



# BIOSECURITY PLAN

## 2019 - 2024



## Table of Contents

Executive Summary .....	2
Introduction .....	3
Local Bioregions .....	4
Biosecurity Plan Administration.....	5
Legislation .....	5
Plan Development .....	6
Timeline .....	6
Stakeholders .....	7
Risk Based Assessment.....	8
Rural Management Zones .....	8
Prioritisation.....	10
Priority.....	10
Control Strategies .....	10
Desired Outcomes .....	11
Desired Outcome 1 - Awareness and Education .....	11
Desired Outcome 2 - Commitment, Roles and Responsibilities .....	11
Desired Outcome 3 - Prevention, early detection, containment and eradication.....	12
Desired Outcome 4 - Strategic Planning and Management .....	12
Desired Outcome 5 - Effective Integrated Management Systems.....	13
Desired Outcome 6 - Monitoring and Assessment .....	13
Invasive Pests .....	14
Invasive Species Alert List.....	14
Invasive Pest Plants in the Charters Towers Region.....	16
Invasive Pest Animals in the Charters Towers Region .....	26
Acronyms .....	32

## Table of Figures

Figure 1 - Map of Region, bioregions and rural quadrants.....	4
Figure 2 - Map of sub-catchments and roads in the Charters Towers Region .....	9

## Tables

Table 1 - Projected time-line for implementation of the Plan .....	6
Table 2 - List of Stakeholders relevant to the Biosecurity Plan.....	7
Table 3 - Management zones by quadrant bioregion and sub-catchment .....	8
Table 4 - Invasive species scoring system .....	10
Table 5 - Risk level matched to scoring .....	10
Table 6 - Control strategy scoring system.....	10
Table 7 - Management techniques scoring system.....	10
Table 8 - Alert for invasive species not yet detected in the Charters Towers region.....	15
Table 9 - Invasive pest plants in the Charters Towers region.....	25
Table 10 - Invasive pest animals in the Charters Towers region.....	30
Table 11 - List of acronyms .....	32

## Executive Summary

Invasive plants and animals are recognised as a significant threat to Australia's biodiversity, agricultural productivity and public health. The management of these species is a challenge and requires strong commitment, cooperation and collaboration from all stakeholders.

In Queensland, the *Biosecurity Act 2014* (the Act) provides the legal framework for managing the impacts of invasive species, including invasive plants and animals. The Act, mandates that all local governments in Queensland prepare and adopt a Biosecurity Plan that outlines a strategic direction for the management of invasive species within their respective government area.

The management of invasive species is a shared responsibility of land managers, industry, the community and all levels of government. While the primary responsibility rests with the land manager, collective action which engages all stakeholders is considered best practice, to allow effective and efficient management practices.

### Vision

To minimise the impact of invasive plants and animals on the environment, the economy, human safety and social amenity.

### Mission

To establish and lead a cooperative and participative environment where government, natural resource management groups, industry and community contribute in the targeted risk-based management of invasive plants and animals in the Charters Towers Regional Council area, in accordance with the objectives of the *Biosecurity Act 2014*.

### Desired Outcomes

The plan outlines the desired outcomes for the region, including:

- Awareness and Education
- Roles and Responsibilities
- Prevention
- Strategic Management and Planning
- Effective Management Systems
- Monitoring and Assessment



## Introduction

### Purpose

The purpose of the Plan is to provide a strategic direction for the management of invasive plants and animals within the Charters Towers local government area. The Plan outlines a strategy for the roles and responsibilities of all stakeholders in relation to the control of invasive species on their land.

The Plan utilises a risk-based assessment framework to assess local priorities and sets out strategies and actions that aim to minimise the environmental, economic and social impacts caused by invasive plants and animals targeted.

The plan ensures that resources are strategically invested in invasive species management activities to achieve effective outcomes and incorporates mechanisms for monitoring, evaluating and reporting on the effectiveness of the strategic actions implemented.

### Charters Towers Region

The Charters Towers Region has a total area of 68,379.7 km<sup>2</sup> or 4% of the total area of Queensland. It has a population of approximately 12,000 people with the predominant industries including; agriculture, Defence, education and training, health care, retail, tourism and mining.

The council area is diverse with 2,896 km<sup>2</sup> of wetlands, eight (8) National Parks, a world heritage area, four (4) distinct bioregions, twenty-six (26) sub-catchments, distinct ancient volcanic and geological features, a saline lake of Lake Buchanan and rugged mountains.

Located to the south-east of the region is Lake Dalrymple, which contains the largest water storage capacity in Queensland. The Cape and Burdekin River systems feed into the lake from the western and northern sections respectively. These two river systems cover approximately 93 % of the Charters Towers Regional Council Local Government area.

For practical and effective management, Council's Biosecurity Plan separates the rural area into four (4) quadrants, separated by the Flinders Highway and the Gregory Development Road, and includes a fifth residential zone, identified by the General and Rural residential areas in and around Charters Towers and including townships as identified in the Charters Towers Regional Town Plan.



Local Bioregions

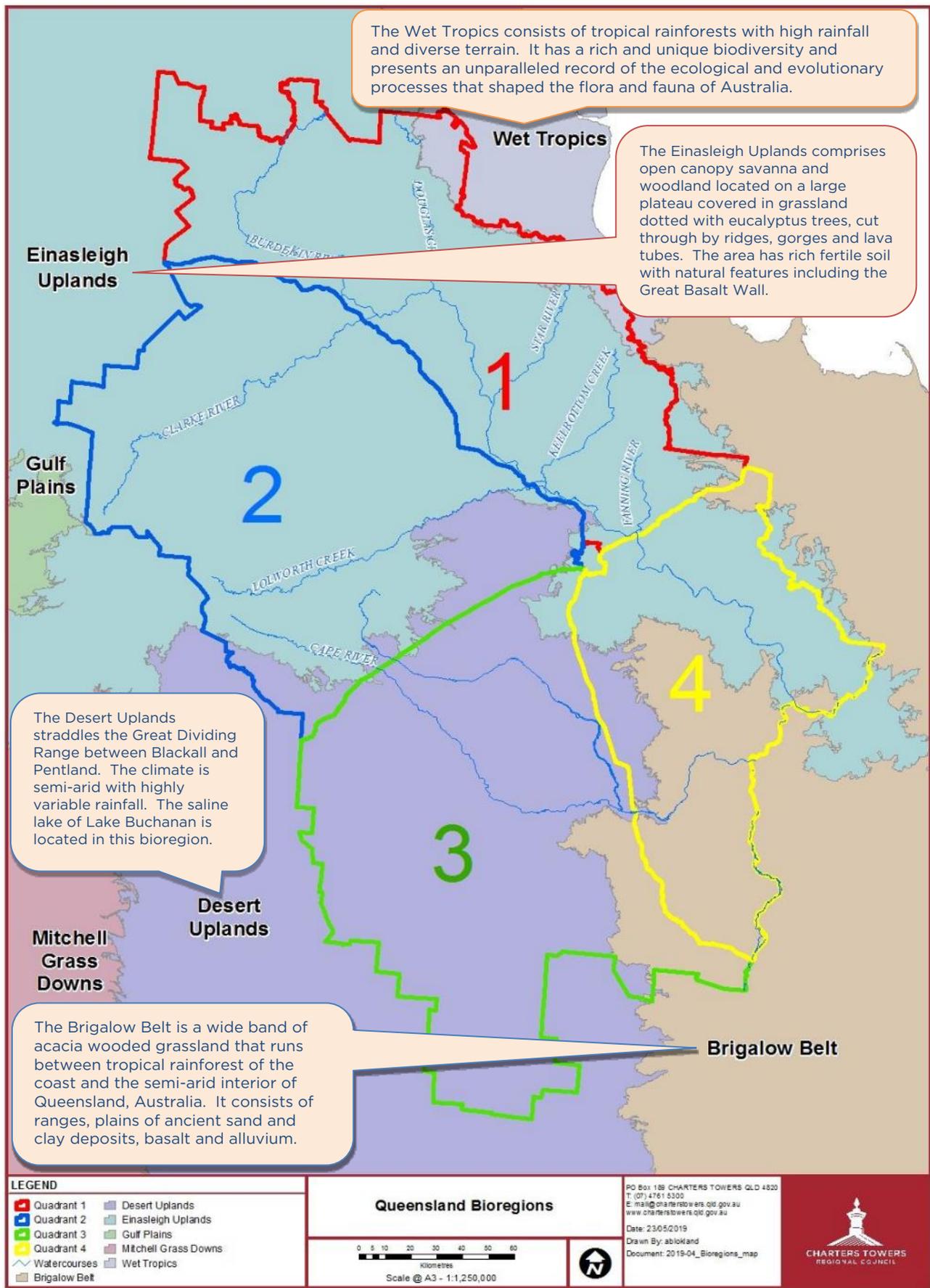


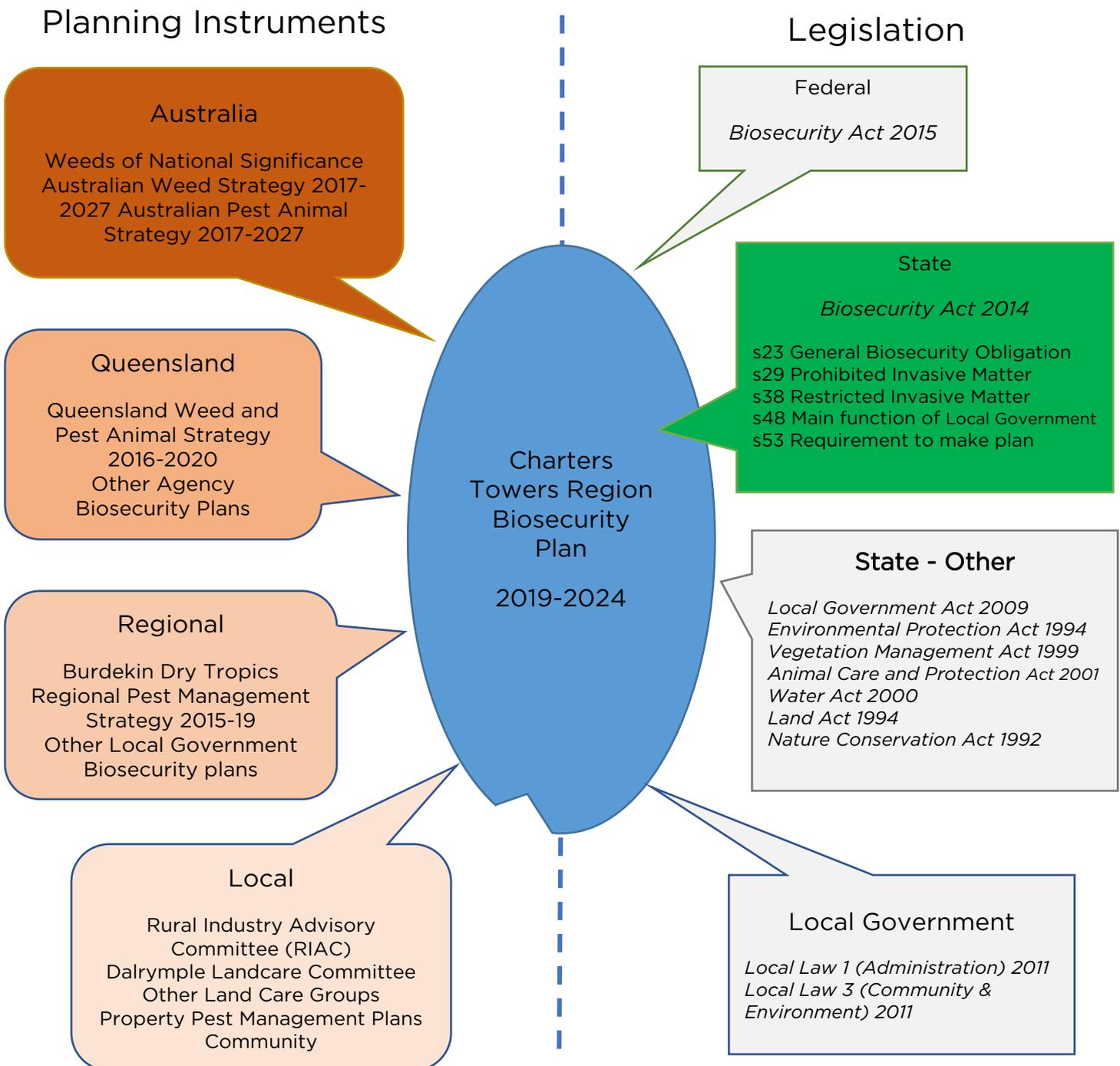
Figure 1 - Map of Region, bioregions and rural quadrants

**Legislation**

The *Biosecurity Act 2014* (the Act) commenced on 1 July 2016. The Act ensures a consistent, modern, risk-based and less prescriptive approach to biosecurity in Queensland. The Act provides comprehensive biosecurity measures to safeguard the economy, agricultural and tourism industries, environment and way of life, from:

- pests (e.g. feral animals and weeds)
- diseases (e.g. foot-and-mouth disease)
- contaminants (e.g. lead on grazing land).

The Act requires Council to develop, adopt and implement a Biosecurity Plan for its region as part of an integrated planning framework for managing invasive biosecurity matter across Queensland.



## Plan Development

The *Biosecurity Act 2014* was implemented on 1 July 2016.

The Charters Towers Local Government Biosecurity Plan 2019-2024 (the Plan) is in effect for no more than five (5) years. Any amendments to the Plan will require re-submission to Council for approval and the old plan replaced upon endorsement of the new plan.

## Timeline

Item	Action	Date
<b>Consultation</b>	Gathering of information via community surveys and stakeholder contributions	<b>Jan 2018 - April 2019</b>
<b>Review</b>	Review of legislation and regional, state and federal strategies	<b>February 2019</b>
<b>Gaps Analysis</b>	Identifying the gaps between the existing Charters Towers Pest Management Plan 2013-17 and the requirement of the Biosecurity Act 2014	<b>March 2019</b>
<b>First Draft</b>	First Draft Completed	<b>April 2019</b>
<b>ELT Review</b>	Council's Executive Leadership Team (ELT) to review the structure and content of the draft plan	<b>May 2019</b>
<b>Second Draft</b>	Open to Rural Industry Advisory Committee for comment	<b>June 2019</b>
<b>Final Draft</b>	Completion of Final Draft	<b>July 2019</b>
<b>Endorsement</b>	Council Resolution seeking endorsement of the final draft	<b>July 2019</b>

[Table 1 - Projected time-line for implementation of the Plan](#)

The plan is a strategic document, it will commence the day the plan is adopted and remain current for a period of five (5) years. The plan will be reviewed annually.

The plan is designed to provide a framework that drives commitment, consultation and partnership, integration, prevention and early detection, monitoring and evaluation, public awareness and best practice principles.

The key advisory body to the implementation of the Plan will be Council's Rural Industry Advisory Committee. From this committee, it is envisaged that smaller working groups may be established as required, in a targeted approach for matters relevant to individual quadrants.



## Stakeholders

A number of stakeholders have interests in pest management in the region. Effective engagement of all relevant parties is critical to the success of invasive biosecurity matter management programs.

AGENCY	RESPONSIBILTIIY
<b>Australian Government</b>	<ul style="list-style-type: none"> <li>➤ Provide and promote the legislative framework for invasive biosecurity management in Australia</li> <li>➤ Provide leadership and coordination for emergency response to invasive biosecurity matter of national significance</li> <li>➤ Manage pests on their area of responsibility</li> </ul>
<b>Department of Defence</b>	<ul style="list-style-type: none"> <li>➤ Eradicate or contain and prevent the spread of invasive plants and animals on land under their control in accordance with the Charters Towers Regional Council Biosecurity Plan and relevant legislation</li> <li>➤ Implement weed hygiene protocols to prevent weed seed spread</li> <li>➤ Implement monitoring program to ensure new incursions are detected and eradicated</li> <li>➤ Implement guidelines and protocols for grazing on Australian Defence Force land</li> <li>➤ Provide support for planned surveillance activities</li> </ul>
<b>Queensland Government</b>	<p><b>Biosecurity Queensland:</b></p> <ul style="list-style-type: none"> <li>➤ Develop and implement invasive biosecurity management through legislation, research and education programs</li> <li>➤ Coordinate state response for high priority invasive pest species</li> <li>➤ Guide, encourage and assist Local Government, regional Natural Resource Management groups, landholders and land managers in invasive pest plant and animal management</li> </ul> <p><b>Other Queensland Government Agencies:</b></p> <ul style="list-style-type: none"> <li>➤ Manage pests in line with respective legislation / operational policy with consideration of local / regional priorities</li> <li>➤ Prevent the spread of high priority species</li> </ul>
<b>Local Government</b>	<ul style="list-style-type: none"> <li>➤ Develop and administer local government area biosecurity plan</li> <li>➤ Participate in compliance activities in accordance with the <i>Biosecurity Act 2014</i></li> <li>➤ Implement and Coordinate community invasive plant and animal management programs</li> <li>➤ Manage invasive pest species on local government-controlled land</li> <li>➤ Assist regional Natural Resource Management groups and community groups with their invasive biosecurity plans</li> <li>➤ Encourage, and assist land managers to develop and implement property pest management plans</li> </ul>
<b>Land managers (public and private)</b>	<ul style="list-style-type: none"> <li>➤ Follow best practice for invasive plant and animal management on land they have responsibility for in line with relevant legislation, policy, guidelines, pest management plans and codes of practice</li> <li>➤ Be aware of and embrace Council’s Biosecurity Plan 2019-24</li> </ul>
<b>Community groups</b>	<ul style="list-style-type: none"> <li>➤ Promote awareness of invasive plant and animal issues within the wider community</li> </ul>
<b>Natural Resource Management (NRM) groups</b>	<ul style="list-style-type: none"> <li>➤ Promote and facilitate invasive plant and animal management on agreed local/regional priorities</li> <li>➤ Assist with control programs for priority species through provision of funding (external)</li> </ul>

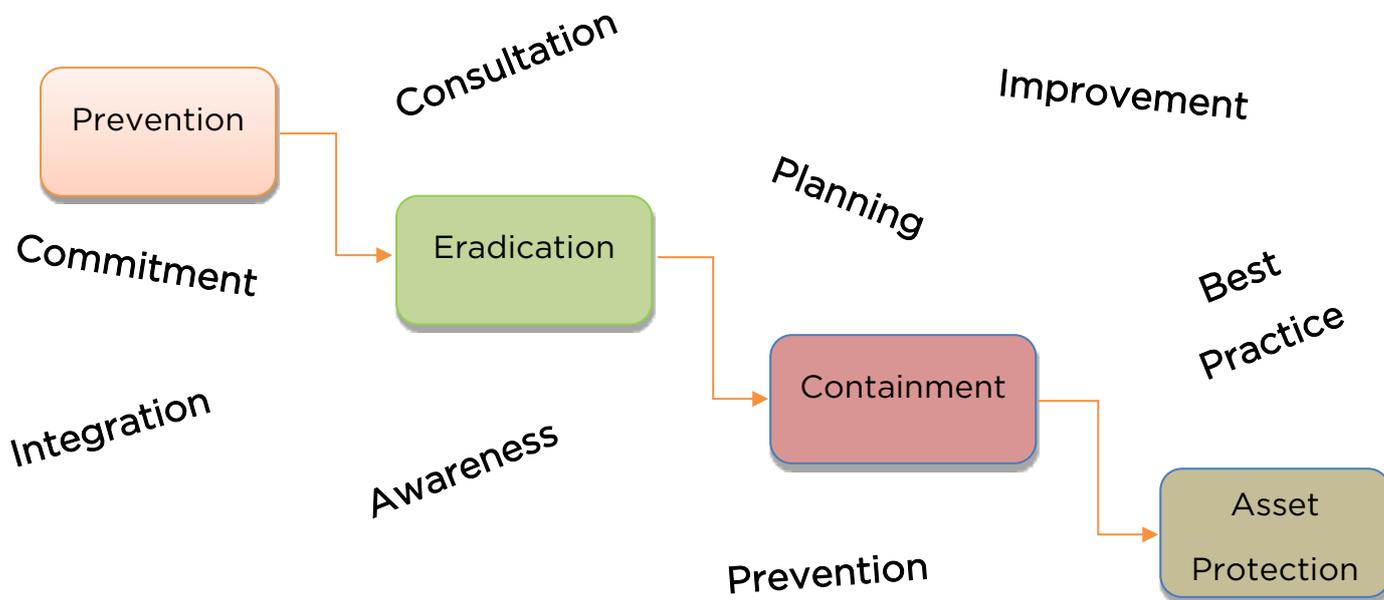
Table 2 - List of Stakeholders relevant to the Biosecurity Plan

### Risk Based Assessment

Decisions about the level of risk invasive plants and animals present, is a critical part of biosecurity planning. A risk-based decision-making process will help determine the way risks are managed.

To ensure a targeted approach, invasive plants and animals within the region will be assessed on economic impacts to landholders, location, level of invasiveness, effects on biodiversity and value for money spent.

The risk of new species entering and becoming established is assessed, with the highest ranked species given highest priority. There are four management strategies in managing invasive plants and animals: prevention, eradication, containment and public interest asset-based protection.



### Rural Management Zones

Basin / Catchment	Quadrants	Bioregions	Sub-catchments
Burdekin River	Quadrant 1	- Einasleigh Uplands - Wet Tropics	Burdekin River (Blue Range), Camel Creek, Douglas Creek, Dry River, Fanning River, Haughton River, Keelbottom Creek, Running River, Star River and Upper Burdekin River
	Quadrant 2	- Einasleigh Uplands - Desert Uplands	Allingham Creek, Basalt River, Clarke River, Gray Creek, Hann Creek and Lolworth Creek (minor sections Cape & Campaspe River)
	Quadrant 3	- Desert Uplands - Brigalow Belt - Einasleigh (minor)	Campaspe River, Cape River, Carmichael River, Lake Buchanan (minor section Lower Cape River)
	Quadrant 4	- Einasleigh Uplands - Brigalow Belt - Desert Uplands (minor)	Burdekin River (Dam), Kirk River, Lower Cape River, Lower Suttor River, Rollstone River and Stones Creek (minor section Campaspe River)

Table 3 - Management zones by quadrant bioregion and sub-catchment

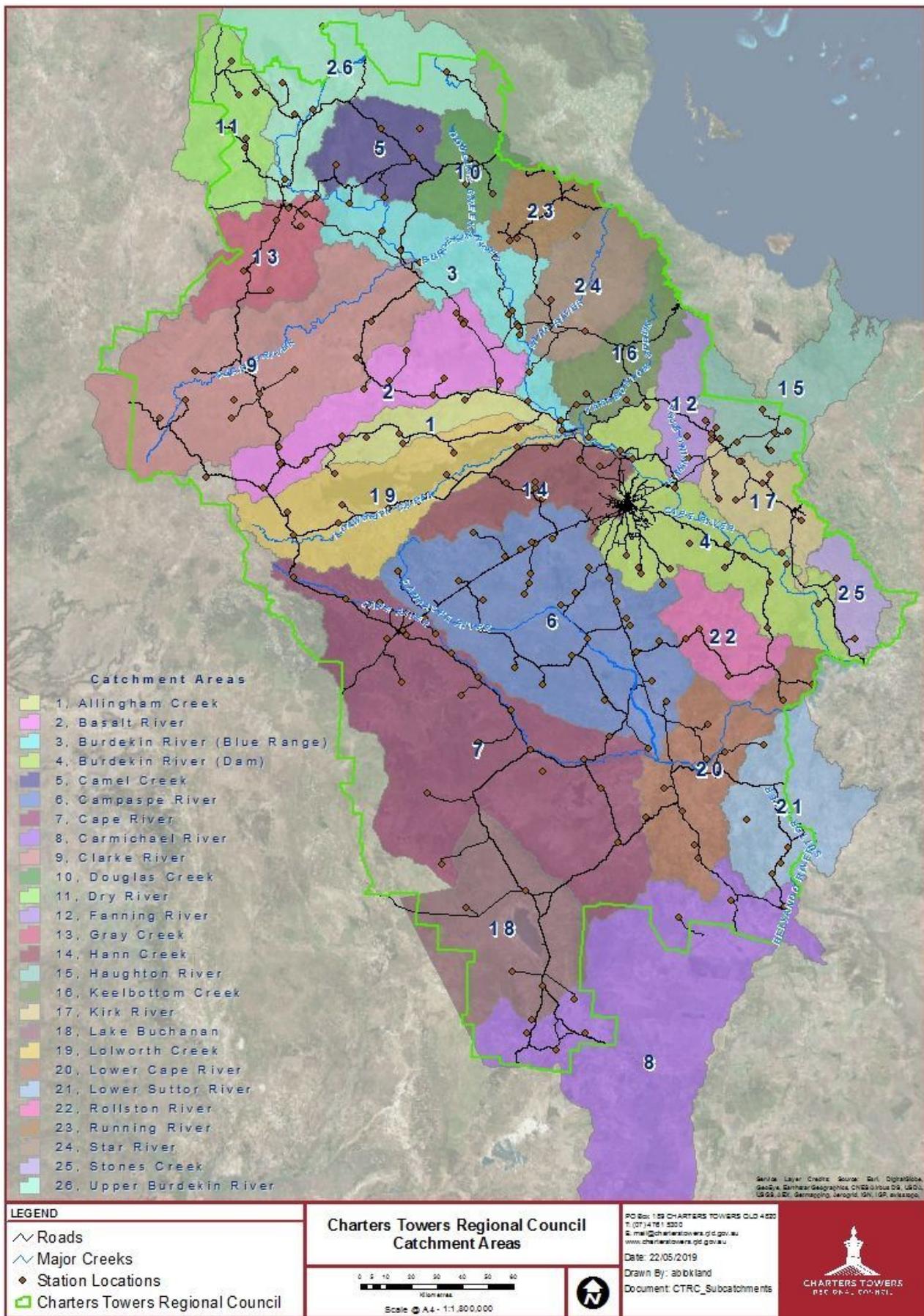


Figure 2 - Map of sub-catchments and roads in the Charters Towers Region

## Prioritisation

### Priority

The key to the Biosecurity Act 2014 (the Act) is the addition of a General Biosecurity Obligation that allows for flexibility in the management of invasive biosecurity matter. In simple terms, it means the intended response can be matched to the risk posed.

The Act itself provides a framework for the management of invasive biosecurity matter across Queensland, whereas the Charters Towers Regional Council Biosecurity Plan is more targeted to invasive pest plants and animals within its own area of influence.

To ensure invasive species that provide the highest risk are targeted, a prioritisation scoring system has been developed, based on three (3) priorities with scores apportioned to eight (8) criteria. Refer summary below.

Priority	Criteria	Scoring Limits (Scale)
Existing Priorities	National, State & Local Declarations	1 to 6
Impacts and Threats	Biodiversity	1 to 5
	Agricultural Impacts	0 to 4
	Residential / Urban	0 to 3
	Invasiveness	1 to 5
	Neighbouring Local Government Areas	0 to 3
Manageability	Distribution	1 to 7
	Achievability	1 to 5

Table 4 - Invasive species scoring system

The score of each of the eight (8) criteria is added together to give a total priority score.

Risk Level	Total Priority Score
High Risk	>24
Medium Risk	20 - 24
Low Risk	<20

Table 5 - Risk level matched to scoring

### Control Strategies

Once Priority / Risk level is determined, Control Strategies are assessed in accordance with Table 6. It is important to note that individual species can be subject to multiple control strategies depending on level of infestation across the region / quadrants etc.

Score	Action	Method
A	Prevention	Maintain safe zones
B	Eradication	Isolated infestation removal
C	Containment	Prevention of spread
D	Reduction	Area decrease
E	Education	Education & Awareness
F	Low Priority	Treat / Control as resources allow

Table 6 - Control strategy scoring system

In order to measure success of a given program, management techniques for each invasive species are established in accordance with Table 7.

Management Techniques		
D	Delimitation	Extent of the pest species is determined
P	Prevention	Clean area, keep clean
R	Removal	All seeds and plants removed
IC	Intensive Control	Reduction to manageable size
IM	Impact Protection	Buffers maintained, important places protected

Table 7 - Management techniques scoring system

A comprehensive prioritisation scoring schedule for invasive pest species in the Charters Towers Region is available upon request.

## Desired Outcomes

### Desired Outcome 1 – Awareness and Education

The key to success lies with lifting the public profile of invasive plant and animal management and targeting education and awareness programs to the needs of the respective audience. Stakeholders often exhibit expertise in specific areas, therefore encouraging participation, ownership and stewardship, is desirable for promoting regional education programs.

#### Council will:

- Maintain Council's webpage with the most current initiatives for controlling invasive pest animals and plants
- Promote Council's Biosecurity Plan 2019-24 and for new threats of invasive species identified.
- Be proactive in promoting best practice through attendance at market / industry stalls etc.
- Support / facilitate public forums / workshops to promote biosecurity issues
- Provide training to staff and landholders on Council's Biosecurity Plan, including the identification of pest animals and plants
- Consider media promotions for evolving species and problem issues
- Support other Council programs



**Weed Information Day**  
for small landholders

This is a free event to expand your knowledge on the pressing weed issues

**Included**

- Lucky door prize
- Morning tea and lunch provided
- Guest speaker:

Dr Melinda Laidlaw from QLD Herbarium will cover the identification, collection and preparation of plant samples.

**RSMP By 8 May**  
Contact: Charters Towers Regional Council  
Ph: 4781 5300  
E: [mail@charters-towers.qld.gov.au](mailto:mail@charters-towers.qld.gov.au)

**When**  
Saturday, 11 May 2019  
8:30 am Registration  
9:00 am ~ 3:00 pm

**Where**  
QDAF's  
Tropical Weeds Research Centre  
27-43 Metal Downs Road, Charters Towers

Topics to be covered • Importance of weed control • Weed identification • Weed control using bioagents • Impact of grazing on weed management • Weed seed viability • Practical demonstration of how to prepare and use herbicides

Charters Towers Regional Council  
Sustainable Landcare Committee Inc.  
Queensland Government  
Weed Spatters: Prevention, Control & Eradication

### Desired Outcome 2 - Commitment, Roles and Responsibilities

The management of invasive biosecurity matter is a shared responsibility of land managers, traditional owners, owners and occupiers, Natural Resource Management Groups, industry and all levels of government. Under the Biosecurity Act 2014 everyone has an obligation to take all reasonable and practical measures to prevent or minimise a biosecurity risk.



#### Council will:

- Maintain working partnerships with stakeholders
- Commit to resourcing invasive pest plant and animal control activities and staff training
- Identify common objectives and opportunities for sharing resources
- Determine a compliance path, for when all other avenues of encouragement have failed
- Investigate and where possible support viable incentive programs
- Actively participate in regional forums and land care groups within the region
- Assist land managers with development of individual biosecurity plans to align with regional priorities and this plan

### Desired Outcome 3 – Prevention, early detection, containment and eradication

Prevention and early intervention is generally the most cost effective management strategy. Once an introduced invasive species takes hold, it is often too late, and land managers are forced to settle for containment measures. Therefore, the key to effective land management is to prevent the expansion of invasive plant and animal distributions to reduce negative impact.

#### Council will:

- Undertake basic surveillance on high priority areas / assets
- Seek funding and other external support for surveillance and control programs
- Stay abreast of research and current developments in the early detection of invasive pest animals and plants
- Facilitate information sharing between stakeholders on prevention, early detection containment and eradication of invasive species.
- Identify and map, new priority weeds and pest animal species
- Reduce new incursions that are identified as high ranked species
- Support awareness and control campaigns aimed at preventing the spread of pest animals and weeds
- Provide avenues for reporting of invasive species locally and for monitoring outcomes



### Desired Outcome 4 – Strategic Planning and Management

Setting priorities for the management of invasive plants and animals is critical to ensuring an effective use of available resources. Effective communication and co-operation between all stakeholders is essential for achieving common goals and set priorities. Council has undertaken a risk assessment to determine the level of risk from invasive biosecurity matter to assist in setting its priorities.

#### Council will:

- Develop, implement and review the Charters Towers Region Biosecurity Plan (the Plan)
- Ensure the support and ownership of stakeholders in the process
- Facilitate budget requests that complement the desired outcomes of the Plan
- Develop an annual operational plan to outline activities for the year ahead
- Integrate pest management planning with other processes
- Investigate funding opportunities
- Facilitate consultation with the Rural Industry Advisory Committee and other Natural Resource Management Groups on planning activities to achieve best outcomes
- Identify high priority areas, which includes high traffic areas, waterways, wash facilities etc.
- Develop biosecurity programs for invasive species
- Prioritise invasive pest species and implement plans based on the outlined ranking process
- Develop a robust system for recording of invasive species sightings and control
- Prioritise regional projects and actively participate with the Burdekin Dry Tropics Regional Pest Management Group

### Desired Outcome 5 – Effective Integrated Management Systems

It is widely accepted that integrated pest management systems are the most effective for control of invasive species. Successful long-term management of invasive biosecurity matter relies on co-operation with neighbours and co-ordination of control activities. To ensure the best possible outcomes Council will advocate best practice management wherever possible.

#### Council will:

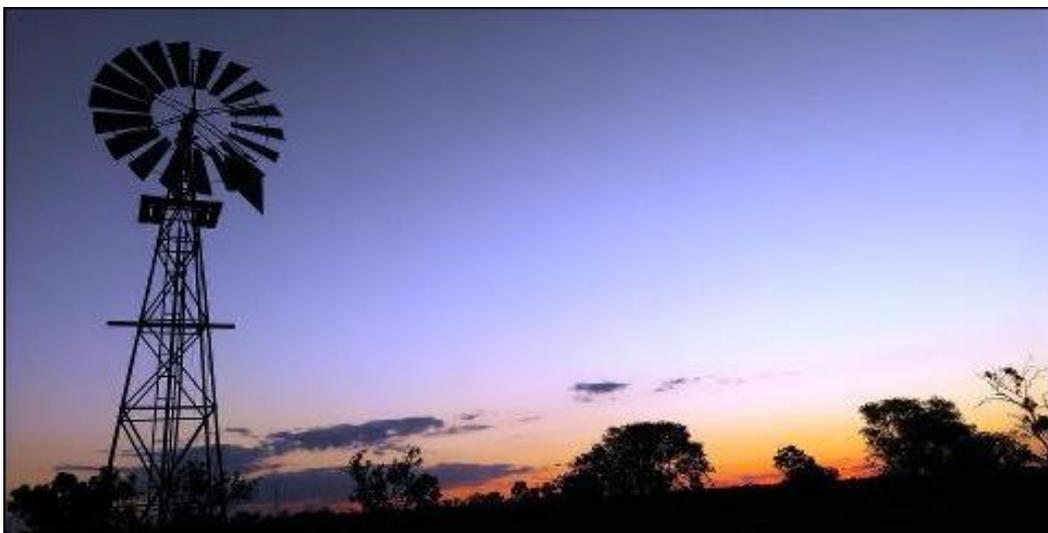
- Investigate new and emerging technologies, bio-controls etc.
- Develop and improve existing management practices reflecting best practice
- Include stakeholders in the leadership, coordination and implementation of targeted priority based invasive pest plans
- Schedule activities to coincide with seasonal variations and other regional coordinated responses
- Support Landholders and promote success
- Provide templates for, and assist in development of property scale invasive biosecurity plans

### Desired Outcome 6 – Monitoring and Assessment

The key to monitoring and assessment is reliable data. Reliable data ensures a holistic approach that balances prevention, surveillance and preparedness. Management practice will be regularly reassessed and updated on the best research and information available. Remaining up-to-date to changes in legislation and research, monitoring and assessment are seen as the key drivers to successful decision making.

#### Council will:

- Review changes to state and federal legislation, and amendments to regional strategies
- Seek the expertise of universities, CSIRO, DAF and other research facilities to build Council's knowledge base and capacity
- Incorporate the latest GIS / drone technology into the collection of data
- Monitor and record the outcomes of biosecurity initiatives, activities and plans
- Assess the performance of the annual operational plan (defined in Desired Outcome 4)
- Share knowledge with other stakeholders
- Collaborative approve (regional pest bodies)
- Develop key performance indicators (KPI's) and link to work plans, Council's corporate plan where possible
- Incorporate and communicate invasive species mapping for the region
- Measure performance against members of the Burdekin Dry Tropics Pest Management Group



## Invasive Pests

### Queensland

Invasive Pest Plants (weeds):

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

Invasive Pest Animals:

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

### Invasive Species Alert List

Plant Species	Detail	Image
<b>Redwood</b> ( <i>Acaciella glauca</i> )	<ul style="list-style-type: none"> <li>• White ball-shaped flowers</li> <li>• Dry tropics</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<b>Bunny Ears</b> ( <i>Opuntia spp</i> )	<ul style="list-style-type: none"> <li>• Dense shrub, bunny ear appearance</li> <li>• Cactus targeted for eradication</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<b>Coastal or Jumping Cholla</b> ( <i>Cylindropuntia prolifera</i> )	<ul style="list-style-type: none"> <li>• Cylindrical segments</li> <li>• Spines to 2 cm long</li> <li>• Pink flowers</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<b>Hudson Pear</b> ( <i>Cylindropuntia pallida</i> (Syn. <i>Rosea</i> ) <i>C. tunicate</i> )	<ul style="list-style-type: none"> <li>• Cylindrical segments</li> <li>• Long spreading spines</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<b>Hygrophila</b> ( <i>Hygrophila costata</i> )	<ul style="list-style-type: none"> <li>• Emergent herb up to a metre tall</li> <li>• Papery white flowers</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<b>Koster's curse</b> ( <i>Clidemia hirta</i> )	<ul style="list-style-type: none"> <li>• Forms dense thickets</li> <li>• Can grow to a height of 5 metres</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<b>Yellow Burrhead</b> ( <i>Limnocharis flava</i> )	<ul style="list-style-type: none"> <li>• Yellow flowers</li> <li>• Triangular stems</li> <li>• Water bodies and margins</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	

<p><b>Mesquite</b> (<i>Prosopis spp.</i>)</p>	<ul style="list-style-type: none"> <li>• Multi stemmed shrub with branches drooping to the ground</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<p><b>Mexican bean tree</b> (<i>Cecropia spp.</i>)</p>	<ul style="list-style-type: none"> <li>• Can grow to 25 metres</li> <li>• Wide leaf blades 10-50 cms</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<p><b>Mikania Vine</b> (<i>Mikania micrantha</i>)</p>	<ul style="list-style-type: none"> <li>• Heart shaped leaf</li> <li>• Smothering habit</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<p><b>Mimosa Pigra</b> (<i>Mimosa pigra</i>)</p>	<ul style="list-style-type: none"> <li>• Fine fern-like leaf</li> <li>• Central leaf stalk, prickly</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<p><b>Opuntioid cacti</b> (<i>Astrocylinropuntia species and other Cylindropuntia species not yet identified</i>)</p>	<ul style="list-style-type: none"> <li>• Restricted invasive plant</li> <li>• Low growing cacti shrubs to trees 8 metres high</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<p><b>Water Mimosa</b> (<i>Neptunia oleraceae/N. plena</i>)</p>	<ul style="list-style-type: none"> <li>• Fern-like leaf</li> <li>• Pithy stems that float</li> <li>• Can dominate a water body</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	
<p><b>Tropical Soda Apple</b> (<i>Solanum viarum</i>)</p>	<ul style="list-style-type: none"> <li>• Resembles a variegated cherry tomato</li> <li>• Thorny leaves</li> <li>• Look in sale yards, abattoirs</li> </ul> <p><a href="#">Find out more&gt;&gt;</a></p>	

Table 8 - Alert for invasive species not yet detected in the Charters Towers region

Invasive Pest Plants in the Charters Towers Region

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Acacias non-indigenous to Australia ( <i>Acacia spp.</i> )	Med	3		TCC FSC	B, C, E		
African Fountain Grass ( <i>Pennisetum setaceum</i> ) <ul style="list-style-type: none"> <li>- Out-competes native plants and pastures</li> <li>- Fire hazard</li> </ul>	Medium	3		TCC WRC	B	D, P, IC	
African Tulip Tree ( <i>Spathodea campanulata</i> ) <ul style="list-style-type: none"> <li>- Infests gullies, waterways, and disturbed rainforest</li> <li>- Harmful to native bees</li> </ul>	Low	3		TCC WRC IRC TRC HSC	E		
Asparagus Ferns ( <i>Asparagus scandeus</i> ) <ul style="list-style-type: none"> <li>- Becomes dominant ground cover, displacing native plants even in undisturbed systems</li> </ul>	High	3	WONS	TCC BSC WRC HSC	B, E	C, D, P	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
<p>Athel Pine (<i>Tamarix aphylla</i>)</p> <ul style="list-style-type: none"> <li>- Can increase salt levels in soil</li> <li>- Consumes water faster than native vegetation</li> <li>- Forms densely along river banks</li> </ul>	Medium	3	WONS	TCC WRC IRC FSC	C, E		
<p>Bellyache Bush (<i>Jatropha gossypifolia</i> and hybrids)</p> <ul style="list-style-type: none"> <li>- Spreads rapidly and toxic</li> <li>- Out-competes and replaces native plants and grasses used in grazing.</li> </ul>	High	3	WONS	TCC WRC IRC BRC FSC TRC BSC	C	D, IC, IM	
<p>Broad-leaved Pepper Tree (<i>Schinus terebinthifolius</i>)</p> <ul style="list-style-type: none"> <li>- Out-competes and replaces native grasses used in grazing</li> <li>- Toxic to natives, people etc.</li> </ul>	Medium	3		TCC WRC IRC BRC BSC	B	D, P	
<p>Calotrope (<i>Calotropis procera</i>)</p> <ul style="list-style-type: none"> <li>- Invades cultivated land and overgrazed areas</li> </ul>	Medium			TCC TRC BSC	B, E	D, P	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Cane Cactus ( <i>Austrocylindropuntia cylindrica</i> )	High	3			C, E		
Castor Oil Plant ( <i>Ricinus communis</i> ) - Spreads over sandy soil areas, creekbanks and gullies - Toxic to stock, natives & people	Low			BSC WRC FSC	F	IM	
Cat's Claw Creeper ( <i>Macfadyena unguis-cati</i> ) - Smothers native vegetation, including growing up over trees. - Changes soil chemistry	Medium	3	WONS	TCC HSC IRC WRC	B, C	P	
Chinee Apple ( <i>Ziziphus mauritiana</i> ) - Creates impenetrable thickets that seriously hamper stock management - Reduces pasture production and accessibility for animals	High	3		TCC BSC BRC FSC ESC WRC IRC	D	IM	
Devil's Fig ( <i>Solanum torvum</i> ) -	Low				E		

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Elephant Grass ( <i>Pennisetum purpureum</i> ) - Forms bamboo-like, densely tufted clumps that invade bushland vegetation	Low	3		TCC BSC	E		
Elephant's Vine ( <i>Philodendron spp.</i> ) - Smothers ground in damp sites on most soil types - Toxic to natives and stock	High	3		TCC	C, E	D, P	
Eve's Pin Cactus ( <i>Austrocylindropuntia subulata</i> )	High	3			B, C, E	D, P	
Gamba Grass ( <i>Andropogon gayanus</i> ) - Replaces native grasses and reduces natural biodiversity - Fire hazard	High	3	WONS	TCC WRC ESC BRC HSC	B,E	D, P, R	
Golden Crown Beard ( <i>Verbesina encelioides</i> ) - Able to displace native vegetation and prevent native species from re-establishing following disturbances	Low				E		

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Grader Grass ( <i>Themeda quadrivalvis</i> ) - Invades pasture and native grassland, replaces native plants	Med			TCC BSC TRC FSC ESC WRC	D, E	IM	
Grewia ( <i>Grewia asiatica</i> ) - invades natural woodland communities, changing the structure and processes of the systems	Low			TCC WRC	E		
Harissa Cactus ( <i>Harrisia martini</i> , <i>H. tortuosa</i> , <i>H. pomansis</i> ) - Chokes out pastures and reduce native plant growth	Med	3		TCC BSC BRC	B, D, E	P	
Hymenachne ( <i>Hymenachne amplexicaulis</i> ) - Interferes with irrigation and infrastructure - Affects drains, lagoons, wetlands, creeks and rivers, flood increase, Interferes with wildlife habitats	Medium	3	WONS	TCC BSC WRC IRC ESC TRC HRC	B, E	D, P	
Lantana (all species) ( <i>Lantan camara</i> , <i>L. montevidensis</i> ) - Forms dense thickets that smother native vegetation.	High	2,3,4,5	WONS	TCC BSC IRC BRC ESC TRC HSC TRC	D	IM	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
<p>Leucaena (<i>Leucaena leucocephala</i>)</p> <ul style="list-style-type: none"> <li>- Forms dense thickets, hindering movement of wildlife and excluding all other plants</li> </ul>	Medium			TCC WRC ESC TRC BSC	A, B	P	
<p>Mother of Millions (<i>Bryophyllum delagoense</i>)</p> <ul style="list-style-type: none"> <li>- Forms infestations in grasslands, and open woodlands</li> <li>- Poisonous, with newly exposed stock</li> </ul>	Low/Medium	3		TCC ESC FSC IRC WRC TRC HSC BSC	C, E, F	IM	
<p>Mother of Millions Hybrid (<i>Bryophyllum</i> × <i>houghtonii</i>)</p> <ul style="list-style-type: none"> <li>- Forms infestations in grasslands, open woodlands and coastal dunes</li> <li>- Poisonous, with newly exposed stock</li> </ul>	Low	3		TCC ESC FSC IRC WRC TRC HSC BSC	C, E, F	IM	
<p>Noogoora Burr (<i>Xanthium occidentale</i>, <i>syn. X. pungens</i>, <i>x. strumarium</i>)</p> <ul style="list-style-type: none"> <li>- Contaminates wool, reducing value by increasing processing costs. Toxic to stock</li> <li>- competes with native vegetation</li> </ul>	Low			TRC TCC BSC WRC IRC BRC FSC ESC	E, F	IM	
<p>Parkinsonia (<i>Parkinsonia aculeata</i>)</p> <ul style="list-style-type: none"> <li>- Forms dense, often impenetrable, thorny thickets along watercourses and bore drains, provides pests with habitat</li> <li>- Reduces pasture production</li> </ul>	High	3	WONS	TCC BSC FSC IRC BRC WRC HSC	C, D	D, IM	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Parthenium <i>(Parthenium hysterophorus)</i> <ul style="list-style-type: none"> <li>- Invades pastures.</li> <li>- Reduces beef production, costs primary industries millions of dollars per year</li> </ul>	Med/High	3	WONS	TCC BSC HSC IRC TRC WRC BRC ERC	C, D	IM	
Praxelis <i>(Praxelis clematidea)</i> <ul style="list-style-type: none"> <li>- Invades native vegetation and pastures</li> </ul>	Medium			TCC HSC BSC	A, C, D	P	
Prickly Acacia <i>(Vachellia nilotica)</i> <ul style="list-style-type: none"> <li>- Degrades soil by facilitating erosion, transforms grasslands into thorny scrub and woodland</li> </ul>	High	3	WONS	TCC BSC WRC FSC ERC BRC	B, C, E	D, P, IC	
Prickly pears- bunny ears/ common pest pear/ Prickly pear/ Tiger pear/ Drooping tree pear/ Westwood pear/ Velvety tree pear/ Prickly pear/ Polka dot cactus <i>(Opuntia spp.)</i> <ul style="list-style-type: none"> <li>- Competes and invades pastures</li> <li>- Can harm animals and prevent them from eating</li> </ul>	Medium	2, 3, 5	WONS	TCC HSC WRC BRC	B, E	D, P, IC	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Rat's tail grass/American rat's tail grass/ giant Parramatta grass/ Giant rat's tail grass ( <i>Sporobolus pyramidalis</i> , <i>s.natalensis</i> , <i>s. jacquemontii</i> and <i>s. fertilis</i> ) - Invades pastures. - Replaces more productive grasses	High	3		TCC WRC FSC ESC IRC BSC HSC TRC	A, B, E	D, P, R	
Rubber Vine ( <i>Cryptostegia grandiflora</i> ) - Smothers riparian vegetation and forms dense thickets and decreases biodiversity - Toxic to stock and natives	Med	3	WONS	TCC WRC BSC IRC BRC FSC ESC	C, D	IM	
Siam Weed ( <i>Chromolaena odorata</i> ) - Quickly invades and smothers native vegetation and pastures - Toxic to stock and natives	High	3	Alert List	TCC TRC HSC FSC WRC BRC BSC	B, C, E	D, P	
Sicklepod/ Hairy cassia/ Foetid cassia ( <i>Senna obtusifolia</i> , <i>S. hirsuta</i> and <i>S. tora</i> ) - Invades pasture, roadsides, fence lines, creekbanks, waste areas	Low	3		TCC BSC TRC HSC WRC	C, D, E	IM	
Singapore Daisy ( <i>Sphagneticola trilobata</i> ) - Spreads rapidly and smothers seedlings, ferns and shrubs. - Invades environmental areas	Low	3		TCC WRC TRC BSC HSC	C, D, E, F	D, P, IC	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Thatch Grass ( <i>Hyparrhenia rufa</i> ) <ul style="list-style-type: none"> <li>- Alters soil chemistry/stability</li> <li>- Not suitable for stock</li> </ul>	Low			TCC WRC TRC IRC	E, F		
Thorn Apples ( <i>Datura innoxia</i> ) <ul style="list-style-type: none"> <li>- Has a serious impact on agricultural production</li> <li>- Host insect pests and diseases that attack vegetables</li> </ul>	Low				E		
Thunbergia ( <i>Thunbergia grandiflora</i> (syn <i>laurifolia</i> )) <ul style="list-style-type: none"> <li>- Threatens remnant vegetation in wet tropics</li> <li>- Degrades banks of creeks and rivers.</li> </ul>	Medium/High	3		TCC HSC TRC	B, E, F	D, IC	
Tobacco Weed ( <i>Elephantopus mollis</i> ) <ul style="list-style-type: none"> <li>- Smothers healthy, thick pastures with dense masses of broad-leafed seedlings</li> <li>- Major threat to beef and dairy industries of North Queensland</li> </ul>	Low	3		IRC TRC TCC	E		

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Water Hyacinth <i>(Eichhornia crassipes)</i> <ul style="list-style-type: none"> <li>- Destroys native wetlands and waterways, killing native fish and other wildlife</li> <li>- Depletes water bodies of oxygen</li> <li>- Interferes with and damages infrastructure</li> </ul>	Medium	3	WONS	WRC TCC HSC TRC ESC IRC	B, C, E	D	
Yellow bells/ Fire flower <i>(Tecoma stans)</i> <ul style="list-style-type: none"> <li>- Readily invades native bushland and roadsides</li> </ul>	Medium	3		TCC BSC WRC BSC TRC IRC BRC	B, C, E	IM	
Yellow Oleander / Captain Cook bush <i>(Cascabela thevetia)</i> <ul style="list-style-type: none"> <li>- Threatens sustainable pastures production</li> <li>- Toxic to stock, people, natives and domestic animals</li> </ul>	Medium			HSC TCC WRC BSC	B, C, E	IM	

Table 8 – Invasive pest plants in the Charters Towers region

### Invasive Pest Animals in the Charters Towers Region

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
<p>Camel (<i>Camelus dromedaries</i>)</p> <ul style="list-style-type: none"> <li>- Add to the total grazing impact</li> <li>- Destroy fences and are a potential carrier of exotic diseases that may be a threat to livestock</li> </ul>	<p>Low / Med (public safety)</p>			FSC	B	IM	
<p>Feral Cattle (<i>Bos spp.</i>)</p> <ul style="list-style-type: none"> <li>- Overgrazing, contributors to erosion, trampling pastures</li> </ul>	<p>Low / Med (public safety)</p>			TRC HSC TCC WRC BSC IRC FSC ESC BRC	B	IM	
<p>Feral Chital Deer (<i>Axis axis</i>)</p> <ul style="list-style-type: none"> <li>- Can damage natural environment by eating native vegetation, damaging trees, dispersing weed seeds, and fouling water.</li> </ul>	<p>Med/High</p>	3, 4, 6		TCC BSC IRC BRC	D	D, IM	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
Dingo/Wild Dog <i>(Canis familiaris)</i> <ul style="list-style-type: none"> <li>- Causes stock losses and lower production from bitten stock</li> <li>- Diseases can spread to domestic animals</li> <li>- Eats native species</li> </ul>	High	3, 4, 5, 6		TCC TRC HSC BSC WRC IRC BRC FSC ESC	D	IM	
Donkey <i>(Equus asinus)</i> <ul style="list-style-type: none"> <li>- Contribute to soil erosion</li> <li>- Competes with stock and native animals for pastures</li> </ul>	Low			TRC HSC TCC WRC BSC IRC FSC ESC BRC	B, C	IM	
European Rabbit <i>(Oryctolagus cuniculus)</i> <ul style="list-style-type: none"> <li>- Competes with native animals for food and space, changes biodiversity, overgrazing, degrades native pastures</li> </ul>	Medium	3, 4, 5, 6		TCC FSC BSC ESC BRC IRC WRC HSC TRC	C, D	IM	
European Red Fox <i>(Vulpes Vulpes)</i> <ul style="list-style-type: none"> <li>- Greatest threat to long-term survival of many small marsupial species in Australia</li> <li>- Preys on young stock</li> <li>- Can spread diseases to domestic animals</li> </ul>	High	3, 4, 5, 6		TCC FSC BSC IRC MSC ESC	C	IM	
Feral Cat <i>(Felis catus)</i> <ul style="list-style-type: none"> <li>- Can injure and transmit disease to domestic cats</li> </ul> S0067 Biosecurity Plan 2019-2024	Medium	3, 4, 6			C	IM	

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
<p>and native species</p> <ul style="list-style-type: none"> <li>- Threatens endangered species</li> </ul>							
<p>Feral Goat (<i>Capra hircus</i>)</p> <ul style="list-style-type: none"> <li>- Competes for pasture and damages fences</li> <li>- Contributes to overgrazing and soil erosion</li> </ul>	Low	2, 4, 6		FSC BRC HSC	C (when found)	IM	
<p>Feral Horse (<i>Equus caballus</i>)</p> <ul style="list-style-type: none"> <li>- Competes with livestock for pasture</li> <li>- Contributes to overgrazing and soil erosion</li> </ul>	Low / Med (public safety)			FSC TRC HSC TCC BSC WRC IRC BRC ESC	B	IM	
<p>Mule (<i>Equus caballus</i> x <i>Equus asinus</i>)</p> <ul style="list-style-type: none"> <li>- Competes with livestock for pasture</li> <li>- Contributes to overgrazing and soil erosion</li> </ul>	Low			TRC HSC TCC WRC BSC IRC FSC ESC BRC	B	IM	
<p>Peacock (<i>Pavo cristatus</i>)</p> <ul style="list-style-type: none"> <li>- Competes with native wildlife</li> <li>- Traffic hazards</li> </ul>	Low			TRC HSC TCC WRC BSC IRC FSC ESC BRC	C, D		

Species	Prioritisation Rank (low, med, high)	Biosecurity Act Category	Federal Status	In Neighbouring Local Government Areas	Control Strategy	Management Technique	Image
<p>Feral Pig (<i>Sus scrofa</i>)</p> <ul style="list-style-type: none"> <li>- Spreads weeds</li> <li>- Degrades waterholes and wetlands</li> <li>- Contributes to soil erosion</li> <li>- Carries diseases that affect native and domestic animals</li> <li>- Ruins pastures and crops</li> </ul>	Medium	3, 4, 6		TRC HSC TCC WRC BSC IRC FSC ESC BRC	C, D	IM	
<p>Feral Sheep (<i>Ovis aries</i>)</p> <ul style="list-style-type: none"> <li>- Competes with livestock for pasture</li> <li>- Contributes to overgrazing and soil erosion</li> </ul>	Low			TRC HSC TCC WRC BSC IRC FSC ESC BRC	C	IM	
<p>Tilapia (Fish) (<i>Oreochromis mossmabicus</i> and <i>Tilapia mariae</i>)</p> <ul style="list-style-type: none"> <li>- Successfully invades and dominates many water habitats</li> </ul>	Low	2, 3, 4		TCC BSC	B, E  (ponds and dams)	IM	
<p>Water Buffalo (<i>Bubalus bubalis</i>)</p> <ul style="list-style-type: none"> <li>- Competes with livestock for pasture</li> <li>- Contributes to overgrazing and soil erosion</li> </ul>	Low			TCC TRC	B	IM	

Table 9 – Invasive pest animals in the Charters Towers region



## Acronyms

BRC	Barcaldine Regional Council
BSC	Burdekin Shire Council
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTRC	Charters Towers Regional Council
DAF	Department of Agriculture and Fisheries
DES	Department of Environment and Science
DLGRMA	Department of Local Government, Racing and Multicultural Affairs
DNRME	Department of Natural Resources Mines and Energy
TMR	Department of Transport and Main Roads
ESC	Etheridge Shire Council
FSC	Flinders Shire Council
HSC	Hinchinbrook Shire Council
IRC	Isaac Regional Council
QH	Queensland Health
QR	Queensland Rail
TCC	Townsville City Council
TRC	Tablelands Regional Council
WoNS	Weeds of National Significance
WRC	Whitsunday Regional Council

Table 10 - List of acronyms



## Biosecurity Plan 2019-2024

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