechanical control is not recommended as it can facilitate the spread of the plant.

#### Prevention

The best form of weed control is prevention. Managing risk of spread through vehicle and equipment hygiene is the most important aspect of prevention. Infestations of weeds should be treated when small to prevent large-scale establishment and further spread. Keep livestock away from infestations to prevent accidental spread.

## Control Calendar

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Foliar Spray	[Red bar indicating optimal timing]											

[Red bar] Optimal timing

Chemical Application	Recommended herbicide											
Foliar Spray	Access											

# Wild Dogs (*Canis lupus familiaris*)

A

## Priority

National	State	Local	Conservation	Riparian/Aquatic	Agricultural	Community Priority	Rate of spread	Achievability	Current Distribution	Total Score
0/5	1.5/5	5/5	5/5	2/5	5/5	5/5	1/5	2/5	1/5	27.5/50

## Details

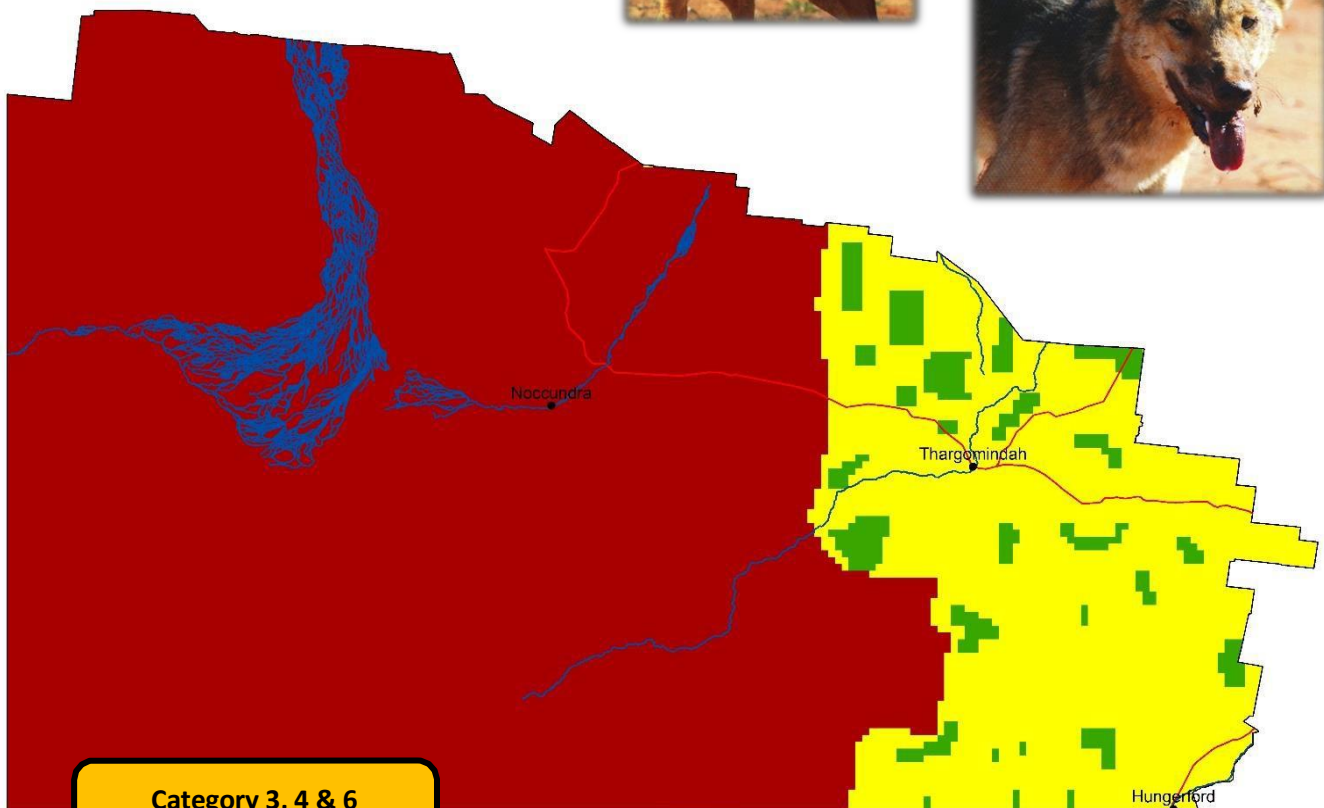
**Description:** Escaped or released domestic dogs, dingoes and dingo hybrids are collectively referred to as Wild Dogs in agricultural areas.

**Impacts:** Wild dogs can cause significant impacts on livestock, particularly small stock (sheep and goats). Some wild dog groups harass and kill livestock, often without eating any. Wild dogs can carry diseases and parasites that may infect domestic dogs. They will often harass domestic pets in peri-urban areas.

**Distribution:** Wild dogs are considered abundant west of the Wild Dog Barrier fence and occasional in areas east of the fence.

## Distribution

Legend	Management
Abundant	Asset Protection
Occasional	Intensive Control
Absent/Unknown	Prevention



Category 3, 4 & 6  
Invasive Animal

Photos and information courtesy of Department of Agriculture & Fisheries. Visit <https://www.daf.qld.gov.au/> for more information.



# Wild Dogs (*Canis lupus familiaris*)

## What is my General Biosecurity Obligation?

All landholders in Bulloo Shire have a responsibility to control Wild Dogs on their land. The Biosecurity Act 2014, requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. Wild Dogs are Category 3, 4 and 6 restricted invasive animal and must not be given away, sold or released into the environment without a permit, must not be moved and must not be fed.

### Asset Protection

It is recommended that landholders protect high value assets from Wild Dog damage.

Wild Dogs are considered abundant west of the Wild Dog Barrier Fence in Bulloo Shire. Effective control requires an integrated and collaborative approach where all stakeholders participate in planning, implementation and evaluation of the actions taken.

### Intensive Control

Fencing is an expensive option but is proven to be the most effective long-term measure. Shooting is effective on individual dogs or small populations but is highly opportunistic. Trapping is a great tool for mopping up problem dogs or dogs that will not take poison baits. This is highly reliant on the skill of the trapper. Livestock guardian animals are also available to protect flocks from wild dog attacks.

The most economic, efficient and effective method for controlling Wild Dogs is poison baiting. Baits can be laid by hand in strategic locations or by blanketing the landscape from aircraft. Sodium fluoroacetate (1080) is available from Bulloo Shire Council for use in controlling Wild Dogs. Manufactured baits (1080 and PAPP) are available through commercial providers (e.g. ACTA) but require an endorsement through QHealth. Contact QHealth or Biosecurity QLD for further information.

Canid Pest Ejectors (CPEs) are a new tool that are available for individual use. These operate as a combination between a trap and a bait. They are laid in strategic locations and are triggered only by the sufficient pull from a canine (dog or fox). Because of this, they have a reduced impact on non-target species. The poison capsules are very easily removed so that they can be made safe for working dogs. These are available through commercial providers (e.g. ACTA) but also require an endorsement through QHealth.

Wild Dogs cause significant damage to livestock in Bulloo Shire. It is a requirement that landholders are contributing to Shire-wide Wild Dog control by utilising at least one of the methods above.

### Prevention

The best form of pest control is prevention. Managing risk of spread by implementing fencing is highly recommended as is controlling populations of dogs before they establish in new areas.

Method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Shooting	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Trapping	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Fencing	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Baiting	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Guardian animals	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good

	Optimal timing
	Good timing