Cairns Region Biosecurity Plan 2025 – 2030

Contents

Acronyms and Glossary

4TW/ NTWEP	National Tropical Weeds Eradication Program – A national eradication program delivered by Biosecurity Queensland (BQ), targets the eradication of five weeds listed as restricted matter (category 2,3,4 & 5) - *Mikania vine, Miconia calvescens, Miconia racemosa, Miconia nervosa* and *Limnocharis flava*. Previously called the Four Tropical Weeds Program.
APVMA	Australian Pesticides and Veterinary Medicines Authority: maintains a register of permits and herbicides suitable for pests.
BQ	Biosecurity Queensland coordinates the government's efforts to prevent, respond to, and recover from pests and diseases that threaten the economy and environment. BQ is made up research, operations and policy. BQ is part of the Department of Agriculture and Fisheries (DAF).
BQ Act	*QLD Biosecurity Act 2014.*
BWG/PWG	Biosecurity Working Group prev. Pest Working Group; Local forum established to regularly bring all the relevant stakeholders together to discuss a range of land management priorities.
CRC	Cairns Regional Council – Council for Local Government area covered by this plan.
DPI/ DAF	Queensland Department of Primary Industries/ Agriculture and Fisheries.
DAFF	Federal Department of Agriculture, Fisheries and Forestry.
DES/ DESI	Department of Environment, Science and Innovation.
DTMR	Department of Transport and Main Roads.
FNQROC	Far North Queensland Regional Organisation of Councils is made up of membership of Councils from Ingham north to Cooktown and west to Carpentaria in Far North Queensland. The organisation fosters cooperation and resource sharing between councils and advocates regional positions and priorities.
GBO	An obligation (a General Biosecurity Obligation) to take all reasonable and practical measures to prevent or minimise the biosecurity risk.
IBPES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (International Body)
NAMAC	Joint Councils Natural Asset Management Advisory Committee made up of FNQROC Councils.
NAQS	Northern Australia Quarantine Strategy developed to provide an early warning system for exotic pest, weed and disease detections across northern Australia and run by DAFF e.g. foot and mouth disease.
NRM	Natural Resource Management.
MSF	MSF Sugar, a major agricultural cane industry representative and stakeholder for the region.
PINs	Penalty Infringement Notices (Fines)
PPMP	Property Pest Management Plan or specific Biosecurity Plan for a property. This lays out the controls and steps the property has in place to address risk and pest issues on property.
QPWS	Queensland Parks and Wildlife Service.
Terrain NRM	Terrain Natural Resource Management - Regional Natural Resource Management organisation working over the Wet Tropics region which takes in the local government areas of Hinchinbrook Shire Council, Cassowary Coast Regional Council, Tablelands Regional Council and Cairns Regional Council.
TOs	Traditional Owners (First Peoples) for the Region: the Djabugay; Yirriganydji; Bulawai, Gimuy Walubara Yidinji; Mandingalbay Yidinji; Gunggandji; Dulabed and Malanbarra Yidinji; Wanyurr Majay; Mamu and NgadjonJii peoples.
WTMA	Wet Tropics Management Authority; The agency established to manage the Wet Tropics of QLD World Heritage Area.
WONS	“Weeds of National Significance” as determined by the Federal Government.
YCA	Yellow Crazy Ant

Introduction

The Cairns Regional Council area extends from Wangetti Beach in the north to Waugh's Pocket in the south. Cairns is fringed by World Heritage rainforests lining the Great Dividing Range and is the largest urban centre in the Wet Tropics Area. Cairns is the largest tourism and commercial hub of the Wet Tropics comprising a wide mix of land uses including urban development, peri urban, agriculture and conservation areas.

The Cairns Region Biosecurity Plan 2025 - 2030 is a guiding document for managing biosecurity which has been formulated by Cairns Regional Council and Far North Queensland Regional Organisation of Councils (FNQROC) with the direct input of the Cairns Region Biosecurity Working Group.

This plan is in line with Council's obligations under the BQ Act and is a major component in meeting its requirements.

Invasive species are considered a leading impactor on biodiversity worldwide, (IPBES, 2023) and have substantial cost impacts on economy, environment, health and social amenity for the region.

Of note, some key messages from the 2023 IPBES report regarding invasive species impacts and their control:

> Impacts from invasive species can be significant. *"Invasive alien species have contributed solely or alongside other drivers to 60 per cent of recorded global extinctions and are the only driver in 16 per cent of the documented global animal and plant extinctions."*
>
> Management is a small proportion of the costs of invasive species. *"The vast majority of global costs (92 per cent) accrue from the negative impacts of invasive alien species on nature's contributions to people or on good quality of life, while only 8 per cent of that sum is related to management expenditures of biological invasions."*
>
> *"Invasive alien species and their negative impacts can be prevented and mitigated through effective management."*

Objectives of this Biosecurity Plan

The Cairns Region Biosecurity Plan provides strategic direction for the management of invasive biosecurity matter and other priority pests on all land tenures within the Cairns Regional Council area and has been developed in consultation with community. The plan has identified species that pose or are likely to pose a significant biosecurity risk to economy, lifestyle and the environment in the Cairns Regional Council area and outlines obligations and expectations associated.

In line with Councils obligations under s53 of the BQ Act, the Cairns Region Biosecurity Plan has provisions for the following:

a) achievable objectives under the plan;
b) strategies, activities and responsibilities for achieving the objectives;
c) strategies to inform the local community about the content of the plan and achievement of its objectives;
d) monitoring implementation of the plan and evaluating its effectiveness;
e) other matters the local government considers appropriate for management of invasive biosecurity matter for its local government area.

Plan Development

This plan development and risk assessment process align with a regional partnership with neighbouring councils and the Natural Assets Management Action Committee (NAMAC) which CRC is a contributing member. The process used is considered the current industry best practice for prioritising pests at a State and Local Government level.

Major changes from prioritisation scoring used in previous years include:

- Further removal of the influence of pest legal designation or WONS status **by itself** as an influence of risk for the Cairns region. Previous Biosecurity Plans were already moving in this direction. There is influence from pest classifications on achievability rather than as a separate consideration of risk, e.g. if a pest is restricted then there are more tools for compliance vs environmental weeds that can only be actioned on risk with limited compliance possible. Also, a range of pests listed under the WONS system are no longer considered to have locally significant impacts.
- Risk impacts were calculated by using highest scored impact rather than cumulative impacts as in previous methods, keeping in line with standard.
- Definitions for measuring achievability and risk are much more defined using more specific examples and as such considered less subjective.
- Standardised scoring across a wider range of Councils and States, using the same process.

The Cairns Biosecurity Working Group

The Cairns Region Biosecurity Working Group (BWG) was originally formed in 1997. The BWG is the local forum established to regularly bring all the relevant stakeholders together to discuss a range of land management priorities in the Cairns Regional Council area.

The primary roles of the Biosecurity Working Group are:

- To identify and confirm the roles and responsibilities of all stakeholders.
- To provide advice to the Cairns Regional Council, Regional and State agencies, organisations and stakeholders of the biosecurity management priorities and requirements of the CRC area.
- Prioritise invasive biosecurity matter and local priority pest species including the development of locally specific obligations to ensure pests are being managed, to a standard that is accepted by the community.
- Ensure all stakeholders formally know, accept and acknowledge their roles and responsibilities in relation to the Biosecurity Plan. Key stakeholders are involved in monitoring, reviewing, and coordinating the implementation of the Biosecurity Plan.
- Align programs and priorities as practical and reasonable for mutual benefit, coordination and efficiencies of programs.
- Ensure that the Biosecurity Plan balances concerns of pest impacts on different land uses and interests, such as rural land impacts against impacts on urban areas, economic drivers and the growing concern for natural resources within the community. Different stakeholders can have wildly different ideas of the most important pest issues in the region.

The current Biosecurity Working Group consists of stakeholders invited from the following groups as well as other interested parties:

- Far North QLD Regional Organisation of Councils (FNQROC)
- Cairns Regional Council (CRC)
- Biosecurity QLD (BQ)

- QLD Department of Primary Industries (DPI) - State
- Department of Agriculture, Fisheries and Forestry (DAFF- NAQS) - Federal
- Wet Tropics Management Authority (WTMA)
- QLD Parks and Wildlife Service (QPWS) - State
- Terrain Natural Resource Management (Terrain NRM)
- Sugar Industry, Canegrowers representatives and agricultural industry representatives
- QLD Department of Transport Main Roads (DTMR) - State
- Ergon Energy
- Regional or Local Landcare/ land management Groups
- Local First Peoples/ Traditional Owner Groups

Legal Requirements

Under the *QLD Biosecurity Act 2014*, Local Governments are responsible for ensuring ***invasive biosecurity matter*** s48 (1) (a-d) for the Local Government's area is being managed in compliance with the *QLD Biosecurity Act 2014*.

Biosecurity Plan Requirements

The *Cairns Region Biosecurity Plan 2025 – 2030* will guide the management of all invasive biosecurity matter and locally declared pests in the Cairns Regional Council area as per section 53 of the Act.

To fulfil these responsibilities, Council is expected to:

a) Control invasive biosecurity matter on land under its control.
b) Inspect private property to determine the presence of invasive biosecurity matter.
c) Provide advice to landholders on appropriate pest control options.
d) Carry out procedures to ensure control of invasive biosecurity matter on private property.

The *Biosecurity Act 2014* provides Authorised Officers a broad range of powers, and tools needed to ensure the level of response is appropriate to the level of biosecurity risk.

The Biosecurity Action Plans at the end of this document define what Council and the community expects of individuals to discharge their **General Biosecurity Obligation (GBO)** regarding the identified priority invasive pests in specific areas.

The General Biosecurity Obligation (GBO)

The General Biosecurity Obligation (GBO) is one of the core principles of the *Biosecurity Act 2014* and represents a major concept under the Act, applying to all individuals and parties.

The General Biosecurity Obligation applies to any business, organisation or person/s who deal with biosecurity matter or a carrier, or carries out an activity, if the 'person' knows or ought reasonably to know that the biosecurity matter, carrier or activity poses, or is likely to pose a biosecurity risk. The person has an obligation (a General Biosecurity Obligation) to take all reasonable and practical measures to prevent or minimise the biosecurity risk. Also, the person has an obligation (General Biosecurity Obligation) to prevent or minimise adverse effects on a biosecurity consideration of the person's dealing with the biosecurity matter or carrier or carrying out the activity; and to minimise the likelihood of causing a biosecurity event, or to limit the consequences of a biosecurity event caused, by dealing with the biosecurity matter or carrier or carrying out the activity; and not to do or omit to do something if the person knows or ought reasonably to know that doing or omitting to do the thing may exacerbate the adverse effects, or potential adverse effects, of the biosecurity matter, carrier or activity on a biosecurity consideration.

What is a general biosecurity obligation and who does it apply to?

The GBO is an overarching obligation that requires all persons who deal with biosecurity matter or a carrier to take all reasonable and practical measures to prevent or minimise the risk. However, the obligation only arises when the person *knows or ought reasonably to know* that the biosecurity matter, carrier or activity poses, or is likely to pose a biosecurity risk.

A person is reasonably expected to know their obligations associated with the identified priority pests when they have an activity in the region in line with the knowledge requirement. Put another way as an example, a person ought to reasonably know and investigate risks associated with managing or activity on land they are operating on.

How is compliance with a GBO used to achieve local pest management outcomes?

The GBO imposes an obligation on all relevant persons – individuals, industry and government to take an active role in preventing, managing and addressing biosecurity risks that relate to their activities. It provides a capacity for flexibility and ensures that the focus is on the management of the biosecurity risk rather than following a prescribed process.

The Cairns Region Biosecurity Plan provides management targets for specific high priority pests. These management targets are outlined in the pest specific Action Plans and have been developed based on priority, knowledge of distribution, feasibility, achievability and the existing and potential impacts on the biosecurity considerations (human health, social impacts, the economy or the environment) in the local area. The management outcomes guide or set the standard for the actions and measures thought to be reasonable and practical by the Cairns community that will help in addressing the biosecurity risk posed by these pests and achieve the identified local management objectives.

How to meet Your General Biosecurity Obligation?

The following tables identify different groups of landowners, managers, or organisations that have a role to play in management of invasive biosecurity matter, (pest plants and animals). To meet your GBO in each of the identified zones or as part of any listed groups, the identified actions are the minimal actions required. Additionally, pest specific obligations for prioritised pests found in the region can be found in the Action Plans in Appendix 6.

Table 1. Primary producer's and community member's expected GBOs

These are general to all pests, additional GBOs for prioritised pests are identified in the Action Plans in Appendix 6.

Sector	Actions	Obligation (GBO)
Primary producers sugar cane/ bananas	• Headland and crop/risk area checks. • Survey for weeds/animals during routine maintenance. • Vehicle/machinery hygiene protocols. • Spot spraying, manual removal, bagging seed heads, use of fire or other control methods to reduce weed infestations and pest animal harbourage. • Property and site-specific signage identifying issue/risk. • Crop rotation and Cover cropping. • Manage off crop weeds on headlands, watercourse and adjacent roadways. • Develop strategic pest plans for managed properties. • Be aware of priority pest species in the region.	• Participate in feral animal control programs. • Reduce declared weeds on your property. • Prevent the spread of declared weeds by focusing on high risk spread areas such as watercourses, roadways and property boundaries. • Provide/maintain access for biosecurity programs. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region. • Appropriately dispose seconds or farm waste products, so as not to attract pest animals.
Primary producers wet/dry grazing	• Boundary/risk area checks. • Survey for weeds/animals during routine maintenance. • Vehicle/ machinery hygiene. • Holding paddocks. • Spot spraying, manual removal, bagging seed heads, use of fire or other control methods to reduce weed infestations and pest animal harbourage. • Property and site-specific signage identifying issue/risk. • Chopper rolling, slashing, boom or aerial spraying. • Develop strategic pest plans for managed properties. • Install pest animal appropriate exclusion fencing. • Be aware of priority pest species in the region.	• Participate in feral animal control programs. • Reduce declared weeds on your property. • Prevent the spread of declared weeds by focusing on high risk spread areas such as watercourses, roadways and property boundaries. • Provide/maintain access for Biosecurity Programs. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region. • Appropriately dispose seconds or farm waste products, so as not to attract pest animals.
Landholders fruit production /horticulture	• Crop/risk area checks. • Survey during routine maintenance. • Ensure equipment leaving or entering your property is clean of contaminants. • Spot spraying, manual removal, bagging seed heads, use of fire or other control methods to reduce weed infestations and pest animal harbourage. • Property and site-specific signage identifying issue/risk. • Ground cover management. • Develop strategic pest plans for managed properties. • Install pest animal appropriate exclusion fencing. • Reduce priority pests on your property.	• Participate in feral animal control programs. • Reduce declared weeds on your property. • Prevent the spread of declared weeds by focusing on high risk spread areas such as watercourses, roadways and property boundaries. • Provide/maintain access for Biosecurity Programs. • Do not dispose of excess crops or material in a manner that encourages pest animal feeding. • Report any newly identified priority pests to Government bodies responsible to support

Sector	Actions	Obligation (GBO)
	• Be aware of priority pest species in the region. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread.	management strategies for the region. • Appropriately dispose seconds or farm waste products, so as not to attract pest animals.
Nursery industry and plant sellers	• Find out weed risk information before new stock lines are introduced. • Spot spraying, manual removal, bagging seed heads, or use other control methods to reduce weed infestations and pest animal harbourage. • Property and site-specific signage identifying issue/risk. • Develop strategic pest plans for managed properties. • Reduce declared weeds on your property. • Be aware of priority pest species in the region. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread.	• Report unusual plants and animals. • Prevent sale of State, Local and problem environmental weeds. • Provide/maintain access for biosecurity programs. • Reduce declared weeds on your property. • Do not dispose of excess crops or material in a manner that encourages pest animal feeding. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region. • Appropriately dispose seconds or farm waste products, so as not to attract pest animals.
Landholders rural residential and lifestyle	• Report unusual plants and animals. • Select locally suitable garden plants. • Participate in local area management activities. • Report recurrence of priority pest and weeds. • Develop strategic pest plans for managed properties. • Install pest animal appropriate exclusion fencing. • Reduce priority weeds on your property. • Be aware of priority pest species in the region. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread.	• Participate in baiting and trapping programs. • Prevent the spread of declared weeds by focusing on high risk spread areas such as watercourses, roadways and property boundaries. • Provide/maintain access for Biosecurity Programs. • Dispose of green waste responsibly. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region.
Landholders urban and residential	• Select locally suitable garden plants. • Cooperate in delivering local management priorities. • Report recurrence of priority pest animals and weeds. • Develop strategic pest plans for managed properties. • Install pest animal appropriate exclusion fencing. • Reduce priority weeds on your property. • Be aware of priority pest species in the region. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread.	• Participate in baiting and trapping programs where practical. • Reduce declared weeds on your property. • Prevent the spread of declared weeds by focusing on high risk spread areas such as watercourses, roadways and property boundaries. • Provide/maintain access for Biosecurity Programs. • Dispose of green waste responsibly • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region.
Developers	• Consult with Council planning requirements.	• Manage soil movement as a potential pest carrier.

Sector	Actions	Obligation (GBO)
	• Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread. • Landscaping plantings avoiding pest species per the FNQROC Development Design Manual for Landscaping including: a) Biosecurity Regulation Schedule 4 Category 3 Restricted Matter: Section 13 Part 1 Invasive Plants. b) Local government's Biosecurity Plans, and c) Publication "Agricultural and Environmental Weeds – Far North Queensland" (Wet Tropics Management Authority, Department of Natural Resources and Mines) OR d) Planting in line with the any current FNQROC standard replacing the above.	• Monitor Tramp Ant related Biosecurity zones effecting movement of soils. • Consult with local pest management bodies regarding appropriate disposal methods or movement considerations. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region.
Forestry	• Crop/risk area checks. • Survey during routine maintenance. • Ensure equipment leaving or entering your property is clean of contaminants. • Spot spraying, manual removal, bagging seed heads, use of fire or other control methods to reduce weed infestations and pest animal harbourage. • Property and site-specific signage identifying issue/risk. • Ground cover management. • Develop strategic pest plans for managed properties. • Install pest animal appropriate exclusion fencing. • Be aware of priority pest species in the region.	• Participate in feral animal control programs. • Prevent the spread of declared weeds by focusing on high risk spread areas such as watercourses, roadways and property boundaries. • Provide/maintain access for Biosecurity Programs. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region.

Table 2. Government departments, asset managers and non-government organisations expected GBO's

These are general to all pests, additional GBOs for prioritised pests are identified in the Action Plans in Appendix 6.

Agencies/NGO's	Actions	Obligation
FNQROC Natural Assets Management Advisory Committee (NAMAC)	• Maintain collaborative partnerships, advocacy and coordination across regional stakeholders. • Undertake regional approaches to planning where relevant.	• Liaise with Local, State and Commonwealth government. • Liaise with research organisations and programs.
Biosecurity Working Group	• Maintain collaborative partnerships, advocacy and coordination across local stakeholders. • Seek internal/external resources. • Participate in risk assessment. • Liaise with research organisations and programs. • Cost and develop long term operational works programmes. • Deploy coordinated early intervention to new outbreaks. • Deliver extension and communication. • Deliver disaster weed spread prevention protocols when required. • Monitor effectiveness of BQ plan.	• Disseminate information to represented groups. • Deploy early intervention to new outbreaks. • Deliver extension and communication. • Deliver disaster weed spread prevention protocols when required. • Report on progress. • Negotiate management programs with road and fire management agencies. • Maintain operational works programs. • Discuss effectiveness of BQ Plan in implementation at regular meetings.
Local Government (Cairns Regional Council)	• Education and awareness. • Risk assessment. • Pest surveillance. • Vehicle/ equipment hygiene. • Visitor/user management. • Data collection. • Monitoring.	• Develop strategic pest plans for managed properties and procedures. • Fire planning & management. • Pest management and treatment in line with pest risk on Council land. • Provide community assistance and education programs to support pest management. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread.
Biosecurity Queensland (DAF)	• Education and awareness. • Risk assessment. • Aerial/ ground surveys. • Vehicle/ equipment hygiene. • Capacity building. • Data collection. • Monitoring. • Legislative advice.	• Invasive biology and management research. • Release and monitor biocontrol. • Conduct control and impact research. • Disposal of waste in a way that does not encourage other pests, seed spread, or pest spread.
Corridor and infrastructure managers (Road and Rail, Power and Communications, Water and Sewage Network)	• Ensure best management practice from operations. • Allocate appropriate resources. • Report any outbreaks immediately • Risk assessment. • Aerial/ ground surveys. • Ensure clean equipment enters clean zones.	• Engage contractors to manage removal targets on managed easements. • Engage with neighbouring landowners in joint management programs. • Allocate sufficient resources to support management activities. • Maintain GIS data for operational and design activities.

Agencies/NGO's	Actions	Obligation
	• Adjust maintenance and design practices. • Allocate resources to prevention activities. • Vehicle/ equipment hygiene. • Signage in high-risk areas.	• Monitoring. • Work with biosecurity staff and contractors to maintain buffer areas.
Queensland Parks & Wildlife & Unallocated State Land Management	• Education and awareness. • Risk assessment. • Aerial/ ground surveys. • Vehicle/ equipment hygiene. • Visitor/user management. • Data collection. • Monitoring.	• Engage with neighbouring landowners in joint management programs. • Maintain GIS data. • Maintain operational works programs. • Fire planning & management. • Release and monitor biocontrol. • Engage with neighbouring landowners in joint management programs.
Natural Resource Management Bodies (e.g. Terrain NRM)	• Education and awareness. • Capacity building. • Distribute information and facilitate the securing of resources for management. • Promote prevention targets and activities across stakeholder networks. • Capacity building integration into management programs.	• Align landscape restoration targets with pest management priorities. • Facilitate education and awareness programs for tourists and recreational users. • Engage with stakeholders. • Liaise with Local, State and Commonwealth government.
Land management focussed Traditional Owner groups, Catchment & Community groups	• Distribute information and facilitate the securing of resources for management. • Participate in on-ground activities • Record and report on local issues and projects. • Actively search to make sure the area is free of target pests. • Ensure clean equipment enters clean zones. • Collaborate with management agencies where possible. • Collaborate with pest management staff on management programs. • Report any newly identified priority pests to Government bodies responsible to support management strategies for the region.	• Align landscape restoration targets with pest management priorities. • Implement on-ground works. • Facilitate education and awareness programs for tourists and recreational users. • Liaise with Local, State and Commonwealth government.

Significant Biosecurity Developments since last Plan

The following notable newly identified infestations/incursions have occurred in the region or neighbouring areas since the last plan (2019):

- Madeira Vine has been identified on Bana Gindarja Creek in Edmonton. The infestation is under active management and early indicators are that it is manageable.
- Rubber Vine has been identified in a single infestation in the northern beaches and eradication in the region is feasible unless new infestation locations are identified.
- An isolated incursion of Gamba Grass has been found along the Bruce Highway near Wright's Creek Gordonvale and quickly removed. The area is under ongoing surveillance.
- Incursions of Basket Asparagus Fern in urban areas have been treated. This is expected to be ongoing and low impact. Infestations are not known to be actively spreading and appear to be historical, older plantings that have not spread. Treatment is underway.
- Rabbits are becoming commonly seen at the base of the Palmerston Range Highway in Cassowary Coast region and are commonly found in Atherton and Yungaburra on the Tablelands. Previous accepted knowledge was that rabbits did not have suitable habitat in the region. This is now strongly in doubt as an explanation why they were not in region yet. Long term, the region is expected to become infested due to current limited effective management techniques available. Rabbits being kept illegally as pets are more commonly being reported and addressed.
- Previous accepted knowledge that Non-Domestic Cats were not a significant problem in the region have turned out to be untrue. Recent research has identified significant populations wherever surveillance has occurred at all altitudes and areas investigated. Populations have been found to be in larger numbers than equivalent areas in other parts of the country. Due to current limited effective management techniques available there is expected to be no change to this infestation level.
- Madras Thorn previously thought to be eradicated in the area, had new individuals from old infestations found and removed. Currently no remaining infestations are known but surveillance is ongoing.

Key Performance Indicators

The following performance indicators are suggested as measures of success for this program or progress against the management issues identified:

- For identified management targets e.g. Asset Protection, Containment, Eradication –
    - Has this been sustained, increased or decreased a level?
    - Has a goal been achieved?
    - Is the pest still within a containment zone identified?
    - Has eradication occurred or is the pest still on a significant downward infestation trend?
    - Has an eradication target seed bank been monitored successfully?
    - Has removal of pest individuals been ahead of the reproduction/ replacement curve? I.e. this is the amount of population that needs to be removed to be making progress against a population of pests, e.g. commonly thought to be 70% for pigs and 40% for deer.
    - Has the asset identified been protected for the duration of the previous plan or program?
    - Have significant new abilities, tools or issues for management of pests been identified that have affected the trend of infestation?
    - Has a biocontrol been introduced?

- Significant new information, research or understanding of a pest issue that is likely to change future efforts e.g. new biology of a pest such as seed bank longevity.
- Have new products or equipment limited or increased the ability to manage pests, e.g. product withdrawn from availability of new application tool available.
- Surveillance efforts, or monitoring has delimited, confirmed no infestation or identified infestations allowing effective management decisions.
- Significant programs or funding has been removed, replaced or introduced to the region to manage pests or the risk.

In consideration, the following has occurred since last plan and should be considered as measures of performance:

- **Pest issues generally considered to be improving:**
  Salvinia infestations have significantly declined across the region due to effective intensive management, (area as well as number of sites).

  Thunbergia has had advances in treatment practices leading to significant cost savings in treatment and significant progress against infestations previously unachievable. Despite these improvements, treatment of this weed still requires high resources in time and cost.

  Amazon Frogbit infestations initially greatly increased spread and impact. Increased management has reduced this back to manageable levels. Increased spread was largely the result of infestations coming down the Barron River. Amazon Frogbit is currently not listed as a pest under the Act but has been locally declared by Council in line with neighbouring Councils and the FNQROC.

  Mexican Bean Tree has had significant progress in the north of Cairns with infestations hitting significant milestones towards eradication in the area. The south of Cairns has also made good progress with no new major discoveries.

  Locally, the Wet Tropics Management Authority manages the Yellow Crazy Ant Eradication Program which aims to eradicate Yellow Crazy Ants from within and adjacent to the Wet Tropics World Heritage Area. In 2024 the Authority declared eradication of 365 hectares. The total area eradicated is currently 455 hectares (June 2024). The Authority anticipates a further 1000 hectares will be declared to be eradicated over the next three years. Outside of region, state-wide progress is dependent on infestations throughout Queensland being brought under control.

  Significant new infestations of Electric Ants have been identified and brought under management. The program continues on target for eradication with significant new funding received and program extended.

  Hygrophila has significantly reduced across the region. Areas once dominated, now have scattered or contained infestations, generally reducing as they are targeted.

  Navua Sedge has had a rust/fungus rapidly spread throughout the greater Far North QLD region infecting and likely reducing the ability of this weed to thrive. This rust was being considered as a candidate for biocontrol by the State Government. The rust was observed to spread throughout Redlynch areas within two weeks of initial identification in the suburb. All current infestations of Navua are expected to become infested in the near future.

- **Pest issues generally not improving:**
  Parthenium management is underway on an isolated sole core infestation. Isolated incursions have been found outside of this area but quickly brought under control. The core infestation has gone from routine management to containment. Eradication has proven impractical despite substantial investment of resources.

  Siam Weed's previous Containment strategy has not worked with infestations spreading beyond previous identified boundaries, being found as far north as Avondale Creek in Smithfield. The current main infestation edge is considered to be south of Gordonvale. The infestation is expected to spread unless significant new effort or tools become available. Biocontrol releases of Gall Fly, which targets this pest, have been made in the region to reduce weediness of Siam.

  Sicklepod has moved from active management, compliance programs and targeted broadscale treatment in the region to Asset Protection only. It is now commonly found throughout the region.

  Giant Rats Tail and American Rats Tail have had significant new infestations found in the Babinda/Russell River region and known infestations have slowly been spreading.

  Tilapia and other pest fish have continued to spread in the region. Tilapia are now found in most major bodies of water.

  Cane Toad numbers have continued to increase across the region from a previous population drop. This lull was thought to be tied to several dry years coinciding with breeding cycles. Numbers are expected to increase back to historical levels ongoing with no broadscale effective management options available. Cane Toads are now considered naturalised. New trap designs and catch methods have become available.

  Slashing continues to be a major disperser of pests, especially grasses and weed seed in the region. Practical measures of clean down and pest hygiene practices between sites or alternatives to slashing continue to be difficult to establish or implement. Good practices implemented, such as working from clean to infested areas and cleaning between locations reduce overall spread of pests, to some success. However, the difficulty of fully cleaning down slashers and other gear in wet field conditions and on continuous runs, remains an issue. Significant effort has been made looking into alternative measures (hard stands, road furniture aprons, alternative cover species, clean down tools and devices), and potential cost savings for alternatives to slashing roadsides, but practical solutions have proved elusive. Education and procedures for weed hygiene are in practice in the region across the range of landholders, agencies, contractors etc. Effort is being made at a FNQROC level developing slashing guidelines, but this is currently considered a long-term goal until some of the practical issues have identified solutions.

- **Mixed outcomes:**
  Hymenachne infestations have significantly declined in the upper sections of the Mulgrave and Russel Rivers. Hymenachne infestations have significantly increased in the north of Cairns from infestations spread in the Barron River Delta. Current management activity focuses on protecting key areas with no catchment wide treatment programs.

  Historic Panama Rubber Tree infestations have been revisited and infestation extent has been delimited. Management will have to address some significantly sized trees within urban

areas. Given the seed bank longevity and limited spread there is good opportunity for eradication in the region.

Limnocharis has had significant new infestations found in previously un-infested regions. Community education programs proved effective, as community identified the sites. Associated eradication programs are ongoing.

Feral Deer numbers at one stage were thought to be down below 20 individuals but recent livestock escapes have increased this feral population substantially to approximately 200 individuals. Isolated individual deer have been recorded in Aloomba and Deeral but currently these have not been confirmed or identified to species. At least six Rusa have been confirmed breeding in the Junction Creek area. Sambar, Fallow, Chital and Red Deer have not been sighted for some time however this is to be confirmed. Commonly sighted individuals are Rusa Deer.

New drone technologies, thermal imaging and machine learning currently holds significant promise in the region for effective surveillance options. Limited application and practical broadscale use have been implemented in the region largely associated with investment or effort required with getting practical implementation, (licencing, initial cost). Various trials and projects are being investigated by a range of stakeholders and the opportunities continue to grow yearly.

New animal poison licensing and supply access has meant that the community has more tools available for pest animal management particularly for Feral Dogs and Feral Pigs in the region. New limitations and conditions of use have been introduced for some existing products and one previously widely available poison has been completely banned. At least one promising new animal poison introduced to market has proven impractical for the Wet Tropics Bioregion. Additionally, as the region continues to develop, areas that were suitable for baiting continue to reduce or become more difficult to implement given distance requirements from infrastructure, dwellings and fence lines.

Recent genetic studies have identified that presumed “Wild Dog” populations or at least hybridised dingoes genetically are likely predominantly Dingoes. Between the two behaviourally, there are differences affecting risks and impacts associated. Community expectations can also significantly vary depending on a Dog or Dingo classification. Detailed research is still required for the region and any associated impacts on management. Effort has been made in the action plan to address this developing issue and expectations.

Leucaena, is a commonly used pasture fodder with many uncontrolled problem infestations in the region. New varieties are being released for agricultural purposes, said to be sterile and targeting better availability in Tropical areas where it traditionally has underperformed. Due to the extent of existing infestations, it has been locally declared targeting strategic new infestations and specifically not targeting those kept both under best practice management and for agricultural use. This is not intended to manage current infestations which are generally considered unmanageable, but to prevent future issues from arising.

Feral Pigs continue to be a substantial pest issue in the region with no significant progress made across the broad landscape. Individual properties have been able to make significant reductions with coordinated efforts and continued programs. A few larger scale trap designs have been investigated or trialled in the region with mixed success. Smaller box style traps are still the recommended design with the best-known success rate, and considering cost/practicality.

Brillantaisia has moved from an Intensive Control management target to a regional focus of Containment. Impact and spread seen in other regions has proven not to be as bad as expected and programs have been adjusted in line with risk.

Compliance and Enforcement Strategy

A general expectation is that failure to comply with obligations related to pest management will result in some form of compliance or enforcement activity.

Where possible and considering the urgency and priority of pest issues, education is considered the preferred first response. Parties must reasonably be given opportunity to discharge their GBO and meet legislative obligations in line with risk and activity. As such the *Pest Notice and Compliance Workflow* is a rough guide for compliance activities and actions expected in the region and can be found in Appendix 3.

Biosecurity Orders

- A biosecurity order is the main enforcement tool that may be given to a person if an authorised officer reasonably believes that a person has failed, or may fail, to discharge their GBO (s373) or other biosecurity obligations.
- A person fails to discharge their GBO if they do not take 'all reasonable and practical measures' to mitigate a biosecurity risk.
- A biosecurity order can direct a person to treat, control, eradicate, destroy or dispose of biosecurity matter or a carrier in a particular way, clean or disinfect something, stop using the place or remove something from the place.
- A biosecurity order must be directed at ensuring the recipient discharges their GBO at the place; and may relate to a specific biosecurity matter. In addition, the biosecurity order may propose stated times or intervals for re-entry to the place, a vehicle or another place, to check compliance with the order; or state how the recipient may show that the stated action has been taken.
- Biosecurity orders can be used to outline and inform people's obligations inclusive of directions under the Act. Biosecurity orders direct persons in line with reasonable and practical obligations given their risk and activity, so this does not increase responsibility for action, only inform of necessary steps to meet existing obligations.

As can be seen in Appendix 3's Pest Notice and Compliance Workflow, the following situations can be expected to receive **biosecurity orders** under the Act:

- Clear immediate or repeated inaction on large pest infestations.
- Serious or significant infestations that require immediate action to prevent the situation becoming worse.
- Repeated inaction for smaller, less serious infestations.
- Directions to landholder clarifying their obligations and expectations for given management situations, such as when components will be supported by Council, but significant works are also expected by landholder.

As an example:

- A large water weed infestation that is a risk to a neighbouring high value environmental area.
- Prohibited pest infestations.
- Pest tree removal on private property when action assisted by Council, (targeted priority projects).

…would be expected to receive biosecurity orders relating to infestations.

Failure to follow a biosecurity orders directions can result in charges to rates, fines or further legal repercussions.

Local Laws

Locally declared pests can currently be actioned under Council's Local Laws or under a Biosecurity Order, (as above).

As can be seen in Appendix 3's Pest Notice and Compliance Workflow, the following situations can be expected to receive Pest Notices under Local Laws:

- Locally declared pests where reasonable and practical action (in line with the GBO) to manage the pest has not been taken.

As an example:

- An Amazon Frogbit infestation in a backyard pond that has not been treated or has been allowed to infest neighbouring areas, post advice given.
- An infestation of unfarmed Leucaena at a previously un-infested location. This is given that Leucaena is already widespread in the region and that local declaration in this circumstance targets reducing spread and poor management practices as a fodder.
- Any infestation of Hiptage found in the region, as a matter of urgency before it can become established.
- Infestations of Panama Rubber Tree, Brillantaisia, or Ceara Rubber Tree where strategically, progress could be made in the region and in line with the GBO. As these pests are fairly well established in the region, and infestations long term, sufficient communication and potential assistance would be a first step expectation before compliance, (if strategic work becomes achievable).

…would be expected to receive **Pest Notices** under Local Laws.

Failure to comply with a Pest Notice will result in the works being done on the person's behalf and result in a charge on their rates.

Penalty Infringement Notices (PINs)

Penalty Infringement Notices, (more commonly known as **Fines**), under the *Biosecurity Act 2014*, are available as a tool to Local Government for enforcement and prevention purposes. These are a relatively new tool under the Act and so far have not received widespread implementation. PINs are included in Council's Pest Notice and Compliance Workflow attached in Appendix 3.

These are targeted for use when immediate action is required to be taken to prevent further issues arising and as a preventative option.

As an example:

- To reduce the spread of infested soil as a carrier by a person or group from Tramp Ant zones e.g. a Plant Operator has moved infested soil offsite and intends to move more.
- To target a backyard breeder of rabbits to discourage similar activities in the region.

Biosecurity Programs

Biosecurity Programs (**Surveillance or Prevention and Control Programs**) have been implemented by the Department of Agriculture and Fisheries and separately, Cairns Regional Council to enable proactive management of weeds and pest animals in the region.

A copy of all Biosecurity Programs active in the region can be obtained on request from those agencies that have implemented them. Copies of CRC Biosecurity Programs are available on the Council website.

The **Cairns Regional Council Surveillance Program** is intended to provide a mechanism for undertaking proactive surveillance to determine the presence or absence of stated biosecurity matter, monitoring compliance with the Act or the effect of measures taken in response to a biosecurity risk, or levels of biosecurity matter in a carrier – within the Cairns Regional Council area.

The **Cairns Regional Council's Prevention and Control Program/s** are aimed at strategically managing, reducing or eradicating a limited number of high priority pests that currently pose a significant risk to the biosecurity considerations in the region.

Biosecurity Matter

Prohibited Matter

Prohibited matter is listed in the Act. This includes a range of invasive plants and animals in the Act that have the potential to have significant impacts and are currently not present or known to be established in Queensland.

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 are expected to reasonably know about the prohibited matter that you may come across as part of your environment, business or hobby.

Reporting prohibited matter

It is an offence to deal with prohibited matter and fail to report its presence. If you become aware of prohibited matter or you believe, or ought reasonably to believe, that something is prohibited matter you need to report it immediately to Biosecurity Queensland. You must also take all reasonable steps to minimise the risks of the prohibited matter and not make the situation worse. If you are unsure or want to report suspected prohibited matter, contact Biosecurity Queensland on 13 25 23.

Restricted Matter

Restricted matter is listed in the Act and includes a range of invasive plants and animals that are present in Queensland. These invasive plants and animals are having significant adverse impacts in Queensland, and it is desirable to manage them and prevent their spread, thereby protecting un-infested parts of the State.

Categories of restricted matter

There are seven categories for restricted matter. Categories are established based on the risks associated with the pests and severity. Each category places restrictions on the dealings with the biosecurity matter or requires actions to be taken to minimise the spread and adverse impact of the biosecurity matter:

- ***Category 1*** Biosecurity Queensland needs to be made aware of this restricted matter to take action to contain and eradicate it. You must report category 1 restricted matter to a Department of Agriculture and Fisheries Inspector within 24 hours of becoming aware of its presence. You may reach an Inspector by contacting Biosecurity Queensland on 13 25 23.
- ***Category 2*** For category 2 restricted matter there are requirements to report this to an inspector or authorised person. You may reach an inspector or authorised person by contacting Biosecurity Queensland on 13 25 23 or Cairns Regional Council on 1300 69 22 47. Restricted matter is listed in Schedule 2 of the *QLD Biosecurity Act 2014.*
- ***Category 3*** restricted matter must not be distributed or disposed. This means it must not be given as a gift, sold, traded or released into the environment unless the distribution or disposal is authorised in a regulation or under a permit.
- ***Category 4*** restricted matter must not be moved. This is to ensure that it does not spread into other areas.
- ***Category 5*** restricted matter must not be possessed or kept under person's control. You may only keep this restricted matter under a permit.
- ***Category 6*** restricted matter must not be fed unless kept under a permit. Feeding for the purpose of preparing for or undertaking a control program is exempted.
- ***Category 7*** must be killed as soon as practicable and disposed of in a way described under legislation. Generally limited to noxious fish.

Multiple categories can apply to any specific biosecurity matter.

Prioritisation of Issues and Watch Lists (Priority Pest Lists)

Given the range of pest issues, prioritisation allows parties efficient resource allocation and to strategically target different pest issues. Prioritized Pest Lists and Watch Lists for the region can be found below. Council, in consultation with stakeholders, followed a nationally recognised process to prioritise the pests.

Appendix 6 includes a list of Action Plans specific to the Prioritized Pest List with specific obligations and localised detail.

In general, species that have scored *high risk* or greater and most *feasible* post risk assessment have been included in the priority lists. A few species have been included in the Action Plans on the basis of community interest but are considered lower priority and this is noted in the list and individual plans.

Species that are not known to be present but considered of higher risk of introduction to the region have been placed in the Alert/Watch lists, (Tables 7 and 8).

Table 3. Scoring Explanation

Theme	Impact Area	Description	Score/ Impact level
Risk	Economic	This relates to how weeds and pest animals directly impact on business enterprises, particularly primary industries, including losses to production and costs of control. It also considers land management costs to governments and utilities.	1= Insignificant 2= Minor 3= Moderate 4= Major 2*= Insufficient knowledge or information
	Social Amenity	This relates to how weeds and pest animals directly impact on people's use of town and peri-urban landscapes for access, recreation, cultural use and aesthetics.	1= Insignificant 2= Minor 3= Moderate 4= Major 2*= Insufficient knowledge or information
	Human Health	This relates to how weeds and pest animals may have direct health and safety impacts on people, including injury and infection risks.	1= Insignificant 2= Minor 3= Moderate 4= Major 2*= Insufficient knowledge or information
	Environmental	This relates to how weeds and pest animal's impact on biodiversity and the health of natural ecosystems.	1= Insignificant 2= Minor 3= Moderate 4= Major 2*= Insufficient knowledge or information
	Invasiveness	Ability to spread.	1= Low 2= Medium 3= High 4= Very High 2*= Insufficient knowledge or information
	Potential Distribution	Proportion of the area that is at risk from the species of suitable habitat.	1= Potential <10% spread 2= Potential 10-30% spread 3= Potential 30-70% spread 4= Potential >70% spread 2*= Insufficient knowledge or information
	Risk Category	Total calculated score of risk converted into a category. Impact * Invasiveness * Potential Distribution = Risk Score.	>23= Very High >15= High >9= Medium <9= Low <5= Negligible
Feasibility	Current Distribution	How widespread the species in in the area. It looks at the overall area that is occupied, plus the pattern of distribution (e.g. widespread, scattered).	0= None 1= Low 2= Moderate 3=High 4= Very High 2*= Insufficient knowledge or information
	Cost of Control	Costs including chemicals, labour and equipment, per hectare.	4= >$3000 3= $1500-$3000 2= $250-1500 1=<$250 2*= Insufficient knowledge or information

Theme	Impact Area	Description	Score/ Impact level
	Effectiveness of Control	Control option availability, effectiveness and likelihood of pest being reintroduced.	1= Very High 2= High 3= Moderate 4= Low 2*= Insufficient knowledge or information
	Feasibility Score	Current Distribution * Control Costs* Control Effectiveness = Feasibility Score.	<5= Very High >5= High >9 =Medium >15 Low >23 Negligible

Definition of Management Targets

Definitions and principles for management targets are adapted from the *FNQROC Pest Management Planning Local Government pest assessment, prioritization and planning framework (2011)* and the *Wild Matters* prioritisation process. For more details check the Reference Section.

For the purposes of management targets (and not including transitional strategies additionally discussed in the framework):

- ***Prevention:*** Prevention is a deliberate action taken to prevent species spreading to predefined areas where they do not currently occur.
- ***Eradication:*** Eradication is a deliberate action taken to remove all individuals of a species including all propagules in the soil seed bank from within a **predefined area.**
- ***Containment:*** Containment is a deliberate action taken to prevent establishment and reproduction of a species beyond or out of a predefined area.
- ***Asset protection:*** Asset protection is a deliberate action taken to reduce the impacts on important assets in a predefined area.

Recommended Management objectives

It is important to note that scores are for regionwide targets and impacts. Locally or within targeted areas more significant inroads can be made against certain pests given different conditions and achievability. This being the case the recommended management objectives stated should be considered a broadscale or minimum target to strive for or as an objective.

Generally when considering management objectives the following should be considered.

For **Prevention**:

This pest is not considered to be present. Education, biosecurity hygiene and other activities targeting prevention are the focus. Any detection needs to be communicated with stakeholders so the appropriate interventions can be taken as early as possible. Detection in the region would change the management target and require reassessment.

Prevention includes strategic actions focusing on detection, reducing potential for infestation or spread, or education.

For **Eradication**:

Eradication strategies focus primarily on disrupting breeding cycles or exhausting seed bank by the removal or destruction of all individuals to achieve a reduction and eventual elimination of the pest over time.

For plants any action taken must keep in mind seed bank longevity, generation of new seed, and a high likelihood in a program's later years, detections few and far between. If a program cannot be sustained with this in mind and achieve depletion of seedbank, population and new infestation sites ongoing, then the likelihood is that eradication is not being achieved.

For eradication targets in the plan, the practical goal is generally removal from the region. To consider:

- Is eradication a reasonable target given the possibility of reinfestation pathways?
- Will eradication focus across the region, systemically in smaller areas or with a target area order e.g. upstream to downstream?
- Long term, how will monitoring of sites, germination periods and seed bank be managed and resourced?
- Can effort and resources be sustained into the future until eradication is likely? Keep in mind, eventually there may be sustained periods without spotting the pest and that attention and practical skills need to be maintained.

For **Containment:**

Containment strategies focus on stopping spread beyond an existing infestation. This is a harm minimisation strategy acknowledging that the pest is unlikely to be removable from an area.

- Is the pest spreading beyond its current infestation?
- What measures can be put in place that are practical and reasonable to keep it in current infestation borders and are sustainable?
- If a pest spreads outside of its previous containment, can that outlier be quickly destroyed or do new containment lines need to be developed? If this process keeps occurring is containment achievable?
- Consider pathways and transport corridors from within infested areas. What are the likely methods of spread from within the infested areas and can they be reasonably managed?

For **Asset Protection:**

Asset Protection is for established pest issues and focus on harm minimisation strategies based on what values or location need to be protected.

- What is the asset to be protected that is being impacted by the pest?
- What action can be taken that is practical and reasonable to protect this asset?
- If there is no asset being impacted or protection cannot be achieved practically or reasonably, can resources be better spent elsewhere?

Table 4. Management Objective Table

RISK	FEASIBILITY OF CONTROL				
	Negligible (>23)	Low (>15)	Medium (>9)	High (>5)	Very high (<5)
Negligible (<5)	No/limited action	No/limited action	No/limited action	No/limited action	No/limited action
Low (>5)	No/limited action	No/limited action?	Asset Protection	Asset Protection	Asset Protection
Medium (>9)	Asset Protection	Asset Protection	Asset Protection	Containment	Containment
High (>15)	Asset Protection	Asset Protection	Containment	Containment	Eradication
Very high (>23)	Asset Protection	Asset Protection	Containment	Eradication	Eradication

Taken from *Wild Matters Risk Prioritization Tool - Biosecurity Planning Tools for Local Government* https://wildmatters.com.au/biosecurity-planning-tools-for-local-government/

Table 5. Priority Pest Plants in the Cairns Region by Management Objective

This only includes pest plants with a '*High'* risk score (or greater) of impacts when the achievability of the management target scored above '*Negligible'*. More complete lists and scoring can be found in Appendix 4.

Overall Management Target	Common Name/s	Scientific Name	Risk Category (Calculated)
Eradicate	Amazon Frogbit	*Hydrocharis laevigata syn. Limnobium laevigatum*	Very High
	Hygrophila, Glush	*Hygrophila costata*	Very High
	Limnocharis, Yellow Sawah Lettuce, Yellow Burrhead*	*Limnocharis flava*	Very High
	Mexican Bean Tree, Cecropia*	*Cecropia spp.*	Very High
	Miconia spp. *excluding crenata**	*Miconia spp.* excluding *M. crenata*	Very High
	Salvinia	*Salvinia molesta*	Very High
	Water Lettuce	*Pistia stratiotes*	High
Containment	Madeira Vine	*Anredera cordifolia*	Very High
	Parthenium Weed	*Parthenium hysterophorus*	Very High
	Brillantaisia, Abwoluku	*Brillantaisia lamium*	High
	Giant Rat's Tail Grass***	*Sporobolus pyramidalis and S. natalensis*	High
	Kudzu Vine; Japanese Arrowroot	*Pueraria montana var. lobata*	High
	Turbina, Christmas Vine	*Turbina corymbosa*	High
	Water Hyacinth (common)	*Pontederia crassipes (prev. Eichhornia crassipes)*	High
	Woodrose, Merremia; Spanish Arborvine	*Distimake tuberosus syn. Merremia tuberosa syn. Ipomoea tuberosa*	High
Asset Protection	Glow Vine; Purple Funnel Vine	*Saritaea magnifica syn. Bignonia magnifica*	Very High
	Grader Grass	*Themeda quadrivalvis*	Very High
	Hymenachne; Olive	*Hymenachne amplexicaulis and hybrids*	Very High
	Navua Sedge	*Cyperus aromatica*	Very High
	Pond Apple	*Annona glabra*	Very High
	Siam Weed	*Chromolaena odorata and C. squalida*	Very High
	Sicklepods	*Senna obtusifolia, S. hirsuta and S. tora*	Very High
	Singapore Daisy	*Sphagneticola trilobata*	Very High
	Thunbergia; Blue (*grandiflora* and *laurifolia*)**	*Thunbergia grandiflora syn laurifolia*	Very High
	American Rats Tail and Other Weedy Sporobolus (Not GRT)***	*Sporobolus jacquemontii and spp.*	High
	Elephant Grass	*Pennisetum purpureum*	High
	Giant Sensitive Plant	*Mimosa diplotricha (prev. invisa)*	High
	Para Grass	*Urochloa mutica*	High

*These pests have significant Federal or State funded programs, providing significant resources towards eradication.

**Thunbergia; Blue (*T. grandiflora and laurifolia*) has a scored feasibility for management of *Negligible* but due to significant community interest, requests and effort providing opportunities for management on this basis, has been included as a priority pest.

***This pest has been combined with other similar pests in the Action Plans as *Rats Tail Grasses*, in mind of significant shared similarities, advice and obligations related. Differences are noted.

- Higher risk species that are not known in the region have been placed in the Priority Pests Watch List Tables 7 and 8. If any new infestations are found, unless they are significant in size and scope to address, these should be treated as eradication targets initially.
- Species that were identified as "medium" risk or below, generally did not have feasibility scores performed, (per process), and were not included in the Priority Tables.
- Any higher risk pest species that scored 'negligible' under feasibility have been removed from the priority list in mind that progress is not likely and for brevity. This includes a range of pests that are already widespread with limited effective controls including Giant Bramble, Guinea Grass and others.
- A more complete list of species considered and scored can be found in Appendix 4. It may be worth considering targeting some highly feasible lower risk pests, if resources allow as project specific targets e.g. grant funded projects.

Table 6. Priority Pest Animals in the Cairns Region by Management Objective
Full scoring of pest animals considered can be found in Appendix 4.

Overall Management Target	Common Name/s	Scientific Name	Risk Category (Calculated)
Eradicate	Dog (feral)	*Canis familiaris*	Very High
	Deer (feral); (Red, Rusa & Fallow)*	*Cervus timorensis prev. Rusa timorensis, C. elaphus, & Dama dama*	Very High
	Deer (feral); (Samba and all hybrids)*	*Rusa unicolor prev. Cervus unicolor*	Very High
	Dingo** (problem individuals)	*Canis familiaris dingo*	High
	Electric Ants***	*Wasmannia auropunctata*	Very High
	Yellow Crazy Ants***	*Anoplolepis gracilipes*	Very High
Containment	Horses (feral)	*Equus caballus*	Medium
Asset Protection	Pig (feral)	*Sus scrofa*	Very High
	Cat; Non-Domestic	*Felis catus*	Very High

* This pest has been combined with other similar pests in the Action Plans as *Deer; Feral*, in mind of significant shared similarities, advice and obligations related. Differences are noted.

**Dingo is included on the basis of its legislated pest status. Specific management related is included in its action plan and is intended to target only problem individuals that represent a safety risk.

***Electric Ants and Yellow Crazy Ants have significant Federal or State funded programs, providing significant resources towards eradication.

- Higher risk species that are not known in the region have been placed in the Priority Pests Alert/ Watch List Table 7.
- Species that were identified as "medium" risk or below, generally did not have feasibility assessments performed, (per process), and were not included.

Table 7. Priority Pests Alert/ Watch List
These pests are not known in the Cairns region currently but are considered high risk for entry. These are in no particular order.

	Common Name/s	Species	Notes
Animals	Red-eared Slider Turtle	*Trachemys scripta elegans*	State-wide concern and cryptic species, (considered very difficult to detect if present).
	Fire Ants	*Solenopsis invicta*	Currently infests large areas of SE QLD.
	Rabbit	*Oryctolagus cuniculus*	No current infestations are known in the region. Adjacent Council areas have known infestations. Sporadic rabbits are found in the region associated with being kept as pets, (not allowed to keep as pets).
	Varroa Mite	*Varroa destructor*	No current infestations of mite are known in the region.
Plants	Fire Weed	*Senecio madagascariensis*	Currently in adjacent Council areas.
	Mikania Vine	*Mikania micrantha*	Historical infestations in adjacent Council areas.
	Koster's Curse	*Miconia crenata (prev. Clidemia hirta)*	Currently in adjacent Council areas.
	Hiptage	*Hiptage benghalensis*	Currently in adjacent Council areas.
	White Ball Acacia	*Acaciella angustissima syn. Acacia angustissima, Acacia boliviana*	Historical infestations in adjacent Council areas.
	Redwood	*Acaciella glauca*	Historical infestations in adjacent Council areas.
	Madras Thorn	*Pithecellobium dulce*	Not currently known in region (historic infestations).
	Aleman Grass	*Echinochloa polystachya*	Not currently known in region (historic infestations 2007).
	Senegalia, Cha-om	*Senegalia pennata and S. rugatta*	Historical infestations in region and currently in adjacent Council areas.
	Cat's Claw Creeper	*Macfadyena unguis-cati*	Not currently known in region (historic infestations).
	Gamba Grass	*Andropogon gayanus*	Recent (2023) isolated infestation found and removed. Currently in adjacent Council areas.

Aquatic Pest Plants Risk

The Aquatic Pest Plants Watch List Table 8 has been separated from the Priority Pests Watch List Table 7 due to the historic and potential risk posed by this class of pest. Amazon Frogbit is an example, as it was commonly sold in aquariums for upwards of twenty years until its escape and establishment. Prevention or early action based on the risk could have avoided this becoming a significant established weed. Ideally this list can be used to identify and action this class of potential new pests before they become a problem.

Challenges associated with aquatic pests such as cross border stream flow, transport across borders from upstream, ease of transport, online sales platforms and common trading mean that many aquatic pests are a magnitude more difficult to treat or manage.

These aquatic pests are currently not found in the Cairns region but are considered high risk for entry (commonly found on online marketplaces), or they are a species sometimes found in the region but not established.

Long term, this list is intended to link to the FNQROC Regional Aquatic Biosecurity Strategy currently in development. This will enable greater program efficiencies correlating works and strategy with neighbouring Councils relating to aquatic pests especially given challenges associated.

Table 8. Aquatic Pest Plants Alert/ Watch List

Common Name/s	Species	
Bog Moss /Weed	*Mayaca fluviatilis*	Not currently known in region.
Alligator Weed	*Alternanthera philoxeroides*	Not currently known in region (historic infestations).
Sagittaria	*Sagittaria platyphylla*	Not currently known in region.
Yellow Flag Iris	*Iris pseudacorus*	Not currently known in region.
American Frogbit, Spongeplant	*Limnobium spongia*	Not currently known in region.
Floating Pennywort	*Hydrocotyle ranunculoides*	Not currently known in region.
Cabomba/ Fanwort	*Cabomba caroliniana*	Historical infestations in region and in adjacent Council areas.
Water Mimosa	*Neptunia oleracea and N. plena*	Historical infestations in region and in adjacent Council areas.
Water Poppy	*Hydrocleys nymphoides*	Historical infestations in region.

Additional Action Plans

The following pests will have informational action plans generated to discuss options for management and have been included only on the basis of community interest and advice related. **These are generally not considered a priority target based on practicality of management**.

Table 9. Informational Action Plans

Overall Management Target	Common Name/s	Scientific Name	Risk Category (Calculated)
Asset Protection	Leucaena*	*Leucaena leucocephala*	Very High
	African Tulip Tree**	*Spathodea campanulata*	High
	Common or Indian Myna***	*Acridotheres tristis*	Negligible

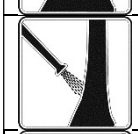
*Leucaena is not currently considered practical to manage as it has a scored feasibility for management of “negligible” but due to significant community queries has been included as management advice.

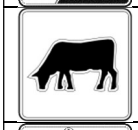
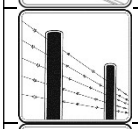
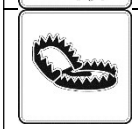
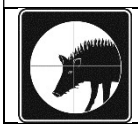
**African Tulip Tree is not currently considered practical to manage as it has a scored feasibility for management of “negligible” but due to significant community queries has been included as management advice.

***Indian Myna is not currently considered practical to manage, has low additional risk and has a scored feasibility for management of “negligible”. It is included in the list solely because of significant community queries and has been included as management advice.

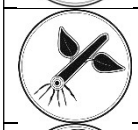
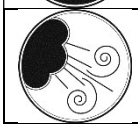
Control Methods and Modes of Spread

The individual Action Plans list the current best practice management strategies for each species represented as the following icons. Action Plans are included as Appendix 6.

Key to control methods		
	**Frill or stem injection**	Herbicide can be applied to woody weeds and trees via cuts or frills made close to the ground around the trunk or stem. This approach is best used when it is ok to leave the dead plant standing.
	**Basal bark**	Herbicide can be applied to woody weeds or vines with a low pressure spray (which usually includes diesel or synthetic oil) to the lower stem. This method is not suited to use near or in water ways.
	**Cut stump**	Many vines, trees and woody weeds can be controlled by applying herbicide to the freshly cut stem. The application is made quickly with a dabber or spray before the plants vascular tissue closes over.

Key to control methods		
	**Chop or grub**	Many weeds can be selectively managed manually by grubbing or chopping. This approach is useful for reducing the competition from weeds while native vegetation or desirable plants re-establish.
	**Drill/stem injection**	Herbicide can be applied as a measured dose into evenly-spaced, downward-facing holes drilled near the base of each stem. Cordless or petrol- powered drills are usually used due to their portability.
	**Best practice grazing**	Carefully managing stocking rates will keep healthy ground-cover which provides competition for many weeds. Grazing can also be used in some situations to knock weeds down prior to control.
	**Hand removal**	Many weeds can be removed manually, particularly when they are at a seedling stage. Hand weeding is very selective and can be used where as little as possible disturbance is required.
	**Foliar spray**	Most weeds can be controlled at various life stages by applying herbicide via a spray. Sprays applicators can be low or high pressure and are suited to covering larger areas or dense infestations.
	**Biocontrol**	The release of carefully selected natural pests or diseases of plants and animals can control them, or to interrupt their reproduction. Biocontrol is most effective when integrated with other control tools.
	**Slashing**	Slashing can often be used to reduce the growth or reproduction of many weeds and is particularly useful before other control actions. Timing is critical to prevent the spread of seeds or fragments.
	**Mechanical removal**	Large scale infestations may require mechanical removal or control. Machinery can also be used to clean up after control activities but will usually require follow-up to control and prevention work.
	**Fire**	A well planned and timed fire can be a very effective management tool which can reduce or stimulate dormant seeds or control living plants. It is most suited to fire adapted vegetation types.
	**Exclusion fencing**	There are a wide range of fencing materials and designs to protect domestic and agricultural assets. Fencing can also be used manage grazing pressure or access to reduce weed or disease spread.
	**Pesticide**	Pesticides are used in certain situations to control anything from ants to wild dogs. There are strict usage and permitting requirements for many pesticides. They can be an effective tool over large areas.
	**Trapping**	Trapping is widely used for feral pigs but can also be used to control wild dogs, non-Domestic Cats and feral deer. Trapping is labour intensive but can very target specific when conducted using best practice tools.
	**Shooting**	Shooting or hunting is sometimes used to control individual animals. It is less usually less effective and even disruptive to other control strategies but is a useful tool to supplement trapping and baiting.

Key to modes spread		
	**Droppings**	Many plants have evolved to use animals to spread seeds by producing a tasty fruit. Seeds are eaten along with the flesh of the fruit and can be dispersed in droppings up to kilometres away.
	**Illegal dumping**	Deliberate or accidental spread of many plants can occur when green waste is not disposed of responsibly. Areas of bushland, creeks and farmland often suffer impacts from dumped garden plants.

Key to modes spread		
	**Machinery and vehicles**	Slashers and earthworks equipment are most commonly blamed, for moving pests, but cars, 4wds, motorcycles, boats and caravans are all capable of moving pest plants and animals great distances.
	**People and animals**	Some plants have seeds adapted to stick to and hitch a ride on passing animals and can move long distances attached to animals fur or peoples clothing.
	**Stock, raw materials & produce**	Raw materials and produce including hay, animal feed, seed mixes and even livestock can contain or carry weed seed or other biosecurity risks like invasive ants, pathogens or diseases.
	**Vegetative**	Many plants can spread from cuttings, stem or root fragments. For some species this is their primary means of reproduction but for others it is in addition to producing seeds or spores.
	**Water**	Many aquatic plants rely entirely on water to spread their seeds. Others have seeds or fragments which can float for long distances and move during regular flows or on flood events.
	**Wind**	Many plants have seeds which are lightweight with attachments to help them glide or float on the air or in the wind. The lightweight seeds can also get caught on vehicles and clothing.

Additional Resources

APVMA Public Chemical Registration Information System Search - portal.apvma.gov.au

Cairns Regional Council Biosecurity Plan 2019-2024

FNQROC - Regional Pest Management Strategy 2010-2015

FNQROC - Weed Spread Prevention Strategy 2008-2010

http://www.fnqroc.qld.gov.au/regional-programs/natural-asset-management.html

Pest Plant and Animal Fact sheets: https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/fact-sheets

Australian Weed Committee: www.environment.gov.au/biodiversity/invasive/weeds

Pestsmart https://pestsmart.org.au/ National Industry Codes of Practice for Pest Animal Management

Feralscan https://www.feralscan.org.au/ National Pest Animal Reporting

Wet Tropics Pest Info https://www.wettropics.gov.au/environmental-weeds

References

DNRM, (2001), *Agricultural and Environmental Weeds – Far North Queensland*" (Wet Tropics Management Authority, Department of Natural Resources and Mines) https://www.wettropics.gov.au/site/user-assets/docs/FNQWeedBook.PDF

FNQROC, (2011), *Far North Queensland Regional Organisation of Councils. Pest Management Planning - Local. Government Pest assessment, prioritisation and planning framework* https://www.fnqroc.qld.gov.au/files/media/original/003/d7a/a59/809/Framework.pdf

FNQROC, (2024), *FNQROC DEVELOPMENT MANUAL DESIGN MANUAL D9 LANDSCAPING* https://www.fnqroc.qld.gov.au/regional-programs/regional-development-manual

IPBES (2023). *Summary for Policymakers of the Thematic Assessment Report on Invasive Alien Species and their Control of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Roy, H. E., Pauchard, A., Stoett, P., Renard Truong, T., Bacher, S., Galil, B. S., Hulme, P. E., Ikeda, T., Sankaran, K. V., McGeoch, M. A., Meyerson, L. A., Nuñez, M. A., Ordonez, A., Rahlao, S. J., Schwindt, E., Seebens, H., Sheppard, A. W., and Vandvik, V. (eds.). IPBES secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.7430692

Wild Matters Risk Prioritization Tool - Biosecurity Planning Tools for Local Government https://wildmatters.com.au/biosecurity-planning-tools-for-local-government/

Appendices

APPENDIX 1. Biosecurity Matter listing

Prohibited and Restricted matter can be found listed in the *QLD Biosecurity Act* Schedules 1 and 2.

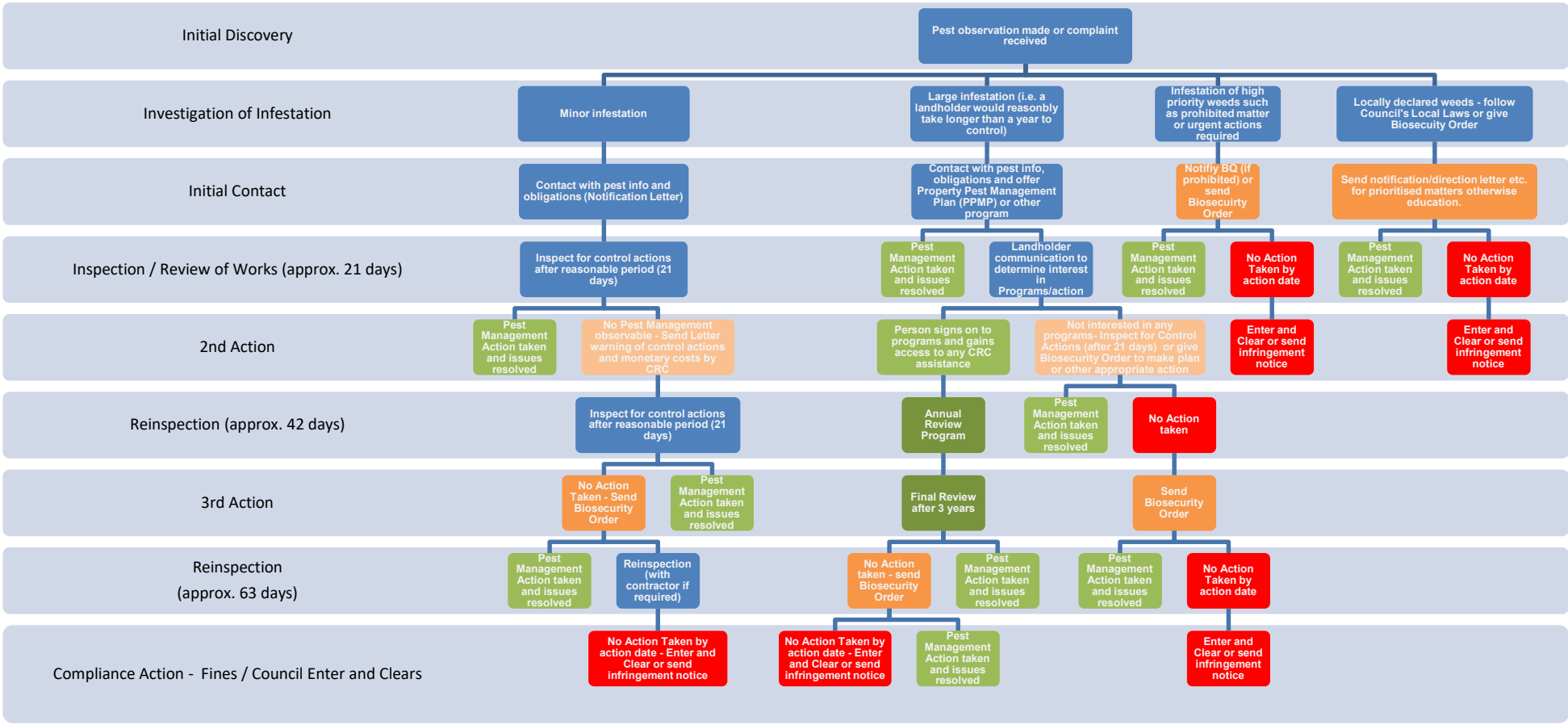
APPENDIX 2. Locally Declared Pests

Pests locally declared under Subordinate Local Law No 3 (Community and Environment). Note this does not identify when these will be actioned, this only gives Council capability to give directions under the Local Laws. See associated Action Plans for more detail.

Hiptage	*Hiptage senagalhensis*
Brillantaisia	*Brillantaisia lamium*
Ceara rubber tree	*Manihot glaziovii*
Panama rubber tree	*Castilla elastica*
Amazon Frogbit	*Limnobium laevigatum*
Water Poppy	*Hydrocleys nymphoides*
Leucaena*	*Leucaena leucocephala*

* Leucaena - except on premises used for Agricultural purposes and managed under a relevant Code of Practice or industry specific best practice management guidelines.

APPENDIX 3. Pest Notice and Compliance Workflow



APPENDIX 4. Pest Priority Scoring

Table 10. Priority Pest Plant Risk Scores in the Cairns Region

Common Name	Scientific Name	Economic	Social Amenity	Human Health	Environmental	Invasiveness	Potential distribution	Risk Score (Calculated)	Current distribution	Cost of control	Effectiveness of Control	Feasibility Score
Mikania Vine	*Mikania micrantha*	4	4	1	4	4	4	64	0	3	3	0
Salvinia	*Salvinia molesta*	2	2	1	4	4	4	64	1	2	2	4
Miconia spp.*	*Miconia spp. excluding crenata*	2	2	1	4	4	4	64	1	4	2	8
Pond Apple	*Annona glabra*	3	2	1	4	4	4	64	3	3	2	18
Sagittaria p.	*Sagittaria platyphylla*	2	2	1	4	3	4	48	0	1	4	0
Amazon Frogbit	*Hydrocharis laevigata syn. Limnobium laevigatum*	2	4	1	3	3	4	48	1	2	2	4
Limnocharis, Yellow Sawah Lettuce, Yellow Burrhead	*Limnocharis flava*	2	2	1	4	4	3	48	1	2	3	6
Hymenachne; Olive	*Hymenachne amplexicaulis* and hybrids	3	2	1	4	4	3	48	3	3	2	18
Siam Weed	*Chromolaena odorata and C. squalida*	3	2	2	3	4	4	48	2	3	3	18
Thunbergia; Blue (*grandiflora and laurifolia*)	*Thunbergia grandiflora syn laurifolia*	2	3	1	4	4	3	48	3	4	2	24
Koster's Curse	*Miconia crenata prev. Clidemia hirta*	2	2	1	3	4	3	36	0	3	3	0
Madeira Vine	*Anredera cordifolia*	2	2	1	3	4	3	36	1	4	3	12
Guinea Grass	*Megathyrsus maximus var. maximus*	2	2	1	3	3	4	36	4	2	3	24
Alligator Weed	*Alternanthera philoxeroides*	2	2	1	3	3	3	27	0	2	2	0
Bog Moss	*Mayaca fluviatilis*	3	2	2	3	3	3	27	0	2	2	0
Hiptage	*Hiptage benghalensis*	2	2	1	3	3	3	27	0	4	3	0
Gamba Grass	*Andropogon gayanus*	2	3	1	3	3	3	27	0	2	2	0
Cabomba/ Fanwort	*Cabomba caroliniana*	2	3	1	3	3	3	27	0	1	3	0
Mexican Bean Tree, Cecropia	*Cecropia spp.*	2	1	1	3	3	3	27	1	4	2	8
Hygrophila, Glush	*Hygrophila costata*	2	2	1	3	3	3	27	2	2	2	8
Parthenium Weed	*Parthenium hysterophorus*	3	2	3	3	3	3	27	1	4	3	12
Singapore Daisy	*Sphagneticola trilobata*	2	2	1	3	3	3	27	4	2	2	16
Grader Grass	*Themeda quadrivalvis*	3	2	1	3	3	3	27	2	3	3	18
Glow Vine; Purple Funnel Vine	*Saritaea magnifica syn. Bignonia magnifica*	1	2	2	3	3	3	27	2	3	3	18
Navua Sedge	*Cyperus aromatica*	3	2	1	3	3	3	27	3	2	3	18
Sicklepods	*Senna obtusifolia, S. hirsuta and S. tora*	3	2	1	2	3	3	27	3	2	3	18
Giant Bramble	*Rubus alceiifolius*	2	2	1	3	3	3	27	3	3	3	27
Harungana	*Harungana madagascariensis*	2	2	1	3	3	3	27	3	4	3	36

Common Name	Scientific Name	Economic	Social Amenity	Human Health	Environmental	Invasiveness	Potential distribution	Risk Score (Calculated)	Current distribution	Cost of control	Effectiveness of Control	Feasibility Score
Leucaena	*Leucaena leucocephala*	2	2	1	3	3	3	27	4	4	3	48
Aleman Grass	*Echinochloa polystachya*	3	3	1	4	2	3	24	0	2	3	0
Fire Weed	*Senecio madagascariensis*	3	2	2	2	3	2	18	0	2	3	0
Floating Pennywort	*Hydrocotyle ranunculoides*	2	2	2	3	3	2	18	0	2	3	0
White Ball Acacia	*Acaciella angustissima syn. Acacia angustissima, Acacia boliviana*	2	2	2	3	3	2	18	0	4	2	0
Yellow Flag Iris	*Iris pseudacorus*	2	2	2	3	3	2	18	0	2	2	0
American Frogbit, Spongeplant	*Limnobium spongia*	2	2	1	3	3	2	18	0	2	2	0
Water Lettuce	*Pistia stratiotes*	2	3	1	3	2	3	18	1	2	2	4
Kudzu Vine	*Pueraria montana var. lobata*	2	2	1	3	2	3	18	2	2	2	8
Water Hyacinth (common)	*Pontederia crassipes (prev. Eichhornia crassipes)*	2	2	1	3	2	3	18	2	2	2	8
Brillantaisia, Abwoluku	*Brillantaisia lamium*	1	2	1	2	3	3	18	2	2	2	8
Woodrose, Merremia; Spanish Arborvine	*Distimake tuberosus syn. Merremia tuberosa syn. Ipomoea tuberosa*	1	2	1	3	2	3	18	1	3	3	9
Turbina, Christmas Vine	*Turbina corymbosa*	1	2	1	3	3	2	18	1	3	3	9
Giant Rat's Tail Grass	*Sporobolus pyramidalis and S. natalensis*	3	2	2	3	2	3	18	1	3	3	9
Para Grass	*Urochloa mutica*	2	2	1	3	3	2	18	4	2	2	16
Elephant Grass	*Pennisetum purpureum*	1	2	1	3	2	3	18	2	3	3	18
American Rats Tail and Other Weedy Sporobolus (Not GRT)	*Sporobolus jacquemontii and spp.*	2	2	1	3	2	3	18	3	2	3	18
Giant Sensitive Plant	*Mimosa diplotricha (prev. invisa)*	2	2	1	2	3	3	18	2	3	3	18
Cucumber Tree	*Parmentiera aculeata and P. Edulis*	1	2	2	3	2	3	18	2	4	3	24
African Tulip Tree	*Spathodea campanulata*	3	3	1	3	2	3	18	3	4	2	24
Dwarf Hygrophila	*Hygrophila polysperma*	1	2	1	2	3	3	18	2	3	4	24
Red Convolvulus, Red Ipomoea	*Ipomoea hederifolia*	1	2	1	2	3	3	18	3	3	3	27
Lantana; Common and Creeping	*Lantana camara and L. montevidensis*	2	2	2	3	2	3	18	3	4	3	36
Shoebutton Ardisia	*Ardisia elliptica syn. solanacea syn. humilis*	1	1	1	3	3	2	18	3	4	3	36
Guava; Yellow	*Psidium guajava*	2	2	1	2	3	3	18	3	4	3	36
Bamboo – Creeping and Clumping	*Phyllostachys spp. and Bambusa spp.*	2	2	1	2	3	3	18	3	4	4	48

Common Name	Scientific Name	Economic	Social Amenity	Human Health	Environmental	Invasiveness	Potential distribution	Risk Score (Calculated)	Current distribution	Cost of control	Effectiveness of Control	Feasibility Score
Dutchman's Pipe (non-native)	*Aristolochia elegans*	1	1	1	3	2	2	12	0			0
Paper Mulberry	*Broussonetia papyrifera*	2	2	3	3	2	2	12	0			0
Water Poppy	*Hydrocleys nymphoides*	1	2	2	3	2	2	12	0		2	0
Ceylon Hill Cherry	*Rhodomyrtus tomentosa*	2	2	1	3	2	2	12	1			0
Madras Thorn	*Pithecellobium dulce*	2	2	2	3	2	2	12	1	4		0
Water Mimosa	*Neptunia oleracea and N. plena*	2	3	2	2	2	2	12	1		1	0
Red Root Floater, Floating Spurge, Apple Duckweed	*Phyllanthus fluitans*	2	2	1	3	2	2	12	1			0
Mile-a-Minute	*Ipomoea cairica*	1	3	1	2	2	2	12				0
Cumbungi	*Typha latifolia*	2	2	2	3	2	2	12		3	3	0
Dense Waterweed	*Egeria densa*	3	2	2	3	2	2	12				0
Fringed Water Lilly, Yellow Floatingheart	*Nymphoides peltata*	2	2	1	3	2	2	12				0
Cat's Claw Creeper	*Macfadyena unguis-cati*	1	2	1	2	2	3	12	0			0
Wandering Jew	*Tradescantia albiflora*	1	2	1	2	2	3	12	1		1	0
Balsam Pear	*Momordica charantia*	1	1	1	2	2	3	12				0
Black-eyed Susan	*Thunbergia alata*	1	1	1	2	2	3	12				0
Calopo	*Calopogonium mucunoides*	2	2	1	2	2	3	12				0
Centro	*Centrosema pubescens*	2	2	1	2	2	3	12				0
Golden Dewdrops/Sky Flower/ Geisha Girl/ Sheena's Gold	*Duranta erecta*	1	1	1	2	2	3	12			3	0
Ivy Gourd	*Coccinia grandis*	2	2	1	2	3	2	12		2	2	0
Kidney-Leaf Mud Plantain	*Heteranthera reniformis*	1	2	2	2	2	3	12				0
Mexican Poppy	*Argemone ochroleuca var. ochroleuca*	2	2	2	2	3	2	12				0
Mother-of-Millions	*Bryophyllum delagoense and x houhgtonii*	2	2	2	2	3	2	12				0
Noogoora Burr	*Xanthium pungens*	2	2	2	2	3	2	12				0
Rubber Vine	*Cryptostegia grandiflora and C. madagascariensis*	2	1	2	3	2	2	12	1	2	2	4
Castor Oil Plant	*Ricinus communis*	2	2	1	2	3	2	12	1	2	2	4
Leaf Cactus	*Pereskia aculeata*	2	2	2	3	2	2	12	1	2	3	6
Basket Asparagus Fern, Ground Asparagus Fern	*Asparagus aethiopicus cv. Sprengeri*	2	2	1	2	2	3	12	1	2	3	6
Alligator Flag Weed (Bent)	*Thalia geniculata*	1	1	1	2	2	3	12	2	2	3	12
Peacock Fern, Willldenow's Spikemoss	*Selaginella willdenovii*	1	1	1	2	2	3	12	2	2	3	12

Common Name	Scientific Name	Economic	Social Amenity	Human Health	Environmental	Invasiveness	Potential distribution	Risk Score (Calculated)	Current distribution	Cost of control	Effectiveness of Control	Feasibility Score
Itch Grass	*Rottboellia cochinchinensis*	1	1	2	2	3	2	12	2	3	3	18
Syngonium, Arrowhead Vine	*Syngonium spp.*	1	2	2	2	2	3	12	3	2	3	18
Coral Berry, Turkey Berry	*Rivina humilis*	1	1	1	2	2	3	12	3	2	3	18
Golden Pothos	*Epipremnum Aureum*	2	2	2	2	2	3	12	3	2	3	18
Thatch Grass	*Hyparrhenia rufa*	1	2	1	2	2	3	12	2	3	4	24
Praxelis	*Praxelis clematidea*	1	1	1	2	2	3	12	2	3	4	24

Note: Feasibility scores were generally not scored if the risk identified was lower than “High” in line with the risk prioritisation process. Pests listed above are only inclusive of those that scored above “Medium” for risk using the methodology defined, (solely for brevity).

Table 11. Priority Pest Animals in the Cairns Region

Common Name	Scientific Name	Economic	Social Amenity	Human Health	Environmental	Invasiveness	Potential distribution	Risk Score (Calculated)	Current distribution	Cost of control	Effectiveness of Control	Feasibility Score
Yellow Crazy Ants	*Anoplolepis gracilipes*	3	3	3	4	4	4	64	2	4	3	24
Electric Ant / Little Fire Ant	*Wasmannia auropunctata*	3	3	3	4	4	4	64	2	4	3	24
Cat; Non-Domestic	*Felis catus*	1	1	2	4	4	4	64	3	4	4	48
Pig (feral)	*Sus scrofa*	3	3	3	3	4	4	48	2	3	3	18
Tilapia	*Oreochromis mossanbicus and Tilapia mariae*	2	3	1	3	4	4	48	2	4	4	32
Cane Toads	*Rhinella marina syn. Bufo marinus*	1	2	2	3	4	4	48	4	4	4	64
Fire Ants	*Solenopsis invicta*	3	3	3	3	4	3	36	0	4	3	0
Asian Green Mussel	*Perna viridis*	3	2	2	3	3	3	27	0	2	2	0
Asian Black Spined Toad	*Duttaphrynus melanosticus*	1	2	2	3	3	3	27	0	2	2	
Dog (feral)	*Canis familiaris*	2	2	2	1	3	4	24	1	2	2	4
Feral Deer (feral); (Red, Rusa & Fallow)	*Cervus timorensis prev. Rusa timorensis, C. elaphus, & Dama dama*	2	2	4	2	2	3	24	1	2	2	4
Feral Deer (Samba and all hybrids)	*Rusa unicolor prev. Cervus unicolor*	1	2	4	2	2	3	24	1	2	2	4
Asian Honeybee	*Apis cerana javana*	4	2	3	3	2	3	24	2	4	4	32
Dingo	*Canis familiaris dingo*	2	2	4	1	1	4	16	1	2	2	4
Chital (Axis) Deer (Feral)	*Axis axis*	1	1	3	2	2	2	12	1			0
Donkey (Feral)	*Equus asinus*	2	2	3	2	2	2	12	0			0
Fall Armyworm	*Spodoptera frugiperda*	3	2	2	2	2	2	12				0
Fallow Deer (feral)	*Dama dama*	1	2	3	2	2	2	12	1			0
House Mouse	*Mus musculus*	1	1	3	2	2	2	12				0
Red-Eared Slider Turtle	*Trachemys scripta elegans*	1	1	2	3	2	2	12	0			0
Sewer Rat, Brown Rat, Norway Rat	*Rattus norvegicus*	2	2	3	2	2	2	12				0
Cattle (feral)	*Bos spp.*	1	1	3	2	2	2	12	1	2	2	4
Red Deer (feral)	*Cervus timorensis*	1	2	3	2	2	2	12	1	2	2	4
Horses (feral)	*Equus caballus*	2	2	3	3	2	2	12	1	3	2	6
Rabbit	*Oryctolagus cuniculus*	1	1	1	2	2	2	8	0	4	3	0
Axolotl	*Ambystoma mexicanum*	1	1	1	2	2	2	8	1			0
Goat (feral)	*Capra hircus*	2	1	2	4	2	1	8	0			0
American Corn Snake	*Pantherophis guttatus*	1	2	1	2	2	2	8	0	2	2	
Black Rat	*Rattus rattus*	2	2	3	2	2	1	6				0

Common Name	Scientific Name	Economic	Social Amenity	Human Health	Environmental	Invasiveness	Potential distribution	Risk Score (Calculated)	Current distribution	Cost of control	Effectiveness of Control	Feasibility Score
Asian House Gecko	*Hemidactylus frenatus*	2	2	2	1	2	1	4	4			0
Ferrets	*Mustela putorius furo*	1	1	2	1	2	1	4	0			0
European Fox (Red)	*Vulpes vulpes*	2	1	3	4	1	1	4	0			0
Common/ Indian Myna	*Acridotheres tristis*	1	2	1	2	1	2	4	2	4	4	32
Sheep (Feral)	*Ovis aries*	2	1	2	1	1	1	2	0			0

Note: Feasibility scores were generally not scored if the risk identified was lower than “High” in line with the risk prioritisation process.

APPENDIX 5. Assumptions Affecting Pest Priority Scoring

These assumptions were considered part of interpreting the existing *Wild Matters Risk Prioritization Process*. Where possible clarity was sought from *Wild Matters*. This effort has been made so that all stakeholders consider and score using the same assumptions.

Health impact

Health impact scoring has been done based on likely health impacts, not potential impacts, giving a frequency/likelihood component to the scoring. For example, a tree can fall on someone killing them, this does not mean that inherently it is at risk of actually doing so. Previous wording in reference and draft documentation for the prioritization process kept this likelihood component. It was unclear why this had been removed as this creates extreme event, unlikely risk assessments.

Cost of Treatment

The per hectare cost of treatment was not reasonable for assessors to make a practical evaluation.

As such a smaller house block size area that assessors could give an estimate of time taken to treat a weed across that area and then used this to set a cost. This was then multiplied up to the hectare.

Council assumes cost of a two-person team is $212 per hour as a standard approximate cost, inclusive of equipment and a flat rate averaged out for materials (herbicide) costs used. This gave treatment cost rates comparable and across the spread of the cost range used in the assessment method.

This method worked well and was broadly acceptable to consulted parties.

Effectiveness of Control

When considering *Effectiveness of Control*, consideration should incorporate the ability to manage the pest overall not just direct actions, (treatment). This includes the legal capacity for management when responsible parties are not meeting GBO, not just the efficacy of treatment. e.g. ability to give a direction for unlisted weeds when the land manager is not actioning is not generally possible if the plant is not declared.

APPENDIX 6. Action Plans

Sorted in the following broad order:

- Plants first then animals,
- Management targets – eradication, containment, asset protection,
- Risk category,
- Alphabetical,
- Last non-priority pests, (advice only).

Special thanks to QLD Government Department of Agriculture and Fisheries who provided significant detail and information used for these Action Plans predominantly taken from its range of Invasive plant and animal publications, (*Pest Fact Sheets*). These are an exceptionally important resource for Council and Land Managers for current and up to date pest information, management practices and treatment methods.

Invasive plant and animal publications | Department of Agriculture and Fisheries, Queensland (daf.qld.gov.au)

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

Amazon Frogbit (*Hydrocharis laevigata syn. Limnobium laevigatum*)

Risk Category	Very High
Recommended Management Objective	Eradicate
Description	A floating or emergent freshwater weed. Leaves are smooth, roughly circular, floating, glossy on top, thick and spongy. Reproduces from seeds and runners resulting in juveniles which form rosettes. As the plant matures leaves are held upright on swollen, fleshy leaf stems. Has a small white flower. Can be mistaken for Water Hyacinth and Kidney Leaf Mud Plantain, (both known in the area), due to superficial similarities.
Distribution	Amazon Frogbit is common in tributaries of the Barron River upstream of Cairns. Infestations downstream in the Cairns region are sporadic but can quickly establish. It is not uncommon to discover new infestations from dumped aquarium material spread. Historic infestations are known in Bellenden Kerr.
Impacts	A large mat of runners and adult plants can develop very quickly resulting in the entire water surface having a thick mat of vegetation. This shades out any submerged plant life and impedes oxygen exchange making the water unsuitable for fish and other animals.
Key Projects	Trials into control tools and techniques have taken place in the Cairns region leading to active management for known infestations. Council has locally declared this as a pest and is actively targeting it for removal from the region.
Background	Originally from Central and South America. Already a significant biosecurity threat in NSW. Has been known to appear for sale on various online marketplaces in the region, creating new infestations. If spotted, complaints can be made direct to the online platform or made known to Council.  Amazon Frogbit is part of a suite of aquatic pests found in the region that are easily spread in natural areas, found in backyard ponds and aquariums, hide in sheltered areas and reestablish post wet season events.
Biosecurity obligations and Local Law requirements	Council has locally declared this plant as a pest. As such, properties can be searched and directions requiring specific action may be given to landowners for this pest. This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act 2014* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan
2025 - 2030

Local Laws apply

Must not propagate

Must not sell or supply

Control

Spread

Eradication; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

Prioritise infestations systematically from top of catchment/waterway down.

Ensure treatments occur in flood prone areas prior to flooding events to prevent spread.

Where chemical treatment is undesirable or impractical, use physical removal methods. Dry out and bag plant before disposal.

Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Make sure any machinery or vehicles moving from infested areas are free from plant material and soil. Monitor and maintain weed free areas.

Avoid moving, distributing, selling, or giving away the pest. If you have an active infestation on your property, you can assist the survey and control team by maintaining property access points and tracks.

Treat as a priority, isolated infestations with a high risk of spread. Manage other accessible infestations to reduce risk of spread to new locations and systematically perform treatment on properties under management.

Contact Cairns Regional Council on 1300 69 22 47, to report any suspect plants beyond known sites or seek advice for treatment. Council may be able to assist as practical and available depending on circumstance.

Consider bunds or similar, to prevent spread on any outflows for impounded water.

Vegetative material or seeds can generate new infestations on banks. Plan treatment and surveillance to include these areas.

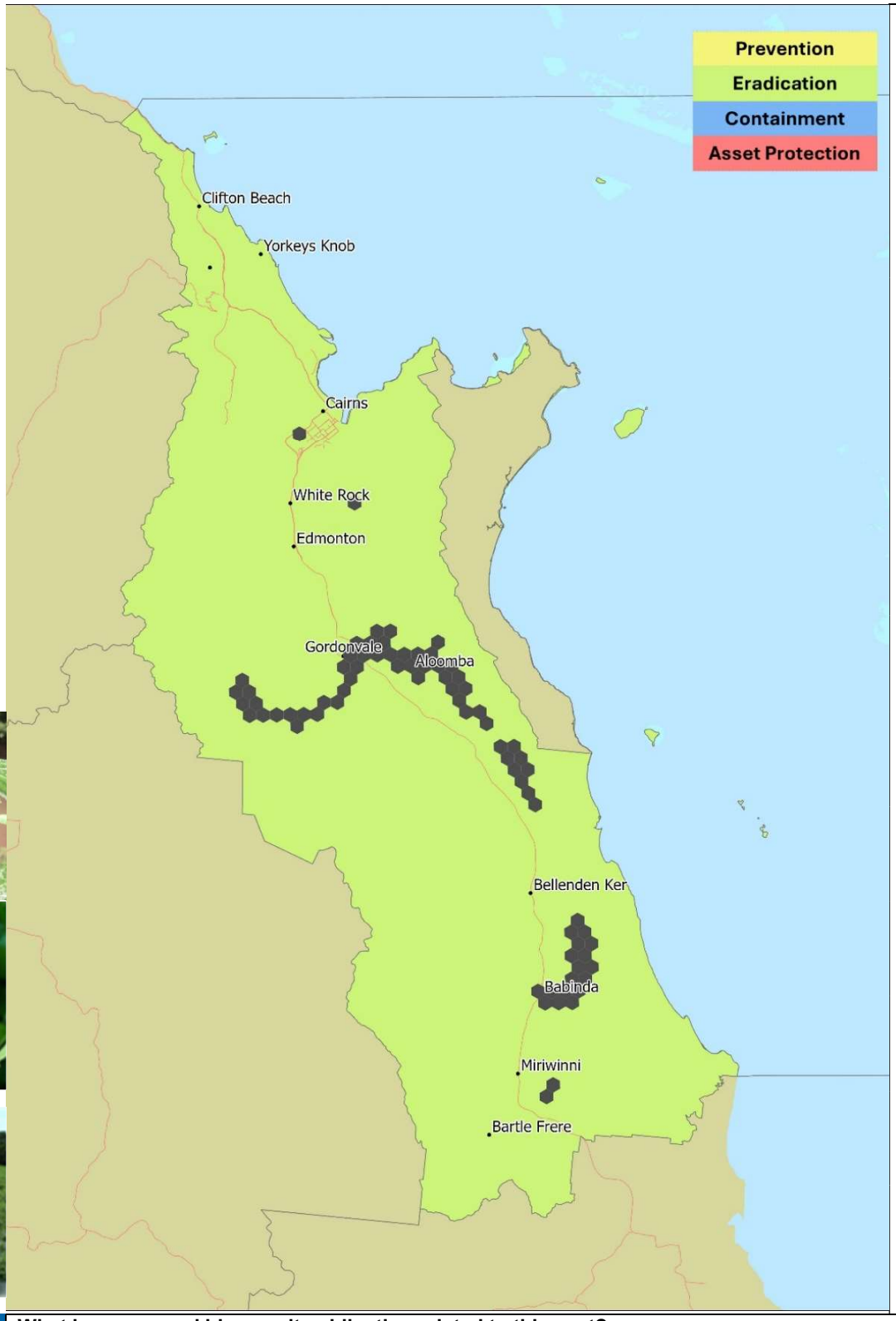
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

Hygrophila, Glush (*Hygrophila costata*)

Risk Category	Very High
Recommended Management Objective	Eradicate
Description	An erect, aquatic herb up to 1m tall. Generally growing in a thick mat on banks and water's edge but also extending over (and under) the water especially in still water. Hygrophila prefers full sun and tends not to grow as well in shaded areas. Small papery white flowers are developed at the junction of the stem and leaf.
Distribution	Widespread and common throughout the lower Russell River and Babinda Creek. Localised occasionally within Earlville, Little Mulgrave, and Mulgrave River.
Impacts	Hygrophila grows in a thick mat which smothers riparian vegetation. It blocks waterways and drainage infrastructure in both natural and artificial water ways. May provide habitat for pest fish species like Tilapia and obstruct movement of native species. Can restrict boating and fishing. Reduces food and habitat for native species and aquatic animals.
Key Projects	Historical efforts combined with local environmental organisations based out of Babinda have worked to reduce the infestations within the Russell River Catchment. As of publication, Council has implemented a Biosecurity Prevention and Control Program inclusive of this pest. Council treats infestations as part of regular works.
Background	Participating in catchment management and water quality projects will assist to promote wider community awareness of the damaging effects of weeds to agricultural land and water ways. Improving water quality and the condition of riparian vegetation will assist in making waterways more resilient to weed impacts into the future. Infestations are currently controlled with herbicide and follow-up surveys to ensure all plant fragments have been treated. On-going treatment efforts are required to continue the reduction of infested sites across the catchments. Monitoring of treated areas after control effort is essential to ensure infestations do not re-establish. Minimize the risk of spread with best practice weed hygiene. Systematic treatments from the top down of each catchment are effective, reducing reinfestation events. Effective management should include treating new incursions as reported and treating existing outlying areas to prevent spread. Council, community, and traditional owner groups have been managing infestations in the Babinda area for over 10 years.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

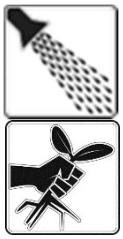
Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control



Spread

Eradicate; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

Prioritise infestations systematically from top of catchment/waterway down. Ensure treatments occur in flood prone areas prior to flooding events to prevent spread. Where chemical treatment is undesirable or impractical, use physical removal methods. Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Make sure any machinery or vehicles moving from infested areas are free from plant material and soil. Monitor and maintain weed free areas. Avoid moving, distributing, selling or giving away the pest. If you have an active infestation on your property, you can assist the survey and control team by maintaining property access points and tracks. Treat as a priority, isolated infestations with a high risk of spread. Manage other accessible infestations to reduce risk of spread to new locations and systematically perform treatment on properties under management. Contact Cairns Regional Council on 1300 69 22 47, to report any suspect plants beyond known sites or seek advice for treatment. Council may be able to assist as practical and available depending on circumstance. Consider bunds or similar to prevent spread on any outflows for impounded water. Vegetative material or seeds can generate new infestations on banks. Plan treatment and surveillance to include these areas.

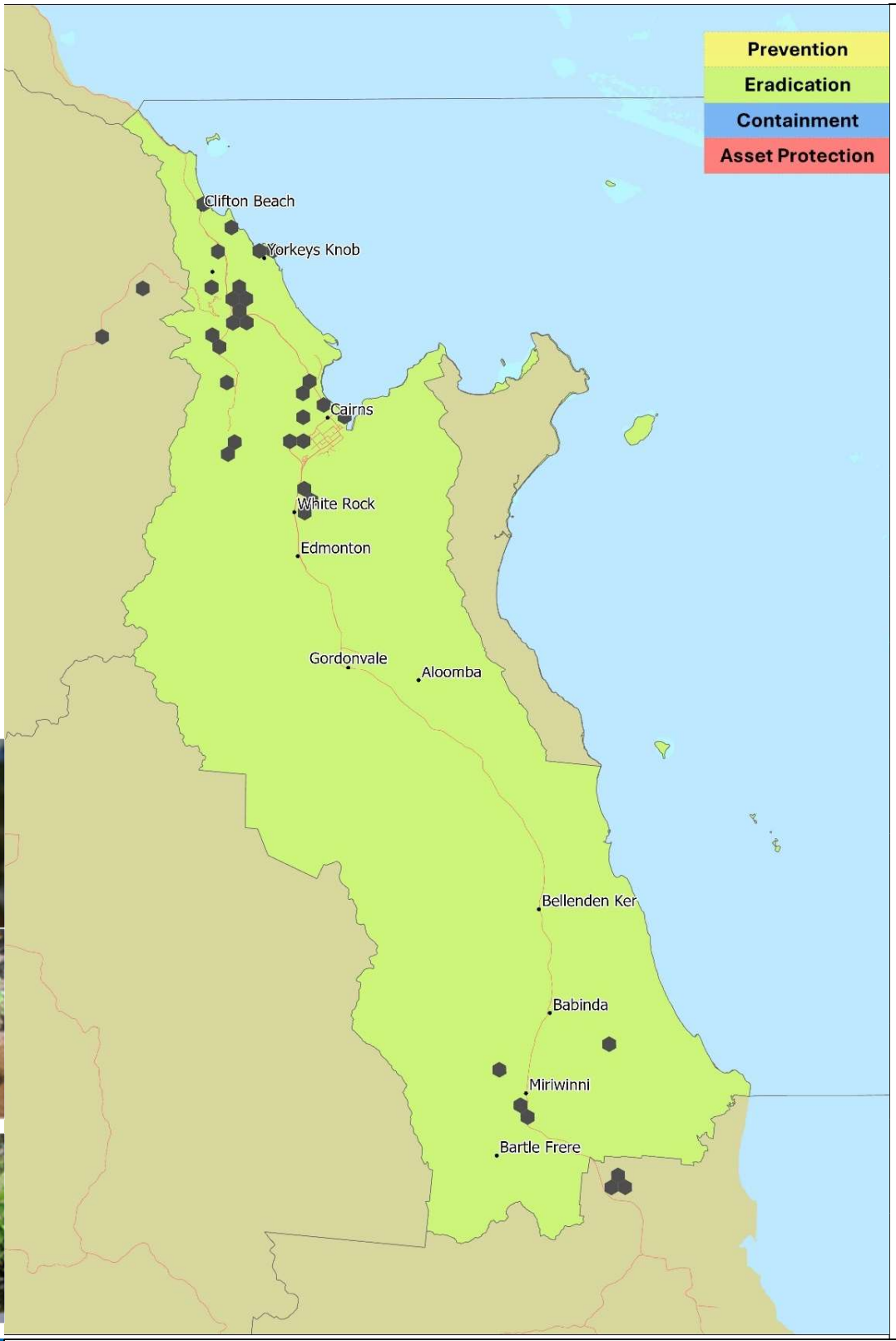
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Limnocharis, Yellow Sawah Lettuce, Yellow Burrhead (*Limnocharis flava*)

Risk Category	Very High
Recommended Management Objective	Eradicate* - Has a state or federally funded eradication program.
Description	Limnocharis is a perennial aquatic weed which can grow to a height of 1 metre. It has pale green leaves and small yellow cup-shaped flowers. Stems of leaves are triangular in cross-section.
Distribution	Limnocharis can occur in natural or artificial water features and wetlands. Known or recent infestations occur in Centenary Lakes, Cairns CBD, Mirriwinni, White Rock, Smithfield, Mulgrave River feeder drains and Redlynch. Historical infestations have also occurred in Manunda, Clifton Beach, Woree, East Russell and Trinity Beach.
Impacts	A major weed in many countries. Limnocharis is a perennial aquatic plant which will colonise shallow wetlands and margins of deeper waterways. It competes with native plants, blocks drains and displaces native flora and fauna.
Key Projects	*All known infestations within the Cairns Region are currently the target of the National cost-shared Tropical Weeds Eradication Program. Landholder assistance to this program is essential to enable ongoing eradication efforts.
Background	Due to its scattered occurrence across the Cairns region it is important to be on the lookout for Limnocharis in natural and artificial water features and wetlands. Regular media campaigns and community displays can assist to identify new infestations. Limnocharis was first discovered in Cairns Regional Council area in 2001. Anecdotal information from the Cairns botanical gardens suggests that it may have been present there since the 1980s. Limnocharis was introduced as an ornamental wetland plant and has escaped from cultivation into drains, creeks and wetlands. Ensuring that aquatic plants are sourced from a weed free source is essential to prevent further spread of invasive aquarium plants. The seed is long-lived and can re-emerge many years after being buried in mud or soil in waterways. The distinctive yellow flowers help distinguish it from native or introduced Water Hyacinth which have purple flowers. The leaf stems are also triangular on cross section. The seed longevity is at least fourteen years with plants reaching reproductive maturity in 58 days. Thus infestations must be monitored every 3-4 weeks to stop all seeding events. Dispersal to new locations has been mainly via cultivation – gardeners and plant collectors. Local movement is via water dispersal of seed or vegetative plantlets. Germination can occur underwater. The seed can remain viable buried in mud and soil for many years so any works in the vicinity of known sites require strict hygiene protocols, contact the eradication team on 13 25 23 for more information or if unsure of the risk.
Obligations related to restricted matter	It is a category 2, 3, 4 and 5 restricted invasive plant under the *QLD Biosecurity Act 2014*. The *QLD Biosecurity Act 2014* requires that all sightings of these plants must be reported to Biosecurity Queensland within 24 hours of being found on 13 25 23. By law, everyone has a general biosecurity obligation (GBO) to take all reasonable and practical steps to minimise the risk of spread of this pest until they receive advice from an authorised officer. It must not be kept, moved, given away, sold, or released into the environment without a permit.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

2 Must be reported

3 Do not distribute

4 Do not move

5 Do not keep

Control

Spread

Eradicate; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
All sightings of infestations are required to be reported within 24 hours to Biosecurity Queensland on 13 25 23. If you have or have had an active infestation on your property you can assist the survey and control team by maintaining property access points and tracks and ensuring you do not move soil or plant material from the infestation area until you have received advice from an authorised officer. For more information refer to the biosecurity programs of the Tropical Weed Eradication Program.

Source any wetland and pond plants from reliable suppliers and from weed free areas. Do not dump wetland, aquarium plants or fish into waterways.

Landholders are required to report suspected infestations immediately to Biosecurity Queensland on 13 25 23. For more information refer to the biosecurity programs of the Tropical Weed Eradication Program.

Do not move soils and plants from infested sites. Ensure machinery and other plant operating in vicinity of the known infestation is operating under strict weed hygiene protocols.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Mexican Bean Tree, Cecropia (*Cecropia spp.)*

Risk Category	Very High
Recommended Management Objective	Eradicate* - Has a state or federally funded eradication program.
Description	A rapidly growing tree to 20m with hollow stems and large deeply lobed leaves with flocked white undersides. The tree has distinctive leaf scars on trunk which are similar to a Paw Paw. Cecropia has separate male and female plants with the female plant producing long finger-like fruiting spikes.
Distribution	Known or recent infestations occur in Clifton Beach, Cairns City and Garradunga which extends into Cassowary Coast Regional Council.
Impacts	Cecropia spp. are rapid growing rainforest pioneers which can invade and dominate rainforests, urban gardens, agricultural land and riparian areas. Cecropia seed profusely and are spread by birds and bats and subsequently can be dispersed long distances into adjoining landscapes and forests.
Key Projects	*All known locations are the target of a regional eradication program led by Biosecurity Queensland. *C. pachystachya, C. palmata* are under monitoring towards eradication as they have not been detected since early 2017. Landholder assistance to this program is essential to enable ongoing eradication efforts.
Background	Seed longevity in Cecropia is short at less than 2 years. This gives great confidence in eradication programs as sites can be considered free quickly. Properties need to be free of Cecropia for a minimum of three years following the removal of last mature female plant to be considered clear. All infestations are believed to have originated from plant collections and subsequently spread and naturalised in the surrounding environment via vectors including birds, bats and water. Dispersal by birds or bats of up to 2km has been observed in Far North Queensland, however data suggests a management area which buffers 1.5km from female plants is suitable. Due to dispersal by birds and flying fox it is important to be on the lookout for Cecropia in gardens, forests and riparian areas. A community education and awareness program is an important part of the eradication program. Managing risk of spread to new areas through hygiene protocols for impacted nurseries and growers play an important role in prevention. Hygiene protocols are also in place for survey and control operations. When searching for Cecropia in the field, programs have learnt to adopt three techniques to maximise detection success, namely; 1) look up into the canopy, searching for the unique leaf shape and the leaves' silvery/white underside; 2) look ahead for the distinctive leaf scars on the stems; and 3) look down for the large, dry, silvery grey leaves on the ground.
Obligations related to restricted matter	All Cecropia species are prohibited invasive plants except *Cecropia pachystachya, C. palamata* and *C. peltata* which are category 2, 3, 4 and 5 restricted invasive plants under the *QLD Biosecurity Act 2014*. The *QLD Biosecurity Act 2014* requires that all sightings of Mexican Bean Tree must be reported to Biosecurity Queensland within 24 hours of the sighting on 13 25 23. Everyone has a general biosecurity obligation (GBO) to take all reasonable and practical steps to minimise the risk of spread of Mexican bean trees until they receive advice from an authorised officer.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Cairns REGIONAL COUNCIL

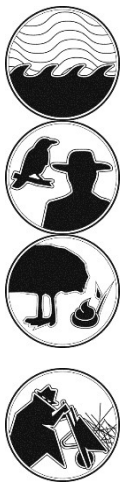
Biosecurity Plan 2025 - 2030

Biosecurity Act Restricted matter category

- 2 Must be reported
- 3 Do not distribute
- 4 Do not move
- 5 Do not keep

Control

Spread



Eradicate; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

All suspected sightings of this plant must be reported to Biosecurity Queensland on 13 25 23 within 24 hours. If you have an active infestation on your property, you can assist the survey and control team by maintaining property access points and tracks and ensuring you do not move soil or plant material from the infestation area. Land managers are required to control all known infestations on their land. As plants take 3 years to reach sexual maturity, land managers are required to survey their part of the management area twice in the first three years following detection and once every 2 years after until deemed eradicated by an Authorised Officer under the *QLD Biosecurity Act 2014*.

It is an offence under the *QLD Biosecurity Act 2014* to sell, distribute or give away Cecropia plants or seeds. If moving to a new property with a history of nursery or fruit tree production, be on the lookout for Cecropia plants.

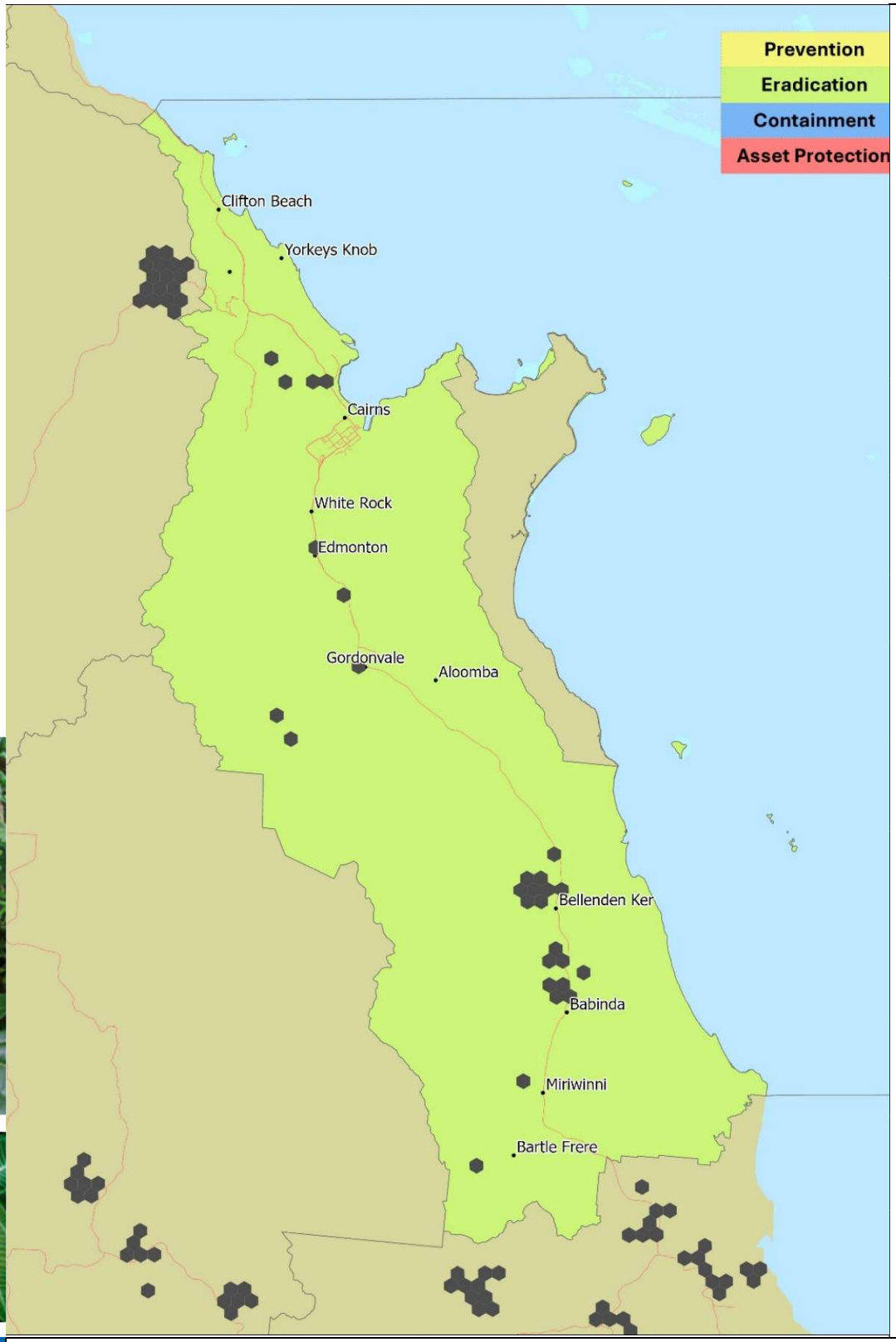
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Miconia (*Miconia calvescens*)

Risk Category	Very High
Recommended Management Objective	Eradicate* - Has a state or federally funded eradication program.
Description	Small tree (up to 15 m) with large leaves up to 70 cm long. The underside of the leaves is a distinct, deep iridescent purple. Produces clusters of small white flowers followed by red/purple berries.
Distribution	Only *Miconia calvescens* infestations are known in the Cairns region. Known or recent infestations occur in Babinda, Deeral, Frenchman's Creek, Harvey Creek, Russell River and Whitfield. Miconia was typically introduced as a garden plant and then spread into neighbouring rainforest and creek lines by birds.
Impacts	Miconia produces hundreds of small berries every year which are attractive to birds and are spread long distances. It forms dense thickets in rainforest understoreys, potentially replacing native plants and affecting wildlife populations.
Key Projects	*Target of the National cost-shared Tropical Weeds Eradication Program led by Biosecurity Queensland. All plants should be reported to Biosecurity Queensland immediately on 13 25 23. Landholder assistance to this program is essential to enable ongoing eradication efforts.
Background	Miconia is a serious weed in Tahiti and Hawaii, where it forms dense thickets in rainforests and displaces native flora and fauna. Miconia was initially brought into Australia via botanic gardens and was sold in some nurseries and markets between 1978 and the mid-1990s. Dispersal to new locations has been mainly via cultivation – gardeners and plant collectors. Fruit eating birds are then the primary mechanism of dispersal into surrounding forests and gardens. A community education and awareness program has been an important part of the eradication program identifying many previously unknown infestations. Managing the risk of spread to new areas through hygiene protocols for impacted nurseries and growers is playing an important role in preventing new infestations establishing. Hygiene protocols are also in place for survey and control operations. *Miconia calvescens* was first discovered in Cairns Regional Council in 1997 at the Flecker Botanical Gardens. Miconia has been detected at 14 locations in the CRC area since 1997. It is the current only known species in the area. A National eradication program is underway and is targeting survey, control and monitoring of all known infestations. Bi-annual surveys are conducted to monitor all known infestations and to ensure no new outbreaks have gone undetected; and that plants do not produce seed. Birds can disperse the small seeds out to many hundreds of metres. The seed of Miconia can remain viable for at least 16 years so it is important to not disturb areas where mature plants have occurred in the past.
Obligations related to restricted matter	The *QLD Biosecurity Act* requires that all sightings of any Miconia species must be reported to Biosecurity Queensland within 24 hours of being found on 13 25 23. It must not be kept, moved, given away, sold, or released into the environment. Everyone has a general biosecurity obligation (GBO) to take all reasonable and practical steps to minimise the risk of spread of Miconia until they receive advice from an authorised officer.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

2 Must be reported

3 Do not distribute

4 Do not move

5 Do not keep

Control

Spread

Eradicate; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
All sightings of infestations are required to be reported within 24 hours to Biosecurity Queensland on 13 25 23. If you have or have had an active infestation on your property you can assist the survey and control team by maintaining property access points and tracks and ensuring you do not move soil or plant material from the infestation area until you have received advice from an authorised officer. For more information refer to the biosecurity programs of the Tropical Weed Eradication Program.

For 16 years post last mature plant at location, do not disturb soil immediate to previous mature plants without good reason, as this can cause germination and new outbreaks. Any such soil disturbance should be discussed with authorised officers and monitoring must be undertaken.

For more information refer to the biosecurity programs of the Tropical Weed Eradication Program.

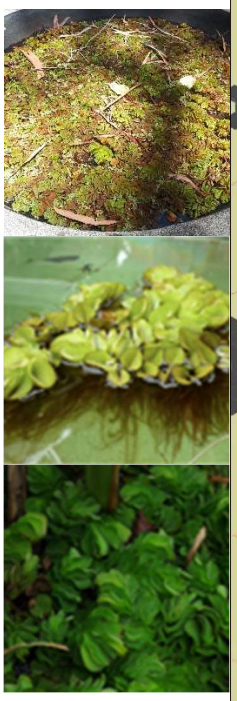
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

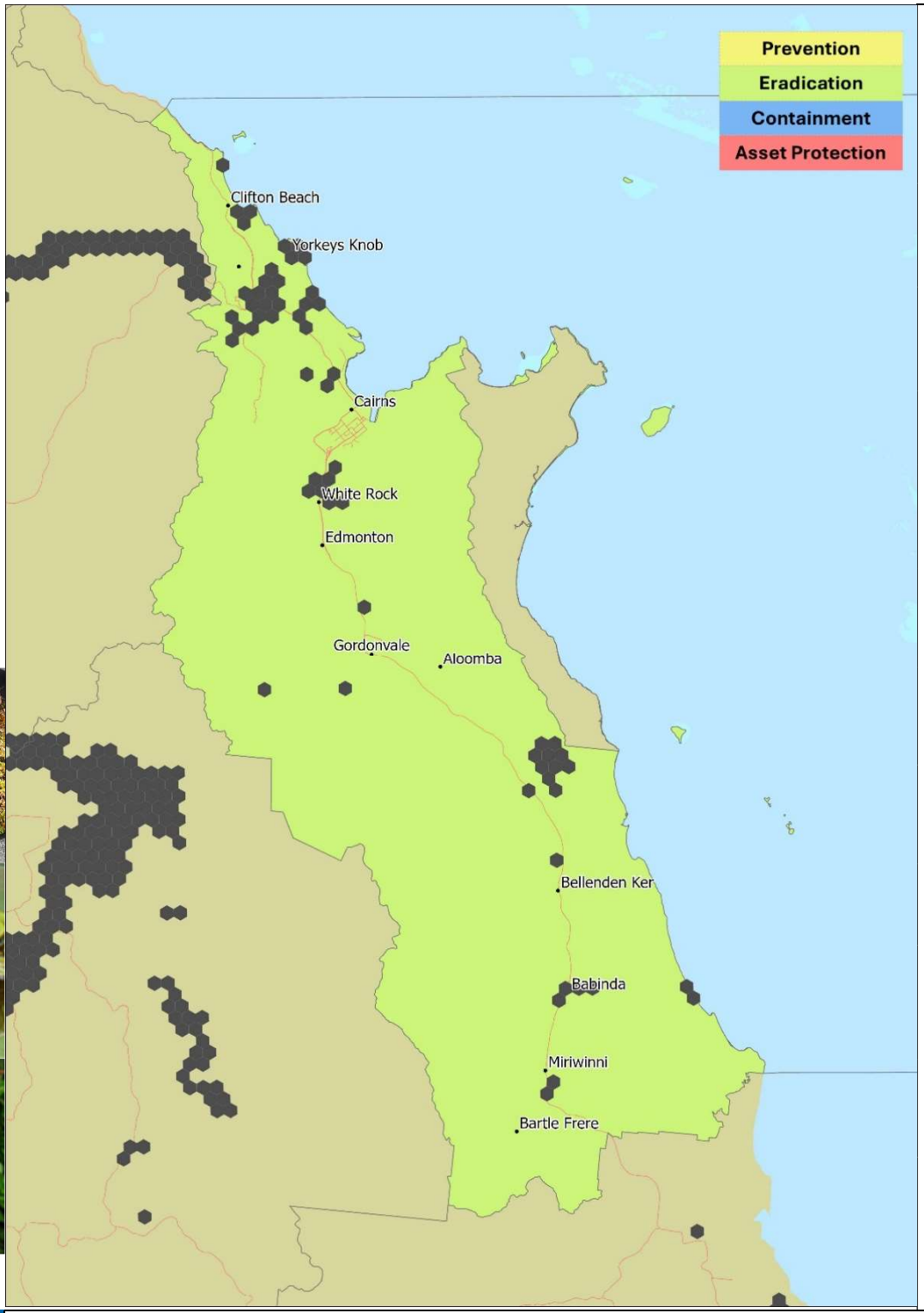
Salvinia (*Salvinia molesta*)

Risk Category	Very High
Recommended Management Objective	Eradicate
Description	A floating fern with small, coarsely hairy oval leaves which repel water. As the plant matures it turns from bright green to brown and bunches up into tight rafts. Reproduces by rapidly dividing into smaller plants.
Distribution	Common and localised within several Cairns northern suburbs. Southern infestations include Edmonton, Mulgrave River, Fishery Falls, Babinda and Bramston Beach. Salvinia occurs in the Barron to Lake Tinaroo, so re-infestation is always likely from upstream sources.
Impacts	An aquatic weed that can choke waterways. It floats on still or slow-moving water and can rapidly spread to cover the entire water surface with a thick mat of vegetation. This shades out any submerged plant life and impedes oxygen exchange, making the water unsuitable for fish and other aquatic animals.
Key Projects	As of publication, Council has implemented a Biosecurity Prevention and Control Program for this pest and actively treats known infestations. It has successfully been removed from several significant ponds and waterbodies, but reintroduction has been an issue. This is dependent on significant effort and discipline revisiting site regularly.
Background	Salvinia is most likely to be introduced as a contaminant of wetland plants sourced from infested locations or aquariums. It may also spread on floodwaters from known locations. Targeted control of key environmental and visitor assets and ongoing release of Salvinia weevil biocontrol agent are the primary means to reduce the impacts of Salvinia. The Salvinia Weevil biocontrol agent is an effective management tool in dense infestations. The weevils are seasonal, often slowing down in the winter months then re-emerging when warmer weather arrives. The weevil may reduce the density and cover of an infestation but will not remove it completely. In doing so they assist in keeping infestations at a manageable threshold.
Obligations related to restricted matter	*Salvinia molesta* is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. All other salvinia species are prohibited invasive plants under the *QLD Biosecurity Act 2014* and requires that all sightings be reported to Biosecurity Queensland within 24 hours on 13 25 23.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030





Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Eradicate; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Prioritise infestations systematically from top of catchment/waterway down. Ensure treatments occur in flood prone areas prior to flooding events to prevent spread. Where chemical treatment is undesirable or impractical, use physical removal methods.

Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Make sure any machinery or vehicles moving from infested areas are free from plant material and soil. Monitor and maintain weed free areas.

Avoid moving, distributing, selling or giving away the pest. If you have an active infestation on your property, you can assist the survey and control team by maintaining property access points and tracks. As a priority treat isolated infestations with a high risk of spread. Manage other accessible infestations to reduce risk of spread to new locations and systematically perform treatment on properties under management. Contact Cairns Regional Council on 1300 69 22 47, to report any suspect plants beyond known sites or seek advice for treatment. Council may be able to assist when practical and available, depending on circumstance. Consider bunds or similar, to prevent spread on any outflows for impounded water. Vegetative material can generate new infestations on banks. Plan treatment and surveillance to include these areas. Keep an eye out in weed free areas. Promote land maintenance and active inspections in those areas. Do not introduce Salvinia to ornamental ponds or water features.

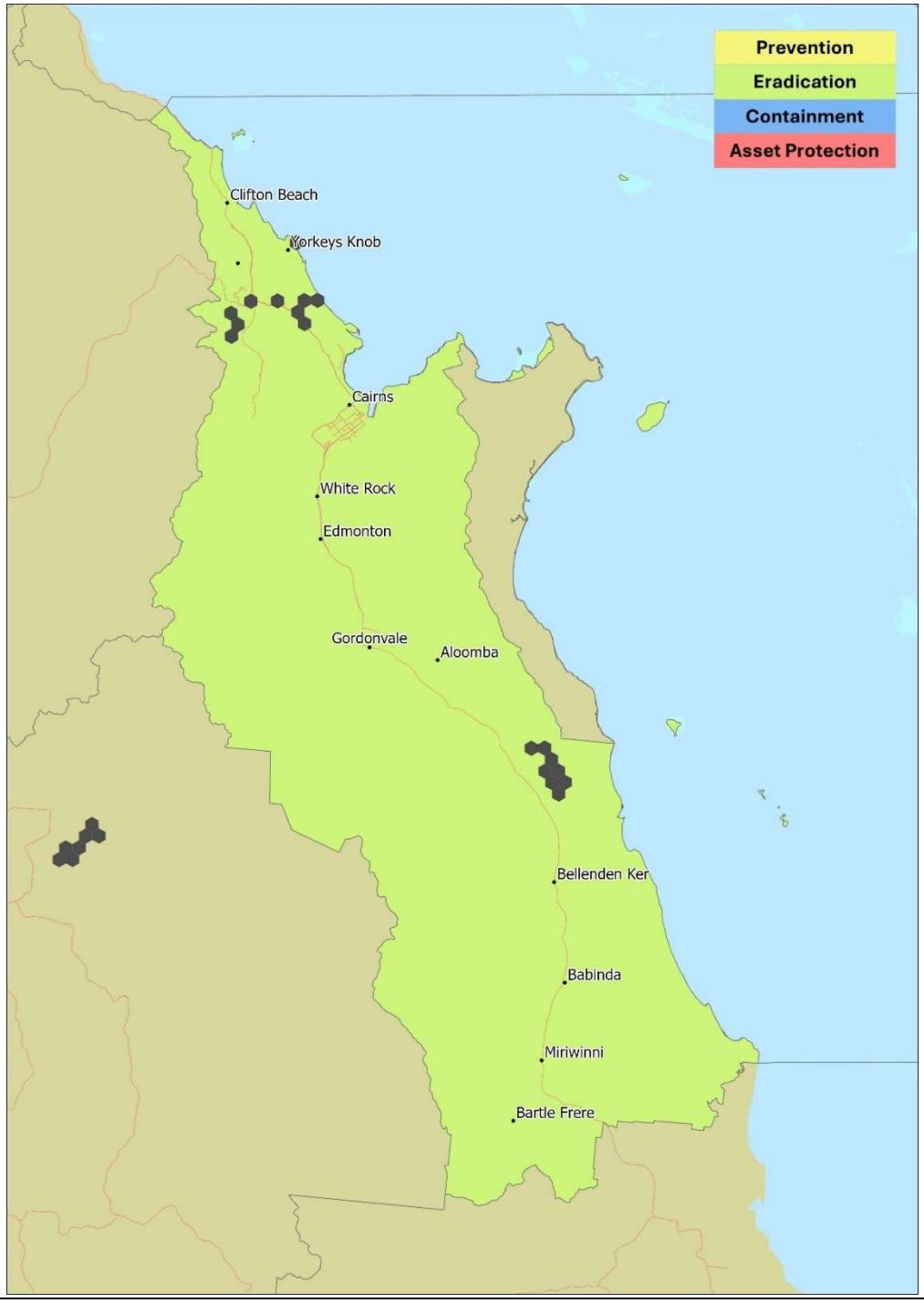
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Water Lettuce (*Pistia stratiotes*)

Risk Category	High
Recommended Management Objective	Eradicate
Description	A free floating, aquatic weed which resembles an open head of lettuce. Leaves are spongy, light green and water repellent. Water lettuce produces Small green flowers and reproduces from seeds or division. It can form dense mats on the surface of slow-moving water, often in conjunction with other water weeds.
Distribution	Isolated and occasional infestations occur in slow moving water bodies with high nutrients including the lower Mulgrave River lagoons, Holloways Beach, Yorkeys Knob and Smithfield. Water lettuce may also be present in artificial water bodies, water features, ponds and aquariums.
Impacts	It floats on still or slow-moving water and can rapidly spread to cover the entire water surface with a thick mat of vegetation. This shades out any submerged plant life and impedes oxygen exchange making the water unsuitable for fish and other aquatic animals. Provides breeding opportunities for mosquitoes.
Key Projects	As of publication, Council has implemented a Biosecurity Prevention and Control Program for this pest and actively treats known infestations. Significant progress has been made against this pest towards removal from the region.
Background	Water Lettuce is most likely to be introduced via aquariums or water features. The plant could potentially be spread as a contaminant in water plants sourced from infested areas. Ensuring that sources of water plants like water lily are weed free and do not contain water lettuce or other water weeds is the most effective way to prevent accidental introductions. Carefully disposing of aquarium or water feature plants and fish will prevent them making their way into man-made or natural waterways. Water Lettuce has a limited distribution in the Wet Tropics so maintaining weed free areas by preventing spread to new locations is the most effective strategy for reducing the impact on waterways and wetlands. There are a range of native alternatives for ornamental ponds and aquarium which don't carry the same weed risk or potential penalties. Most infestations in the Cairns region are currently small in size and restricted to slow moving water bodies or ornamental ponds. By continuing to control known infestations and treating or removing new incursions when they are reported the wetlands and drainage infrastructure of the floodplain will be protected.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Eradicate; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Prioritise infestations systematically from top of catchment/waterway down.

Ensure treatments occur in flood prone areas prior to flooding events to prevent spread.

Where chemical treatment is undesirable or impractical, use physical removal methods.

Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Make sure any machinery or vehicles moving from infested areas are free from plant material and soil.

Monitor and maintain weed free areas. Avoid moving, distributing, selling or giving away the pest.

If you have an active infestation on your property, you can assist the survey and control team by maintaining property access points and tracks.

Treat as a priority, isolated infestations with a high risk of spread. Manage other accessible infestations to reduce risk of spread to new locations and systematically perform treatment on properties under management.

Contact Cairns Regional Council on 1300 69 22 47, to report any suspect plants beyond known sites or seek advice for treatment. Council may be able to assist as practical and available depending on circumstance.

Consider bunds or similar, to prevent spread on any outflows for impounded water.

Vegetative material or seeds can generate new infestations on banks. Plan treatment and surveillance to include these areas.

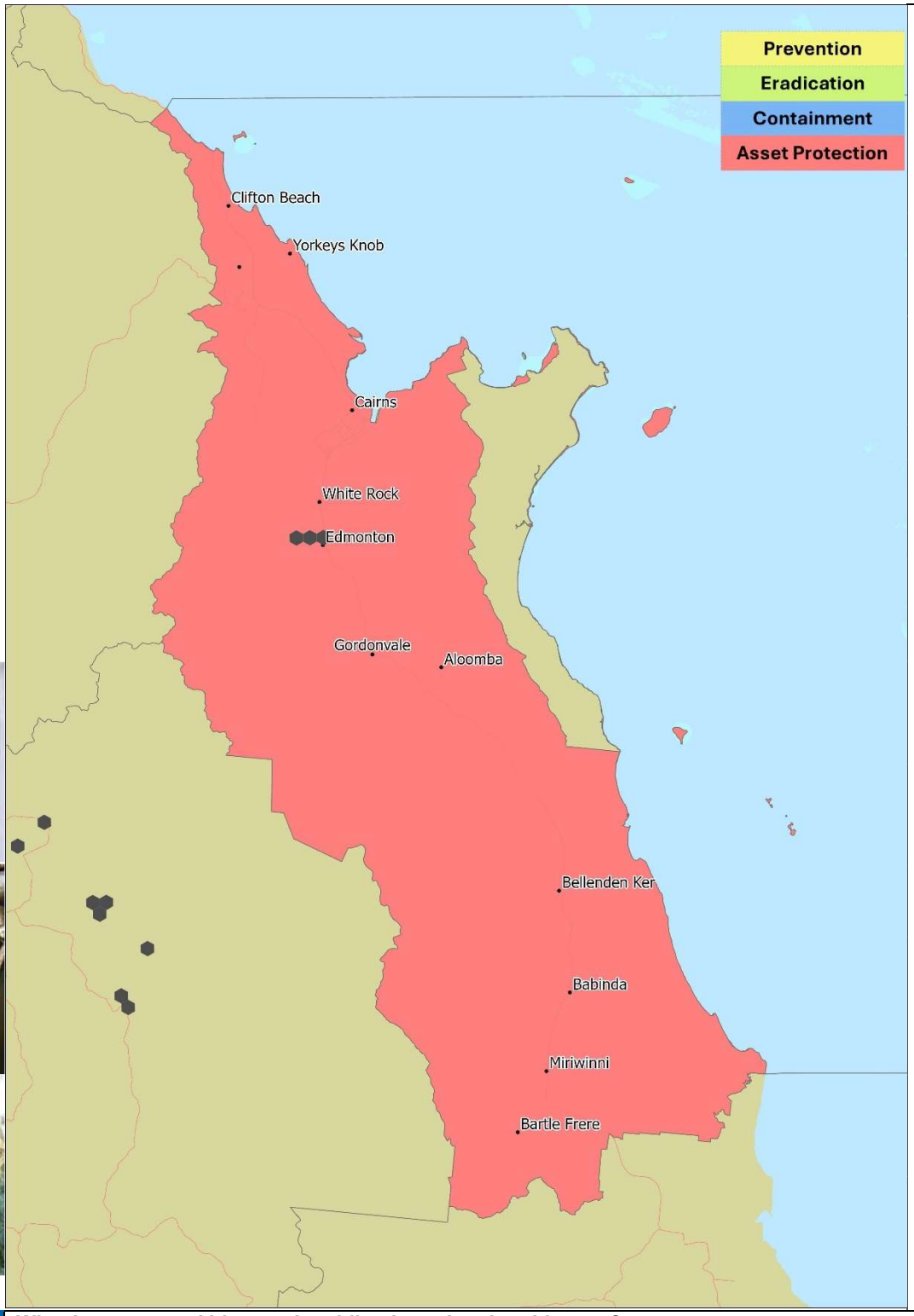
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Madeira Vine (*Anredera cordifolia*)

Risk Category	Very High
Recommended Management Objective	Containment
Description	A rapidly spreading vine which forms clusters of warty, light brown aerial tubers produced along the length of the stem and readily fall when disturbed. Madeira Vine has thick, waxy, green, heart-shaped leaves about 4–5cm in length. Underground tubers up to 20cm diameter can grow at depths of up to 1m. Cream coloured flower spikes are produced from December to April. Madeira Vine has similar features to a number of other introduced common edible vines species in the region. Consult with an expert if uncertain.
Distribution	Usually found in association with ornamental gardens but sometimes found in food gardens. The only current known infestation in the Cairns region is in the riparian zone of Bana Gindarja Creek, Edmonton.
Impacts	A fast-growing vine which has the potential to encroach into thick rainforest and riparian zones, smothering native vegetation. Considered a transformer species replacing native vegetation with potential to drastically change ecosystem types. It can grow up to 1m/week and causes canopy collapse of mature native trees. Madeira Vine produces large numbers of subterranean and aerial reproductive tubers that persist and make effective management difficult. This is demonstrated by treated tubers still sprouting after 2 years of intensive spraying. Madeira Vine is known to be toxic to dogs.
Key Projects	As of time of publication, Council has implemented a Biosecurity Prevention and Control Program for this pest and actively treats known infestations. Council has recently contributed to National case studies towards the further development of best practice management strategies and guidelines.
Background	Madeira Vine is a Weed of National Significance (WONS). Originating from South America. Successful management of Madeira Vine requires exhaustion of the tuber bank. Tubers can remain viable for up to 2 years and are easily spread through poor green waste management, gravity and water movement. Management needs to be carefully considered and include a commitment to regular, long -term follow-up control. The disturbance caused by control work stimulates particularly vigorous vine growth and, if management isn't carried out appropriately, may lead to a greater problem. If disturbing aerial vines, consider capturing falling tubers by putting out tarps or similar, to prevent further spread.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** If you have an active infestation on your property, maintain property access and tracks, and do not move soil or plant material from the infestation area. Ensure machinery and vehicles moving from infested areas are free from plant material and soil. Madeira Vine and its tubers have a high chance of establishing new infestations if not disposed appropriately. Work strategically, protecting the better-quality native vegetation first. Control isolated plants and sparse populations, prioritising isolated infestations on high ground or at the top of catchments. Where practical treat parent plants first and then propagules/seedlings as they appear. Consider revegetation of open areas post treatment (without canopy cover), as a practical means to reduce reinfestation. When trees are being strangled, identify trees worth saving (likely to survive) and treat with that in mind. Trees unlikely to survive post vine removal or already dead need to be managed with that in mind. Will they fall or is it worth foliar spraying pest vines instead of alternative means? Given the similarity to other introduced vines in the region with comparable features, ensure that backyard vines are not Madeira. Contact Cairns Regional Council on 1300 69 22 47 if you are uncertain of identification of vines with similar characteristics or to report any suspected outbreaks or detections. Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Parthenium Weed (*Parthenium hysterophorus*)

Risk Category	Very High
Recommended Management Objective	Containment
Description	Parthenium Weed is an annual herb with a deep tap root and an erect stem that becomes woody with age. As it matures, the plant develops many branches in its top half and may eventually reach a height of two metres. Parthenium Weed forms small dense clusters of white flowers on the tips of numerous stems.
Distribution	Known only from a single, isolated infestation in Edmonton. Individual plants have been sporadically found along Bruce Highway and other locations but thought to be eradicated.
Impacts	Parthenium is a weed of crops and grasslands causing loss of crop and pasture production. Parthenium Weed also causes severe allergic reactions including hay fever and dermatitis in susceptible people.
Key Projects	The edges of all known infestations are surveyed regularly to monitor for any seedlings or flowering plants to reduce possible spread. Eradication has been attempted in the region given the limited spread but has been deemed to be unachievable with current tools and monitoring required. Any eradication program needs to establish monitoring and treatment ahead of germination for the life of the seed bank, (6 years minimum).
Background	Parthenium Weed is often spread as a contaminant in stock and poultry feed. Keep a close watch on areas where feed has been spread. Ensure that the supplier you source from can confirm the product is free from weed seed and not from a known infested area. Ensure imported vehicles and machinery are free from weed seed and soil. Spell any stock in a holding paddock for at least 7 days to allow seed to pass through the gut or fall from the fur of livestock. Hygiene for roadside management operators and wider community will assist to reduce the risk. Public awareness targeted to areas surrounding infestations because it most likely is not familiar to many Cairns residents. Parthenium Weed can develop a large and persistent soil seedbank. It's fast germination rate and ability to undergo dormancy make it well adapted to semi-arid and drier environments. It also releases chemicals that inhibit the germination and growth of pasture grasses and other plants. Parthenium Weed can germinate, grow and set seed within four weeks so close monitoring of known locations is critical in preventing more seed being added to the seedbank. Parthenium Weed prefers alkaline soils but will tolerate a wide range of soil types. It does not usually do well in established, healthy pastures and cannot compete with undisturbed vegetation. Maintaining healthy pastures and ground cover will reduce the risk of establishment.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030

Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

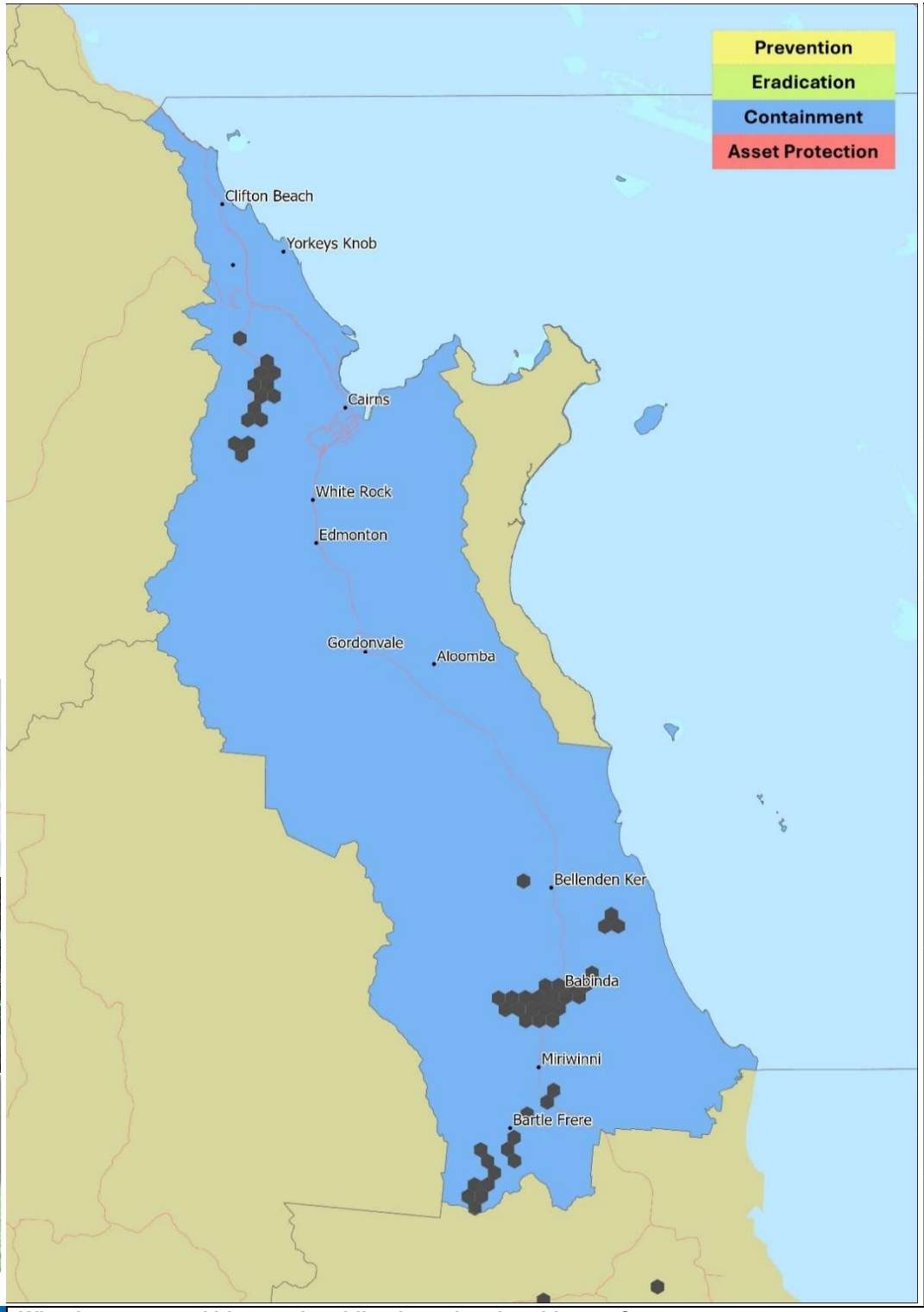
Containment; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Report any suspected outbreaks or detections to Cairns Regional Council on 1300 69 22 47. For infested areas, define the area that is most densely infested and consider this the core of infestation. This could be a densely infested paddock/s or section of creek or area in your backyard. Place a buffer on this core area and make effort to reduce infestation around this core. Work out potential methods of spread from infested areas and the edges of infestation and put preventative measures in place. Treat areas likely to spread infestations as a high priority and isolated patches outside of core areas. Spell any outgoing stock in a holding paddock for at least 7 days to allow seed to pass or fall from animal's coats. Holding paddocks need to be kept clear of pests. Parthenium is easily spread on boots and machinery so special care must be taken to clean down before leaving infested areas. It is reasonable to have a hose ready. Make sure any machinery or vehicles moving from the infested areas are free from plant material and soil. Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. When working in infested areas work from clean areas to dirty to reduce the chance of seed spread. Herbicide treatment is preferred to manual removal as this reduces the chance of seed spread via contamination. Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Brillantaisia, Abwoluku (*Brillantaisia lamium*)

Risk Category	High
Recommended Management Objective	Containment
Description	A small shrubby herb from 20cm to 2m in height. Brillantaisia has hairy square stems with heart shaped leaves. Purple (sometimes white) pea-like flowers are held on thin stems prior to forming cigar shaped seed pods. Brillantaisia can grow in to a dense, thick ground cover right down to the water's edge.
Distribution	Localised in Freshwater Creek and becoming widespread and common from Babinda south concentrating into the Woopen Creek sub-catchment. There is also an isolated infestation in the East Russell.
Impacts	Brillantaisia forms a dense mat and outcompetes native plants in riparian zones. It can take over domestic gardens and roadsides. The small seeds spread easily on machinery, vehicles, and waterways. It grows well in both full shade and/or full sunlight.
Key Projects	Brillantaisia is locally declared under Cairns Regional Council local laws. Extensive, historic efforts have not prevented spread and current efforts focus on preventing further spread or damage to high value assets.
Background	Areas marked for delimitation require on ground surveys to determine extent of distribution. No infestations are currently known in these areas. Brillantaisia spreads readily on machinery and within contaminated soils. It was introduced into the Wet Tropics via a nursery in the Mossman area from where it has been spread in garden plants. Because the plant has rapid growth and seed production it can quickly establish and become infestations which are difficult to manage. It causes impact to ground storey vegetation along riparian zones, roadsides and in pastures. Brillantaisia grows rapidly and can flower and seed all year-round requiring survey and treatment on a continual basis. Isolated outbreaks are treated every six weeks to prevent plants from seeding. Survey in and around the known infestations are conducted to ensure all locations are detected. Small infestations can be hand pulled; however all roots and stem fragments must be removed. Plant fragments should either be double bagged and taken to the dump or preferably hung up to prevent contact with the ground and reshooting. Larger infestations should be herbicide treated. For any treatment to be considered effective, follow-up monitoring must occur to identify any new seedlings.
Biosecurity obligations and Local Law requirements	Council has locally declared this plant as a pest. As such, properties can be searched and directions requiring specific action may be given to landowners for this pest. This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Local Laws apply

Must not propagate

Must not sell or supply

Control

Spread

Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

For infested areas, define the area that is most densely infested and consider this the core of infestation. This could be a densely infested paddock/s or section of creek or area in your backyard.

Place a buffer on this core area and make effort to reduce infestation around this core.

Work out potential methods of spread from infested areas and the edges of infestation and put preventative measures in place.

Treat areas likely to spread infestations as a high priority and isolated patches outside of core areas.

Maintaining healthy pastures and keeping an eye out for the distinctive purple flowers will assist in the timely detection and treatment of new infestations.

Do not move soils and plants from infested sites. Restrict stock and machinery movements unless adequate weed hygiene measures are implemented.

Brillantaisia is a locally declared plant and under local laws cannot be distributed, given away or sold. Ensure sources of garden plants are weed free.

Contact Cairns Regional Council on 1300 69 22 47 to report for treatment advice or to report new infestations.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Rat's Tail Grasses (*Sporobolus spp.*)

Risk Category	High
Recommended Management Objective	Containment - Giant Rat's Tail Grass (GRT) (*Sporobolus pyramidalis and S. natalensis*) Asset Protection - American Rat's Tail and Other Weedy Sporobolus (Not GRT) (*Sporobolus jacquemontii and spp.*)
Description	A group of robust, upright perennial grasses 0.6 –1.7 metres tall. Often referred to as rat's tail grasses, flower spikes are about 40 cm long and transform from a distinctive dark 'rats tail' shape when young to an open pyramid when mature. Leaves are narrow and tough and can be rasp like to touch. Height can be a rule of thumb indicator of Sporobolus varieties. Generally, American Rat's Tail grass grows to 50−75 cm tall, with a seed head of up to 25 cm long and 0.5−3 cm wide. Anything taller is most likely Giant Rat's Tail Grass.
Distribution	GRT is relatively common but localised around the Bellenden Kerr, Babinda, East Russell and Bramston Beach area where transport corridors exist, this includes railway lines and roadsides. Outside of areas of known distribution, a herbarium specimen should be collected to aid identification. American Rat's Tail is more common in the region than the higher impact GRT. Known infestations in rural areas, especially north of Babinda.
Impacts	GRT is a large stature species which can drastically outcompete desirable pastures. Rat's Tail Grass are unpalatable to stock. Can be major problem in overgrazed or disturbed systems. Invades creek lines and woodlands in drier savannah environments.
Key Projects	Priority is to remove these grasses from roads and accesses to prevent further spread. Individual properties should ensure properties are managed and fence lines /access tracks are kept clean. It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as apart of other projects. Some land management groups have specifically targeted this pest in recent projects.
Background	Identification of Weedy Sporobolus grasses can be difficult and often a herbarium sample may be required to confirm identification. Weedy Sporobolus grasses are spread via vehicles, machinery, stock and contaminated hay. Hay and fodder from clean sources should be sought to prevent accidental introduction. Roadsides should be monitored in growing season to detect any new outbreaks. Stock should be spelled for 7 days prior to be released to drop any ingested seed. Take care to brush down camping equipment, clean down vehicles and avoid infested areas altogether if visiting areas outside of the Cairns region where Weedy Sporobolus grasses are known to occur. Maintaining healthy pasture and ground cover will assist in the management of rat's tail grasses. American Rat's Tail grass is indicative of depletion of pasture quality. Improving pasture allows opportunity for other more desirable species to compete. Restricting stock and machinery movement to and from infested areas is essential to reduce the risk of spread to new locations.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed. It is an offence under the Biosecurity Act to move, share, give away or sell produce contaminated with this plant.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030

Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Asset Protection/Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

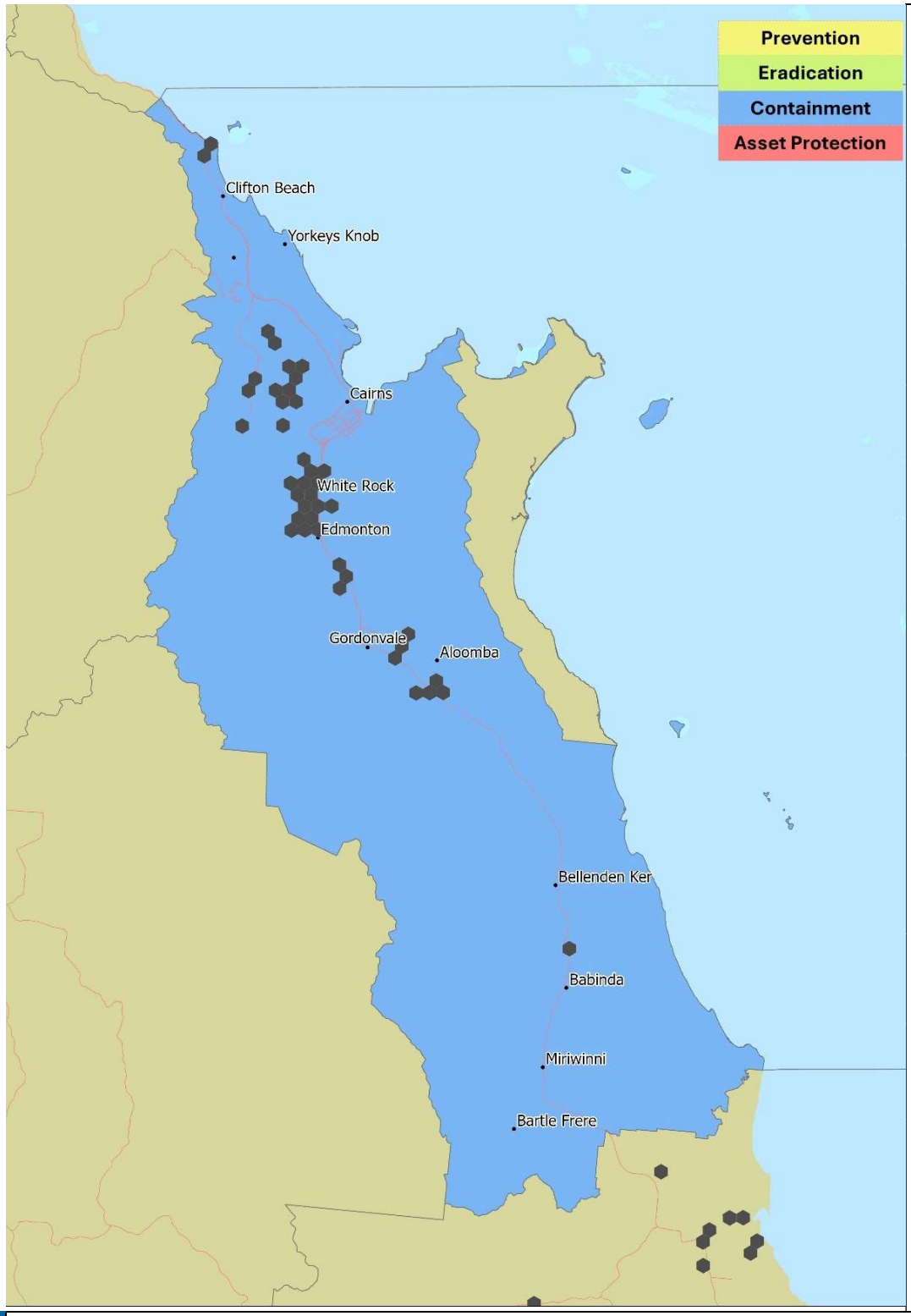
For infested areas, define the area that is most densely infested and consider this the core of infestation. This could be a densely infested paddock/s or section of creek or area in your backyard. Place a buffer on this core area and make effort to reduce infestation around this core. Work out potential methods of spread from infested areas and the edges of infestation and put preventative measures in place. Treat areas likely to spread infestations as a high priority and isolated patches outside of core areas. Seek advice prior to works in vicinity of known locations. Do not move or accept plant material or soil unless you are sure it is from a clean source. Report any suspected outbreaks or detections to Cairns Regional Council on 1300 69 22 47, for treatment advice and possible assistance. Spread to new areas can be reduced by spelling stock in holding paddocks prior to movement. Populations on roadsides should be treated as a priority to prevent further spread. Sources of hay and feed should be managed as a priority. Grazing withholding periods for certain registered herbicides apply. The Weedy Sporobolus- best practice manual provides detailed management options for pasture situations. Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Kudzu Vine; Japanese Arrowroot (*Pueraria montana var. lobata*)

Risk Category	High
Recommended Management Objective	Containment
Description	A perennial scrambling vine with alternate leaves, that produces underground tubers. The large leaves are a lobed shape and form in groups of three, (like a dinosaur footprint). It produces purple, pea-like flowers and spreads rapidly when nodes come in contact with soil. 
Distribution	Common and localised infestations along creek lines within the Edmonton, Mount Sheridan, Kanimbla and Edge Hill suburbs. It has also been located within Wright's Creek, Mulgrave River and Behana Creek Overflow.
Impacts	A fast-growing vine which has the potential to encroach into thick rainforest and riparian zones, smothering native vegetation. Poses a significant threat to agriculture and infrastructure. Can grow to over 30 metres in height, smothering vegetation and infrastructure. Seed pods can be spread by sticking to clothing and the fur of animals but is not currently known to fruit in the region.
Key Projects	Included in riparian restoration and management works as projects are located in infestation areas. Significant historic efforts have reduced infestations, but currently no major projects or treatment is underway. 
Background	Kudzu is often introduced as a medicinal plant and food (starch), so it is likely to be associated with gardens. It often escapes cultivation and spreads along watercourses and into adjoining forest. The distinctive lobed leaves and deep purple flowers help distinguish it from other common vines of gardens and forest edges. Effective treatment programs target existing fringe areas to prevent spread, manage infestations from upstream/up-catchment down and define assets worth protecting and taking resulting actions. It is important to note that effective treatment considers this weed's ability to regrow from underground tubers. If above ground treatment does not sufficiently starve the plant of energy or treat the tubers, reinfestation will occur. Physical tuber removal is considered the most effective management option.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

For infested areas, define the area that is most densely infested and consider this the core of infestation. This could be a densely infested paddock/s or section of creek or area in your backyard. Place a buffer on this core area and make effort to reduce infestation around this core. Work out potential methods of spread from infested areas and the edges of infestation and put preventative measures in place. Treat areas likely to spread infestations as a high priority and isolated patches outside of core areas. Report any suspected outbreaks or detections to Cairns Regional Council on 1300 69 22 47.

Ensure any machinery or vehicles moving from infested areas are free from plant material and soil. Dispose of green waste at a transfer station or compost at home. Kudzu tubers are likely to spread infestations if not disposed appropriately.

Control plants in creeks and drains. Assist management programs by assisting with access to infested areas. Consider revegetation of open areas post treatment (without canopy cover), as a practical means to reduce reinfestation.

When trees are being strangled, identify trees worth saving and likely to survive and treat with that in mind. Trees unlikely to survive post vine removal or already dead need to be managed with that in mind. Will they fall or is it worth foliar spraying pest vines?

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Turbina, Christmas Vine (*Turbina corymbosa*)

Risk Category	High
Recommended Management Objective	Containment
Description	Turbina Vine can form vine towers (20m+) over native vegetation with thick (30cm), rope-like stems. Stems of new growth are smooth, green, cylindrical and hairless while older stems are thicker, pale grey and roughly cylindrical. Leaves are oval and heart -shaped at the base with a pointed tip, 3–10cm long. Turbina Vine has sprays of fragrant, white, bell-shaped flowers. The fruit is a papery beaked capsule 80mm–1cm long and full of brown, hairy seeds.
Distribution	Known infestations in Kamerunga and the Barron River.
Impacts	Invasion of rainforest areas, displacing native vines and shrubs. Dried fruits and seeds float readily in water and have a high level of dormancy.
Key Projects	Given the spread and level of infestation across the region, no significant projects are currently primarily targeting this pest. It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as apart of other projects.
Background	Turbina Vine is scrambling vine that can totally blanket vegetation. Originally from tropical America and now naturalized in Northeast Queensland. It can grow from near sea level to 750 m in rain forest regrowth and in lowland and upland rain forest. The effects of Cyclones Larry and Yasi contributed to the proliferation of Turbina Vine in rainforest margins and on riverbanks
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 – 2030

Environmental Weed

General Biosecurity Obligation (GBO) applies

Control

Spread

Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

For infested areas, define the area that is most densely infested and consider this the core of infestation. This could be a densely infested paddock/s or section of creek or area in your backyard. Place a buffer on this core area and make effort to reduce infestation around this core. Work out potential methods of spread from infested areas and the edges of infestation and put preventative measures in place. Treat areas likely to spread infestations as a high priority and isolated patches outside of core areas. Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas. Control isolated plants and sparse populations, prioritising isolated infestations on high ground or at the top of catchments. Where practical treat parent plants first and then propagules/seedlings as they appear. Consider revegetation of open areas post treatment (without canopy cover), as a practical means to reduce reinfestation. When trees are being strangled, identify trees worth saving and likely to survive and treat with that in mind. Trees unlikely to survive post vine removal or already dead need to be managed with that in mind. Will they fall or is it worth foliar spraying pest vines instead of alternative means?

Contact Council for treatment advice on 1300 69 22 47, but in general:

- Manual control
- Small areas of young plants can be carefully hand pulled.

Suitable disposal may include:
Deep burial, transporting to a waste facility securely, or sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

If the plant is mature and growing up trees or other vegetation, cut all vines at a comfortable height from the ground. The vine should be left to die on its support plant; however, the parts of the plant below the cut should be treated with herbicide.

Herbicide control

Check herbicide labels or off label permits for suitable products, (search APVMA PubCRIS online). Monitor treated areas regularly for any new seedlings or regrowth. These should be re-sprayed.

Water Hyacinth (*Pontederia crassipes prev. Eichhornia crassipes*)

Risk Category	High
Recommended Management Objective	Containment
Description	A free-floating, aquatic herb with glossy, spoon shaped leaves and distinctive purple/lilac flowers. Water Hyacinth forms dense blankets over waterways and wetlands. A similar native species common to the region, Bog Hyacinth (*Pontederia vaginalis prev. Monochoria vaginalis*), can be distinguished by its spear-shaped leaves.
Distribution	Occasional and localised in the lower Mulgrave River catchment and Barron Delta, within waterways.
Impacts	Water Hyacinth floats on still or slow-moving water and can rapidly spread to cover the entire water surface with a thick mat of vegetation. This shades out any submerged plant life and impedes oxygen exchange, making the water unsuitable for fish and other animals.
Key Projects	As of publication, Council has implemented a Biosecurity Prevention and Control Program for this pest and actively treats known infestations. 
Background	Water Hyacinth is most likely to be introduced in water features and ponds or as an aquarium plant. Ensure water features and ornamental gardens do not contain Water Hyacinth. Water Hyacinth grows from seed and by division of mature plants and may be spread in contaminated soil from water features containing the weed in other areas. Infestations are effectively controlled with herbicide (with wetter/surfactant for better uptake), and follow-up surveys to ensure all plant fragments have been treated. Treat new incursions as they are reported or found. Water hyacinth can be moved on floodwaters; it is important to check wetlands and water features after flooding events.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

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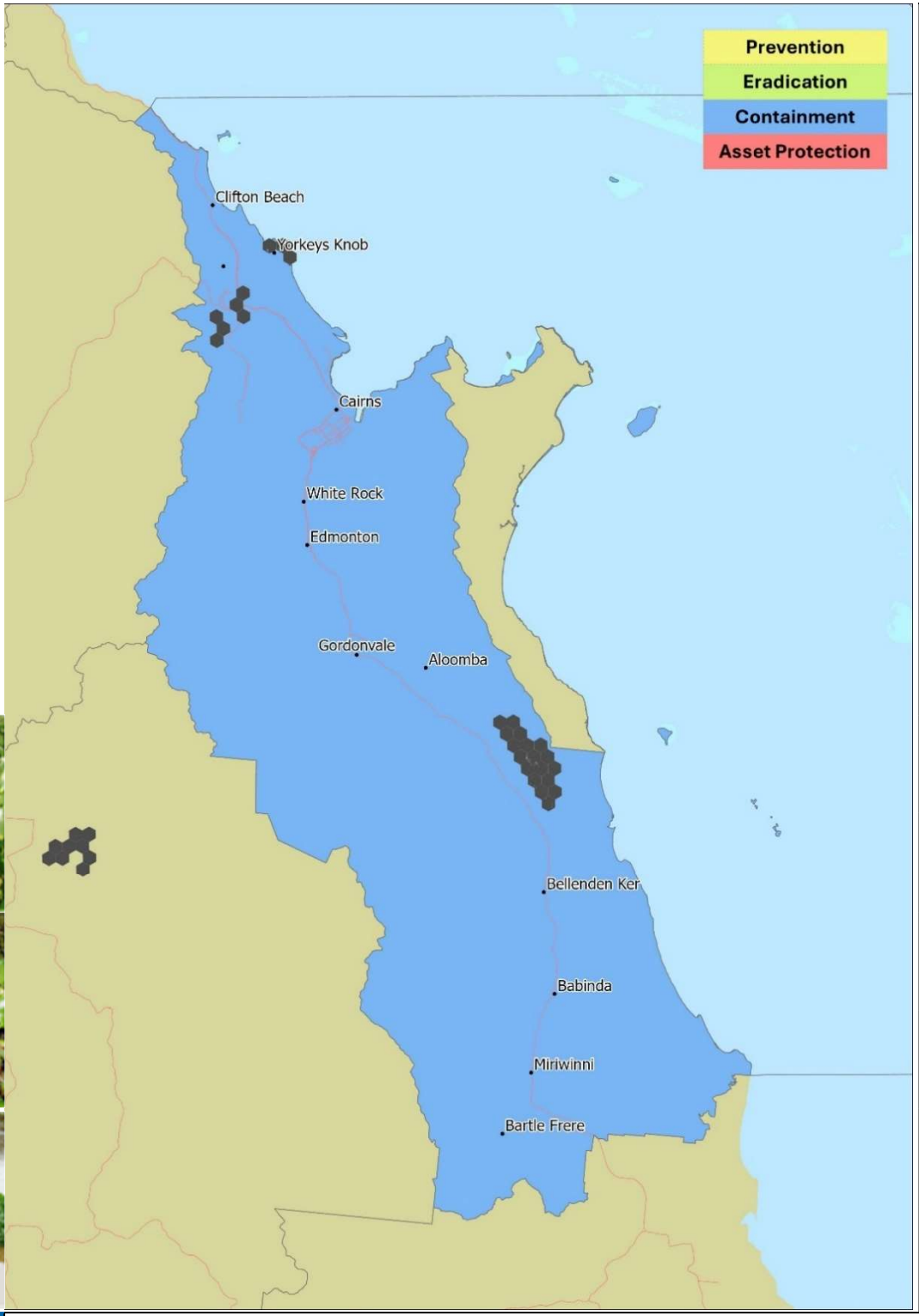

Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Ensure control measures are performed prior to flooding events where spread has a higher risk of occurring.

Prioritise infestations systematically from top of catchment/waterway down. Identify high value assets and protect them from impacts where possible. Maintain best practice weed hygiene measures to reduce risk of spread. Make sure any machinery or vehicles moving from the infested areas are free from plant material and soil. Source any wetland and pond plants from reliable suppliers and from weed free areas. Do not dump aquarium plants or fish into waterways. Where chemical treatment is undesirable or impractical, use physical removal methods. Monitor and maintain weed free areas. Avoid moving, distributing, selling or giving away the pest. If you have an active infestation on your property, you can assist the survey and control team by maintaining property access points and tracks. Treat as a priority, isolated infestations with a high risk of spread. Manage other accessible infestations to reduce risk of spread to new locations and systematically perform treatment on properties under management. Contact Cairns Regional Council on 1300 69 22 47, to report any suspect plants beyond known sites or seek advice for treatment. Council may be able to assist as practical and available depending on circumstance.

Consider bunds or similar, to prevent spread on any outflows for impounded water. Vegetative material or seeds can generate new infestations on banks. Plan treatment and surveillance to include these areas.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Woodrose, Merremia; Spanish Arborvine (*Distimake tuberosus syn. Merremia tuberosa syn. Ipomoea tuberosa*)

Risk Category	High
Recommended Management Objective	Containment
Description	• Bright yellow flowers. Smooth round capsule, surrounded by 5 petal-like sepals. • Tuberous roots. • Perennial Vine with palmate leaves, 5-7 narrow lobes. • Milky exudate (see picture). • Similar to a range of Ipomoea/ Merremia species with palmate leaves. 
Distribution	Widespread throughout disturbed lowland vegetated areas in the region. Found frequently on margins of rainforests throughout central coastal and northeast Queensland. Specific mapping of this pest is still scarce, but this pest is common throughout the region.
Impacts	Invades disturbed areas, displacing native vines and shrubs. A light loving vine that can smother canopy. Generally not known to transform vegetation but can dominate areas given suitable conditions.
Key Projects	 It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as apart of other projects.
Background	An environmental weed of disturbed areas, forest edges and riparian zones. Native to the Americas and Asia. Naturalised and cultivated in Hawaii.
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk. 

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Biosecurity Plan
2025 - 2030

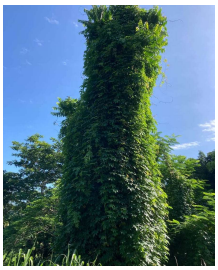
Environmental

Weed

General Biosecurity Obligation (GBO) applies

Control

Spread



Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

For infested areas, define the area that is most densely infested and consider this the core of infestation. This could be a densely infested paddock/s or section of creek or area in your backyard.

Place a buffer on this core area and make effort to reduce infestation around this core. Work out potential methods of spread from infested areas and the edges of infestation and put preventative measures in place.

Treat areas likely to spread infestations as a high priority and isolated patches outside of core areas.

Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Work strategically, protecting the better-quality native vegetation first. Always commence control programs in areas of light infestation, and work towards the denser infestations. Control isolated plants and sparse populations, prioritising isolated infestations on high ground or at the top of catchments.

Where practical treat parent plants first and then propagules/seedlings as they appear. Consider revegetation of open areas post treatment (without canopy cover), as a practical means to reduce reinfestation.

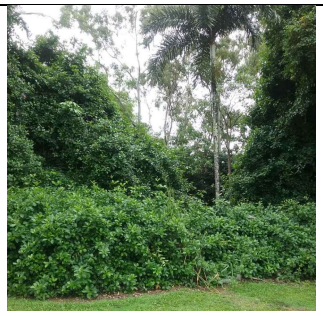
When trees are being strangled, identify trees worth saving and likely to survive and treat with that in mind. Trees unlikely to survive post vine removal or already dead need to be managed with that in mind. Will they fall or is it worth foliar spraying pest vines instead of alternative means?

Contact Council for treatment advice on 1300 69 22 47.

Check herbicide labels or off label permits for suitable products, (search APVMA PubCRIS online).

Monitor treated areas regularly for any new seedlings or regrowth. These should be re-sprayed.

Glow Vine; Purple Funnel Vine (*Saritaea magnifica syn. Bignonia magnifica*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	 • Forms impenetrable thickets. • Perennial, evergreen. • Dark pink to purple, trumpet flowers 6- 10cm long, opposite and bifoliate. • Climbs via tendrils. • Propagates by cuttings and seed. • The fruit are long, flattened, capsules containing two winged seeds, but anecdotally have not been observed in the region as yet.
Distribution	Major infestations are in the upper Barron with a particularly noteworthy infestation around the township of Kuranda. Other significant infestations include Whitfield, Edge Hill, and Redlynch Valley. Infestations are known to cover up to several hectares in the Wet Tropics region. Specific mapping of this pest is still scarce, but this pest is common throughout the region.
Impacts	Invades disturbed areas, displacing native vines and shrubs. Not known to transform vegetation but can substantially smother it given the right conditions.
Key Projects	Given the spread and level of infestation across the region, no significant projects are currently targeting this pest. It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as apart of other projects.
Background	Native to South America, (Columbia, Ecuador, Panama and Venezuela). Naturalised in some other parts of QLD and considered an environmental weed of note in North QLD. 
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

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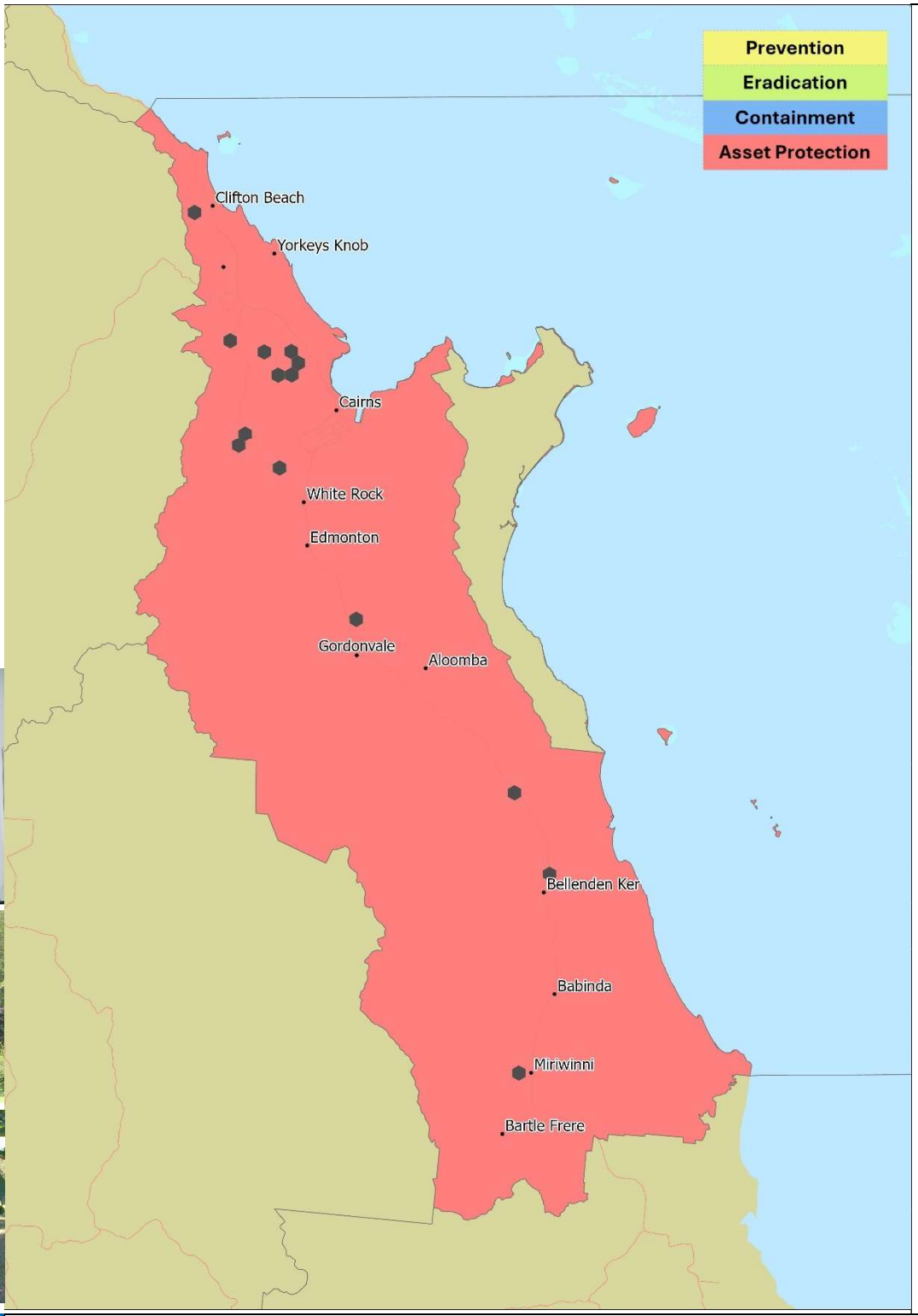
Biosecurity Plan
2025 - 2030

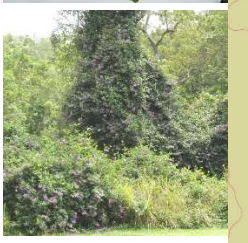


Environmental Weed

General Biosecurity Obligation (GBO) applies

Control

Spread



Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Work strategically, protecting the better-quality native vegetation first. Always commence control programs in areas of light infestation, and work towards the denser infestations.

Control isolated plants and sparse populations, prioritising isolated infestations on high ground or at the top of catchments.

Where practical treat parent plants first and then propagules/seedlings as they appear.

Consider revegetation of open areas post treatment (without canopy cover), as a practical means to reduce reinfestation.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

Grader Grass (*Themeda quadrivalvis)*

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	Upright tufted annual grass to 1-2.5m. Flower stalks are stiff and cane-like with red-brown flower spikes bent downwards. A tropical and sub-tropical grass which forms dense swards and stands on roadsides and in savannah woodlands. A similar common native species, Kangaroo Grass, is shorter in stature, perennial and lacks tufts near the seed. Thatch Grass (*Hyparrhenia rufa*) is another pest grass found in the area often confused with Grader Grass. Thatch Grass has a smaller seed head and pronounced stalk banding.
Distribution	An established weed across the drier regions of the tropics, Grader Grass is increasing in distribution into areas of the Wet Tropics, particularly along roadsides and in rangelands. Sporadic infestations are known throughout the major transport corridors.
Impacts	Can invade native and improved pastures, sugar cane, woodlands and roadsides. Grader Grass is a significant weed of roadsides where it increases management requirements and impacts on safety because of its height. It can significantly outcompete pastures, reducing productivity of grazing lands. Grader Grass produces much higher fuel loads than native grasses increasing fire risk.
Key Projects	QPWS have specifically targeted this pest when impacting or threatening high value environmental areas under their management.
Background	Roadside slashing is the main spreader of Grader Grass. Targeted works should concentrate on preventing spread beyond road corridors or entering sensitive areas. Isolated infestations would be worth targeting to reduce spread.
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

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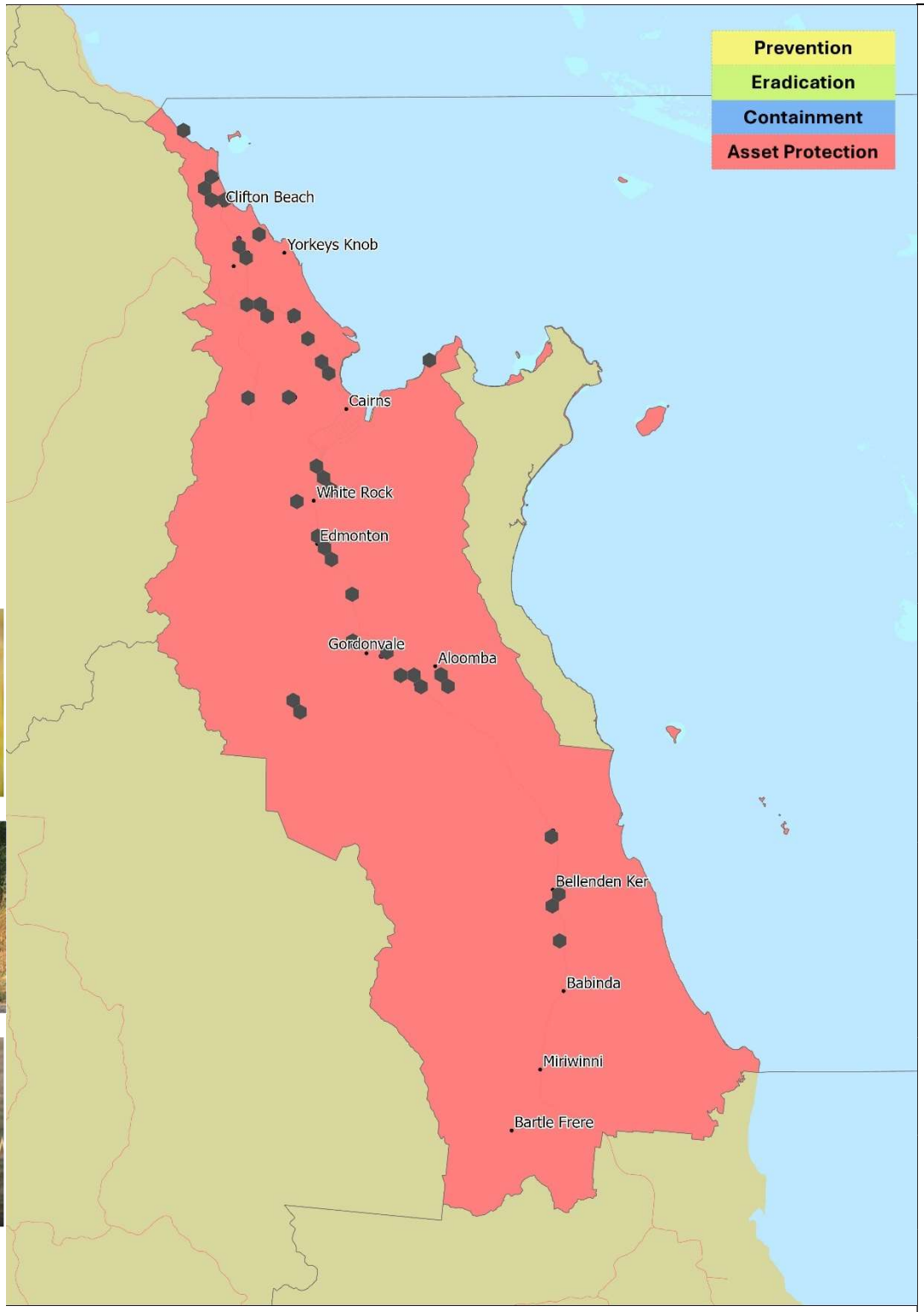
Cairns REGIONAL COUNCIL

Biosecurity Plan 2025 - 2030



Environmental Weed

General Biosecurity Obligation (GBO) applies

Control

Spread

Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Maintain weed free areas. Do not cart, introduce or transport contaminated hay or silage. Wherever practical ensure agricultural and raw materials are sourced from a reliable supplier and are from a Grader Grass free area. If introducing new stock, spell in a holding paddock for at least 7 days before releasing into property. Identify high value assets and protect them from impacts where possible. Promoting healthy pastures through stocking rates and liming will assist to reduce the vigour and germination of Grader Grass. If alternate treatment methods are required, consult with Biosecurity Officers.

Hymenachne; Olive (*Hymenachne amplexicaulis* and *hybrids*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	A robust, upright perennial aquatic grass 1-2m tall with distinctive stem clasping leaves. Olive Hymenachne has distinctive long cylindrical spike-like flowers. Hymenachne is capable of growing in water up to 1.2m metres deep and often rafts out over water on floating, pithy stems. A native Hymenachne species (*Hymenachne acutigluma*) may occur in the same location. The native lacks the clasping leaf base, has narrow upright leaves and distinctive reddish nodes where the leaf joins the stem. The native version predominantly flowers and seeds in February. Hybridisation can occur. Hybrids are considered pests with the same category restrictions and obligations as the pest species.
Distribution	Localised and abundant across the Cairns region within the Mulgrave, Russell River and Barron Catchments. Olive Hymenachne is most likely to be encountered in the waterways and wetlands of the floodplain. In low lying areas of the Barron Catchment infestations are becoming widespread.
Impacts	Olive Hymenachne blocks drainage systems and waterways. It readily invades and outcompetes native plants in wetlands and waterways. Dense mats can prevent fish passage for key species like Barramundi and provide a breeding opportunity for pest fish species like Tilapia. It often blocks cane drains and can damage infrastructure.
Key Projects	As of publication, Council has implemented a Biosecurity Prevention and Control Program including this pest. Infestations are currently targeted in line with available resources to protect identified assets.
Background	Introduced as a pasture fodder crop, escaped, and became established as a quickly spreading pest. Hymenachne is a Weed of National Significance (WONS). Has a high seed load and in good conditions can produce seed for the majority of the year. Best management practices should be mindful of: • Reinfestation along drainage lines; treatment working from upstream down are more effective, • Not tolerant of salty conditions, • Long term biocontrol options are less likely due to risk of impacts on native varieties, • Herbicide is considered the most practical management option. • Removal from properties and systems has been demonstrated in the region, but long-term sustained effort must be made. • Reinfestation and spread to previously cleared areas is a significant issue that ongoing projects needs to consider as part of management plans.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

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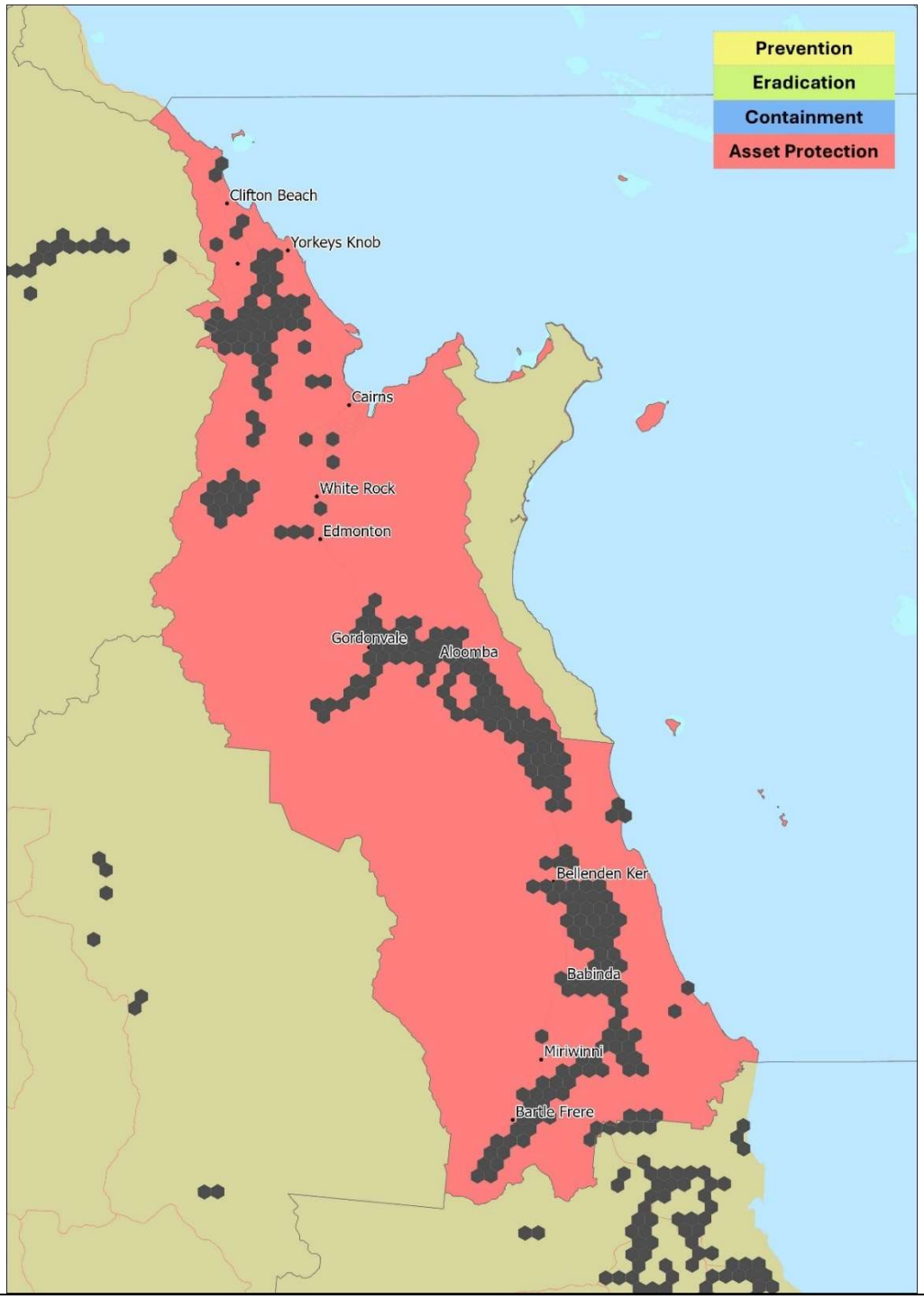
Biosecurity Plan 2025 - 2030

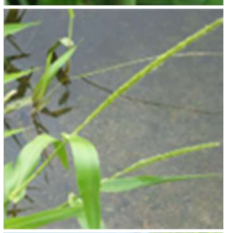


Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread



Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

Identify high value assets and protect them from impacts where possible. This should include targeted maintenance of key fish passage areas, cane drains and farm infrastructure to allow for the breeding cycle of native fish species to take place.

Treat isolated infestations with a high risk of spread.

Provide access to waterways for council to continue control programs.

Source any wetland and pond plants from reliable suppliers and from weed free areas.

Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Maintaining weed free areas and treating isolated infestations will reduce the risk of further spread.

Ensure any machinery or vehicles moving from infested areas are free from plant material and soil.

Contact Cairns Regional Council on 1300 69 22 47 for advice related to management, possible assistance or reporting new infestations.

Hymenachne is likely to be moved around during flood events. Monitoring wetlands, waterways and drains on your property will assist to detect new outbreaks early and allow easier management.

Landholders can assist existing management programs by maintaining key flow areas, re-instating stream-side vegetation, maintaining headlands clear of pests and reducing nutrients and sediment into wetlands.

Navua Sedge (*Cyperus aromatica*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	A grass-like perennial sedge that grows to 70cm high and has a distinctive, button shaped flower with three large and three small, narrow, glossy green leaves. When stressed the plant turns light yellow. The leaves have a distinctive aroma when crushed.
Distribution	Navua Sedge is a widespread weed in many areas of the region. It occurs as dense infestations or scattered plants in pastures and along most roadsides and water courses in the wetter areas of the region.
Impacts	Navua Sedge outcompetes pastures and displaces native grasses and sedges. It is both difficult and expensive to control selectively and can decrease productivity significantly. Navua Sedge spreads rapidly along roadsides. It forms dense stands that can smother many tropical pasture species. It is extremely aggressive, competes strongly for nutrients, light and moisture, and is unpalatable to cattle.
Key Projects	There are no local current targeted projects. Landholders should manage any new outbreaks and keep pastures in good condition. Weed hygiene practices on farm will assist in reducing the opportunities for introduction. There are a range of ongoing research programs investigating herbicide, soil pH and biocontrol options to assist in managing Navua Sedge. There is a rust fungus rapidly spreading in the region (*Uredo kyllingae-erectae)*, which attacks leaves and stems. Other biocontrol candidates being looked at include a smut fungus (*Cintractia kyllingae*) that infects flower heads and seeds and an inflorescence-colonising ascomycete (*Curvularia tanzanica*).
Background	Navua Sedge was first found growing in Australia on the footpaths of Cairns in 1979 and has spread vigorously throughout North Queensland since. Limited practical treatment options, ideal growing conditions and ease of spread have increased the difficulty of effective control. Spread occurs through the normal extension of the rhizome system, by seed and by dispersal of viable rhizome fragments during cultivation. Seed can be dispersed by passing through the digestive system of animals and birds, and also by being transported in mud on hooves, pelts, footwear and machinery. Navua Sedge spreads readily on vehicles and machinery making the management of roadsides and traffic areas important in preventing it spreading to adjoining paddocks and properties. Spelling pastures and careful stock management will also assist reducing the spread. Integrated control in grazing areas including pasture management, herbicide control and weed hygiene activities will assist to keep pasture healthy. Spot spraying isolated outbreaks as they occur and prior to slashing or grazing will assist to prevent development and spread of seed. Making use of weed hygiene facilities and establishing hygiene points within or between properties will assist to reduce the risk of spread to clean areas.
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

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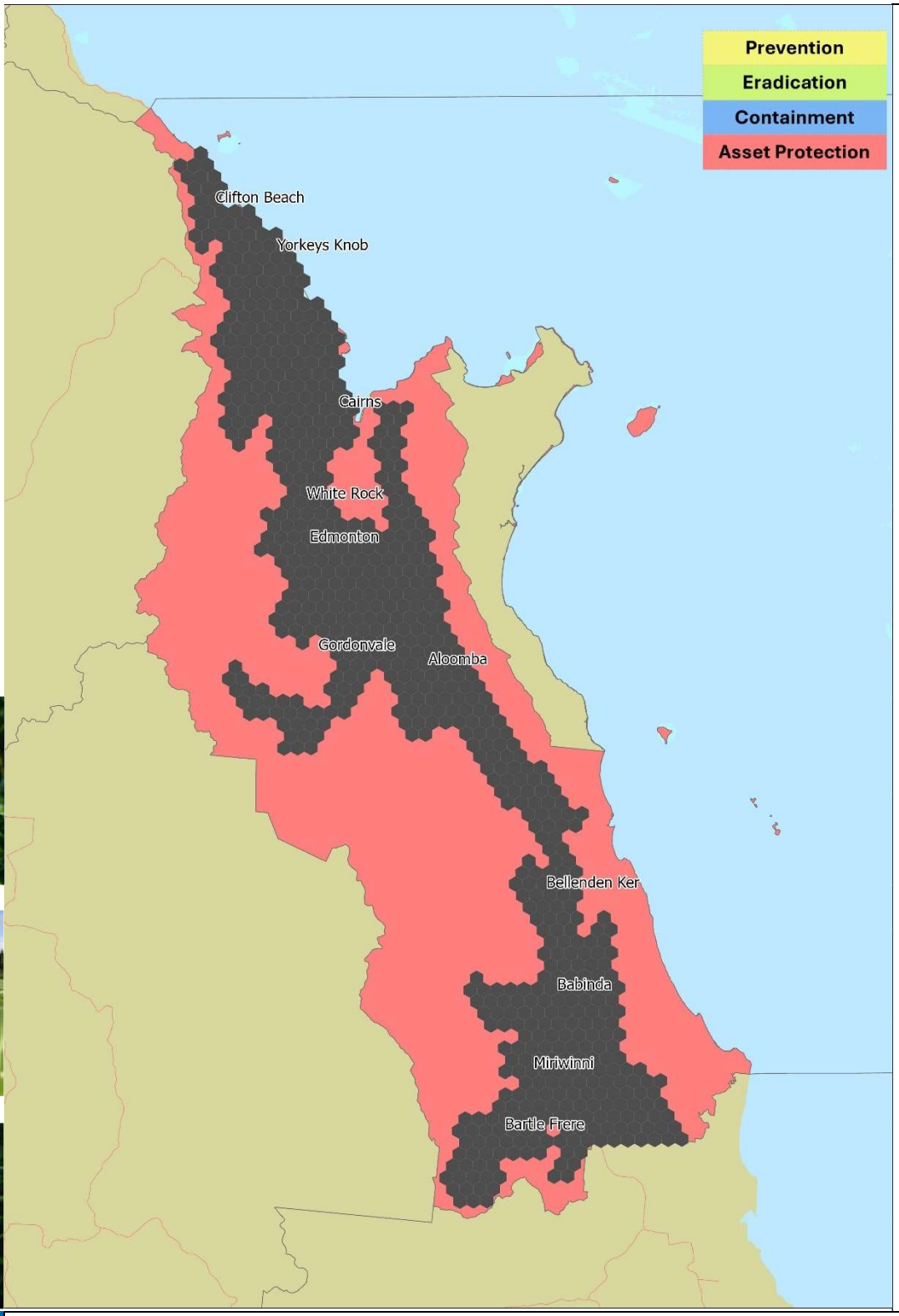
Biosecurity Plan
2025 - 2030



Environmental Weed

General Biosecurity Obligation (GBO) applies

Control

Spread

Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?

Prioritise survey and control of Navua Sedge where there are isolated outbreaks and protect high value pasture and production areas. Maintain buffers on access roads and boundaries to reduce the risk of spread.

Ensure best practice weed hygiene measures and spell stock in clean holding areas prior to movement or sale. Ensure machinery and vehicles moving from infested areas are free from plant material and soil. Make sure materials and produce are sourced from a weed free area. Inspect and clean machinery and vehicles before arriving on or moving from your property.

Spot spray isolated plants and control isolated infestations. Herbicide labels need to be closely followed for effective kill rates.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

Pond Apple (*Annona glabra*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	Tall semi-deciduous shrub or tree reaching around 15m but typically 3-6 m. Pond Apple is most likely to occur in wetlands and along stream margins, but it may occur along beaches as well. Leaves are lighter below than above and have a green apple scent when crushed. The large fruit is similar to a custard apple and are filled with floating seeds similar in size and shape to a pumpkin seed.
Distribution	Pond Apple is widespread at elevations below 20m throughout the southern half of Cairns region, and there are scattered infestations in the north. Seed is dispersed by pigs, cassowaries and deer as well as on river, ocean currents and flood water.
Impacts	Pond Apple invades a wide range of natural and artificial wetlands and waterways. It forms dense thickets that exclude most native ground and shrub layer plants, prevents regeneration of native vegetation and chokes drains. It is a significant modifier of wetlands and freshwater mangrove communities.
Key Projects	Ongoing action in a range of scattered outlier infestations. Progress in some concentrated areas by stakeholders' groups. Top-down management of upstream sources is the preferred option to reduce chances of reinfestation. As of publication, Council has implemented a Biosecurity Prevention and Control Program including this pest.
Background	Areas marked for delimitation require on ground surveys to determine extent of distribution. Pond Apple is most likely to grow along creeks and in wetlands, but it may also be found in old orchards where it was used as graft stock in the past or appear along beaches and beach swales where it arrives as floating seeds. Keep an eye out for Pond Apple in swamps, mangroves, estuaries or islands and report any suspect plants to council. Participating in catchment management and water quality projects will assist to promote wider community awareness of the damaging effects of weeds to agricultural land and water ways. Improving water quality and the condition of riparian vegetation will assist in making waterways more resilient to weed impacts into the future. Effective management includes identifying clean catchments and promoting maintenance and active inspections in those areas. Treating new incursions when detected and controlling existing outlying infestations and high-risk areas will assist to prevent spread to new locations. Reducing the spread and distribution of known infestations will decrease the number of seeds entering waterways and wetlands. Targeted management and restoration of native vegetation in a top-of-catchment down approach is the most effective way to protect downstream assets.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

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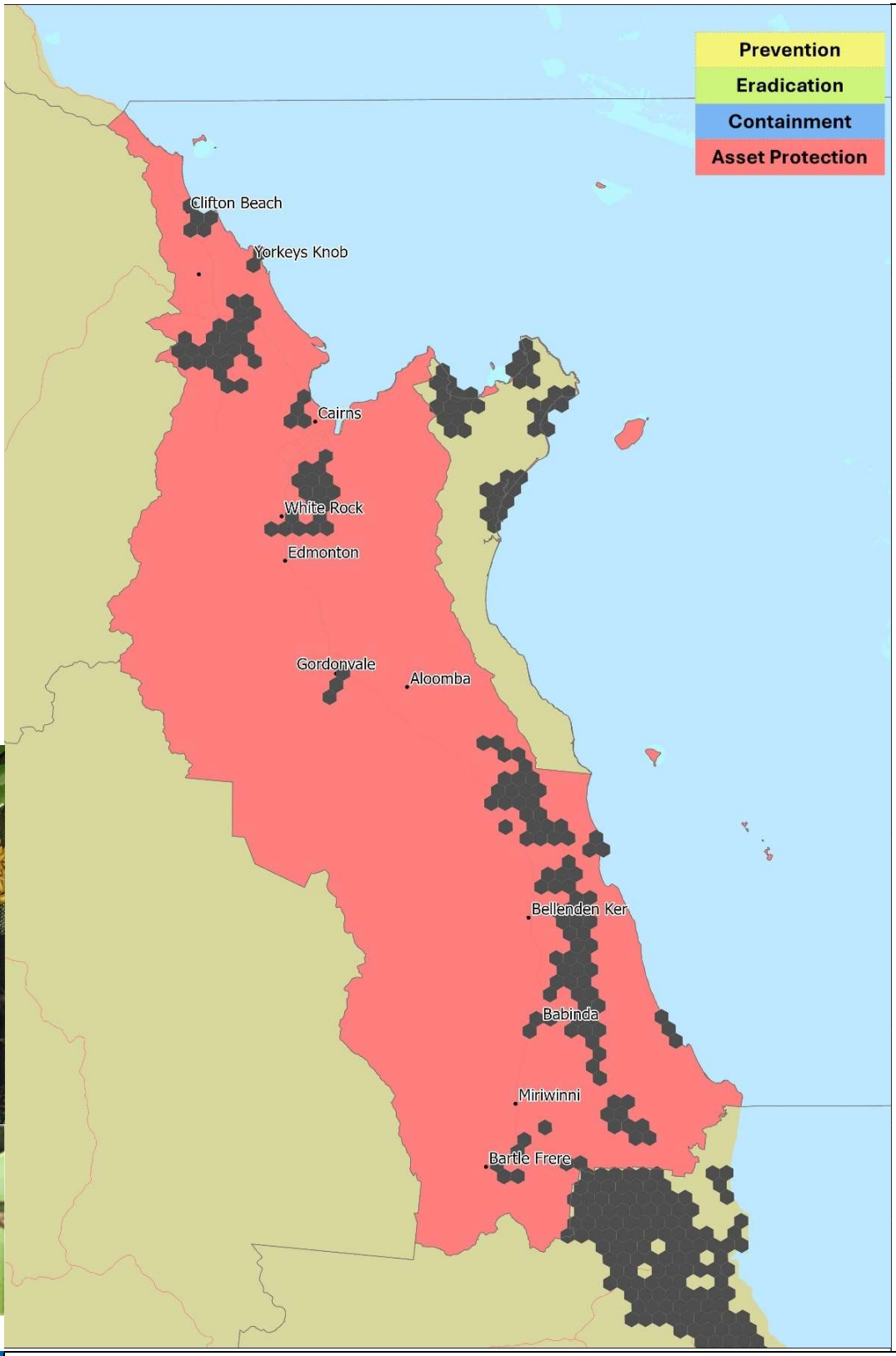
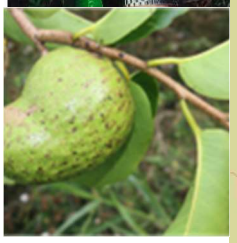


Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread



Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Control plants in creeks and drains. Assist management programs by providing and maintaining with access to water ways and wetlands. Report new infestations.

Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Maintain weed free areas. Identify high value assets and protect them from impacts where possible.

Treat isolated infestations with high risk of spread.

Feral pigs and deer are known spreaders of Pond Apple seeds by consuming its fruit. Practical and reasonable deer and feral pig management will reduce spread.

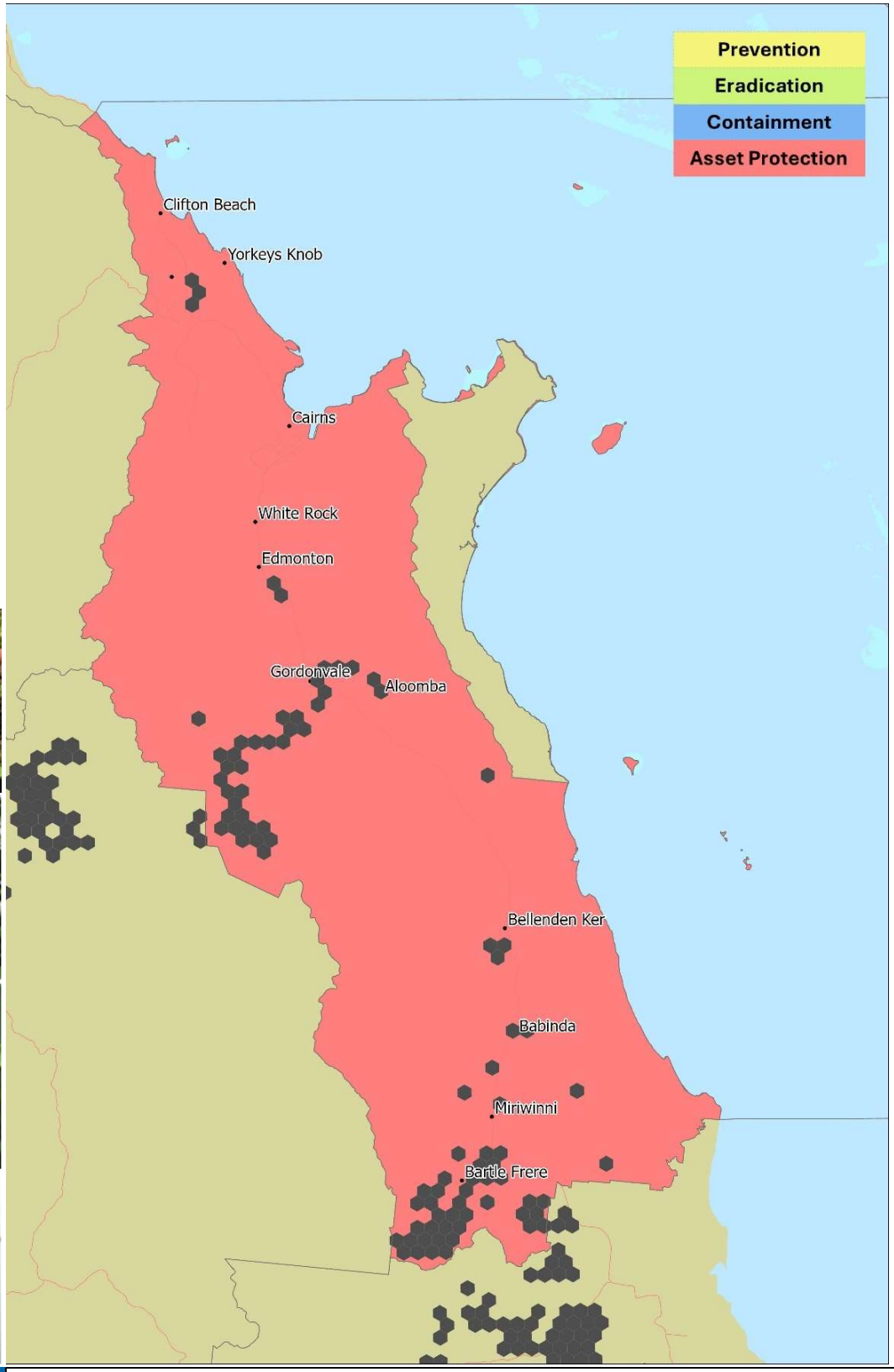
Report any suspected outbreaks or detections to Cairns Regional Council on 1300 69 22 47.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Siam Weed (*Chromolaena odorata* and *C. squalida*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	A sprawling woody shrub to 3 metres, (higher as a scrambling climber), with distinctive forked leaf venation and purple flush on new or stressed leaves. Clusters of white to lilac flowers in May-June and October. Can produce up to 80 000 seeds per plant, per season. Distinguished from similar looking weeds Bluetop and Praxelis, which have short-tasselled mauve to purple flowers and different leaves.
Distribution	There are common infestations of Siam Weed in Goldsborough Valley and Little Mulgrave. Larger infestations are found throughout the Russell Catchment in Woopen Creek, Waugh's Creek and Bartle Frere areas. Minor infestations have been found in Mirriwinni, Babinda Creek, Edmonton, Stoney Creek as far north as Smithfield. Infestations are generally progressing Northward and increasing.
Impacts	Siam Weed forms dense thickets and outcompetes native species and pasture in both disturbed and undisturbed sites. It prefers richer soils in alluvial and riparian zones but will grow in woodlands and coastal zones. Siam weed can exacerbate asthma. Known to cause livestock issues if eaten.
Key Projects	The target of a National Eradication Program up until 2012, Siam Weed has devolved to landholders for further management. Biocontrol releases of Gall Fly have occurred in the region. Significant effort has been made historically to treat with limited success as infestations continue to move north. As of publication, Council has implemented a Biosecurity Prevention and Control Program including this pest.
Background	Siam Weed has a peak flowering period in May-June with another, less vigorous flowering in October. It is most visible at these times and this feature is used to detect plants prior to seeding. Siam Weed is able to be spread by wind and water as well as machinery and vehicles. The seeds of Siam Weed have been confirmed to remain viable in the soil for at least 7 years. Maintaining records of historical infestations and restricting disturbance and movement of soil is essential to prevent spread to new locations. If physical removal is used, any vegetation left in contact with soil can reshoot. Also If the shallow root ball is left in ground, it will reshoot. Mature Siam suppresses the nearby seedbank from germinating until the parent plant is removed. Expect mass seedlings post its removal and plan works to address. Conducting surveys during the peak flowering time in May-June is the best way to detect any new outbreaks or to monitor previously controlled areas. Monitoring along forest edges, degraded pastures and riparian areas is a useful strategy to detect new infestations or single plants. Maintaining healthy native vegetation along watercourses and vigorous pastures will assist to reduce opportunities for Siam Weed to establish in new locations. Biocontrol release of Gall Fly can target dense and unmanaged areas to reduce weediness. Results in the region have been mixed with different success levels per infestation location. Fire management is a good option to consider to exhaust the seedbank. Unless new tools become available for management, Siam Weed is expected to become common across the region.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Any surveillance should be conducted during peak flowering period of May-June.

Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Maintain weed free areas.

Identify high value assets and protect them from impacts where possible.

Treat isolated infestations with high risk of spread.

For dense infestations, contact Council on 1300 69 22 47, for advice on treatment or assistance accessing biocontrol.

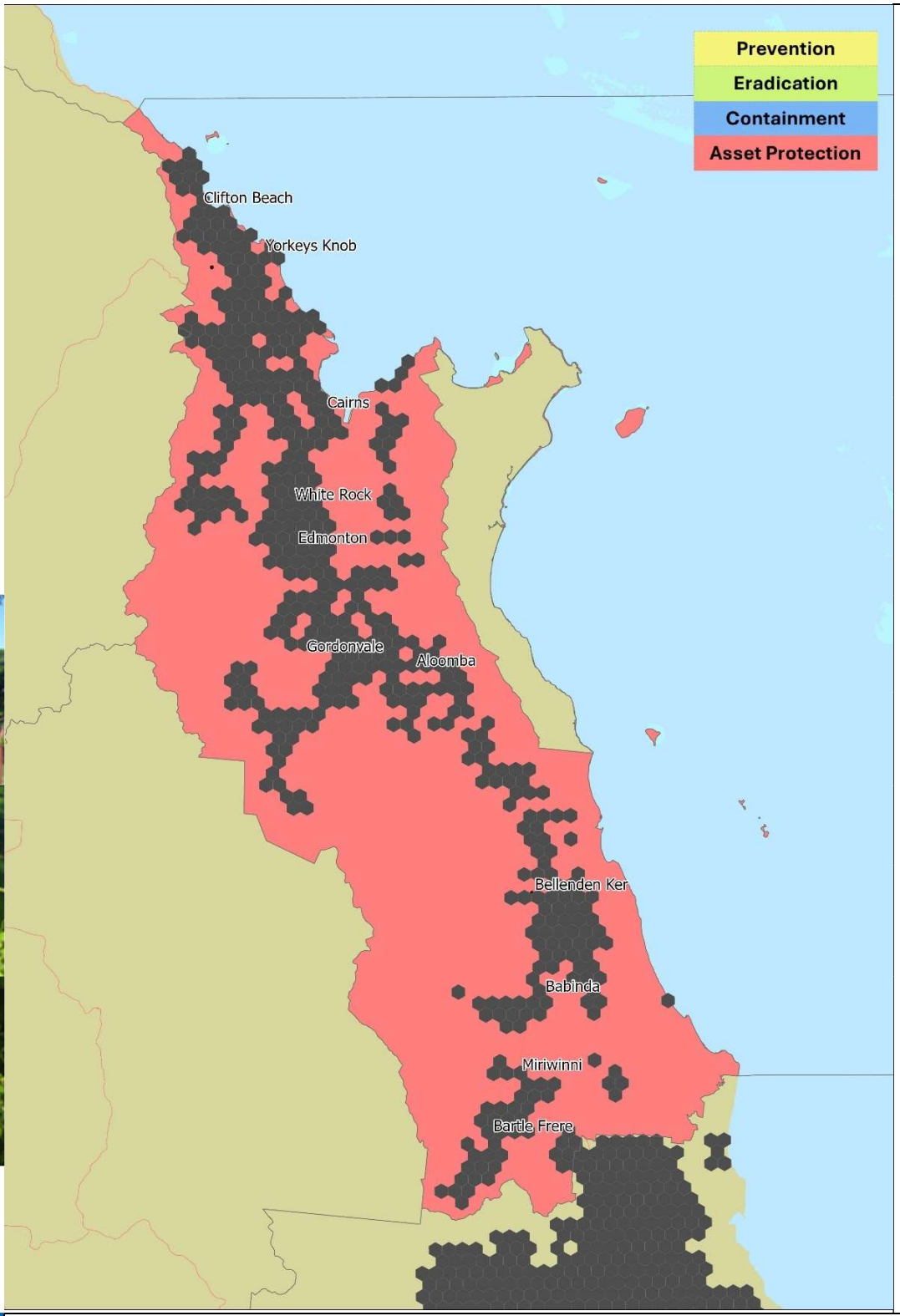
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

Sicklepod (*Senna obtusifolia, S. hirsuta* and *S. tora)*

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	A vigorously growing woody shrub to 1.5-2m tall and 1m wide. Soft bright green oval leaves. Bright yellow pea-like flowers form into characteristic long, slender, curved pods. Seed remains standing on the dead plant and is viable for up to 10 years. Distinguish from rattlepod which has shorter, fatter pea like pods. After cooler months, the plants drop their foliage, appearing brown and dry.
Distribution	Widespread throughout the Cairns Region, with new incursions occurring on new land developments and disturbance of land.
Impacts	Sicklepod can invade and completely dominate pastures. It becomes a major pest of crops within 2 or 3 seasons. Sicklepod will invade natural areas especially following disturbance. Often abundant in road corridors and fallowed/vacant land.
Key Projects	Given the spread and level of infestation across the region, no significant projects are currently primarily targeting Sicklepod. Sicklepod is one of a suite of widespread weeds managed in key environmental areas.
Background	Normally an annual, although plants that have been slashed or survive chemical application often re-shoot and survive another year. Sicklepod is widespread and is considered to occur in all areas where the habitat is suitable across the Cairns region. Targeting management before flowering or seeding reduces seed loads being produced substantially, limiting management activities required and reducing future germination events from the seed bank. Integrated management is required to reduce impacts including strategic herbicide control and fire management This is essential for large infestations in key environmental areas. Due to the large numbers of seed produced, Sicklepod can quickly re-infest areas which have been cleared of the weed if no ongoing management is in place. The use of appropriate fire regimes, mechanical control and grazing practices can assist to protect both environmental and grazing assets in woodland areas. Effective management in urban areas is highly achievable through regular land maintenance activities.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

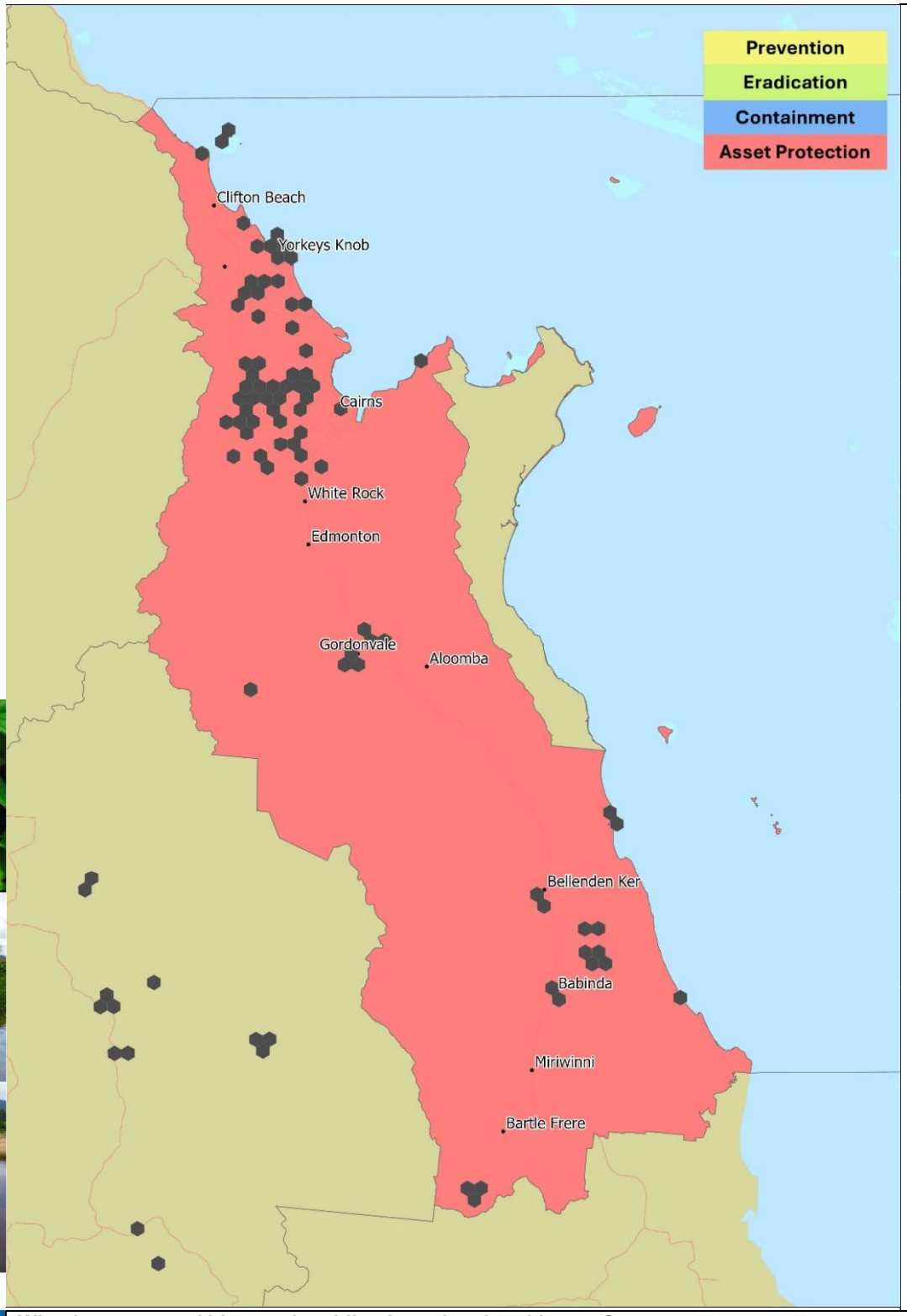
Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Identify high value assets and protect them from impacts where possible. Urban areas can manage infestations through regular mowing and whipper-snippering grassed areas. Sicklepod seed is easily spread on machinery, vehicles, stock and in raw materials. Detailed hygiene is required to prevent spread to new locations. Cleaning down machinery and plant between movements between properties will assist to reduce spread. Spelling stock in a holding paddock for at least 7 days prior to turnout or movement will ensure any ingested seed is passed before moving. Ensuring raw materials like quarry products are sourced from a clean site will assist to prevent the introduction of Sicklepod. Herbicide treatment is most effective during active growth periods. Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

Singapore Daisy (*Sphagneticola trilobata*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	A dense, low ground cover with lobed, glossy leaves and brown/maroon runners rooting wherever they contact the soil. Distinctive yellow daisy flowers are formed year-round. The plant spreads mainly from stem from fragments and runners.
Distribution	Widespread and established throughout the Cairns Region, commonly found in riparian areas.
Impacts	Singapore Daisy forms dense mats smothering out native vegetation and pasture. The plant is allelopathic, releasing a toxin which inhibits the growth and germination of other plants.
Key Projects	Given the spread and level of infestation across the region, no significant projects are currently primarily targeting this pest. It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as a part of other projects.
Background	Significant historical use for erosion control and suppression of rank grasses on drain lines in the region. Now found in many areas requiring bank stabilisation including creek lines. During times of flooding Singapore Daisy is actually a poor bank stabiliser as it has a tendency to "roll up" off the creek bank. Native to Tropical America. 
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

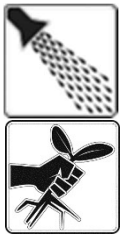
Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

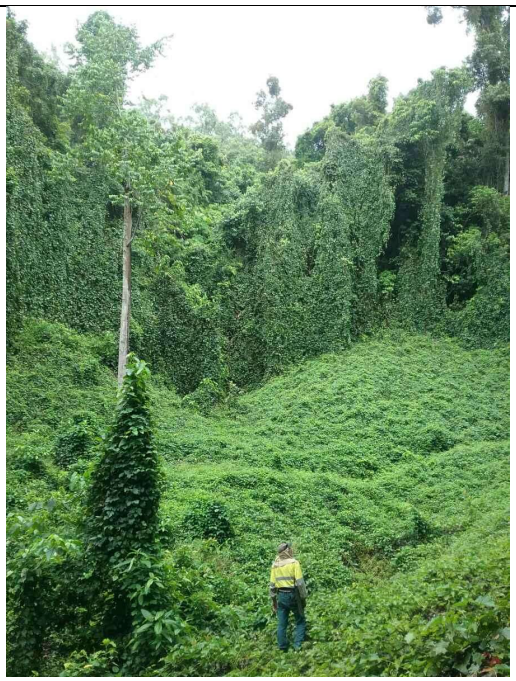
Control



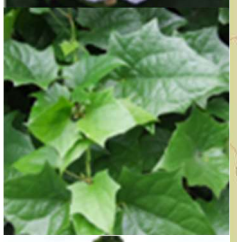
Spread

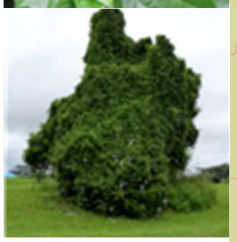
Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas. Landowner's or occupiers can assist by maintaining easy access to infestations. Manage risk of spread from your property and protect priority assets using best practice methods to control infestations where practical to do so. If your property has an active infestation, make sure your green waste does not contain Singapore Daisy and is disposed of in accordance with the regulation. Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

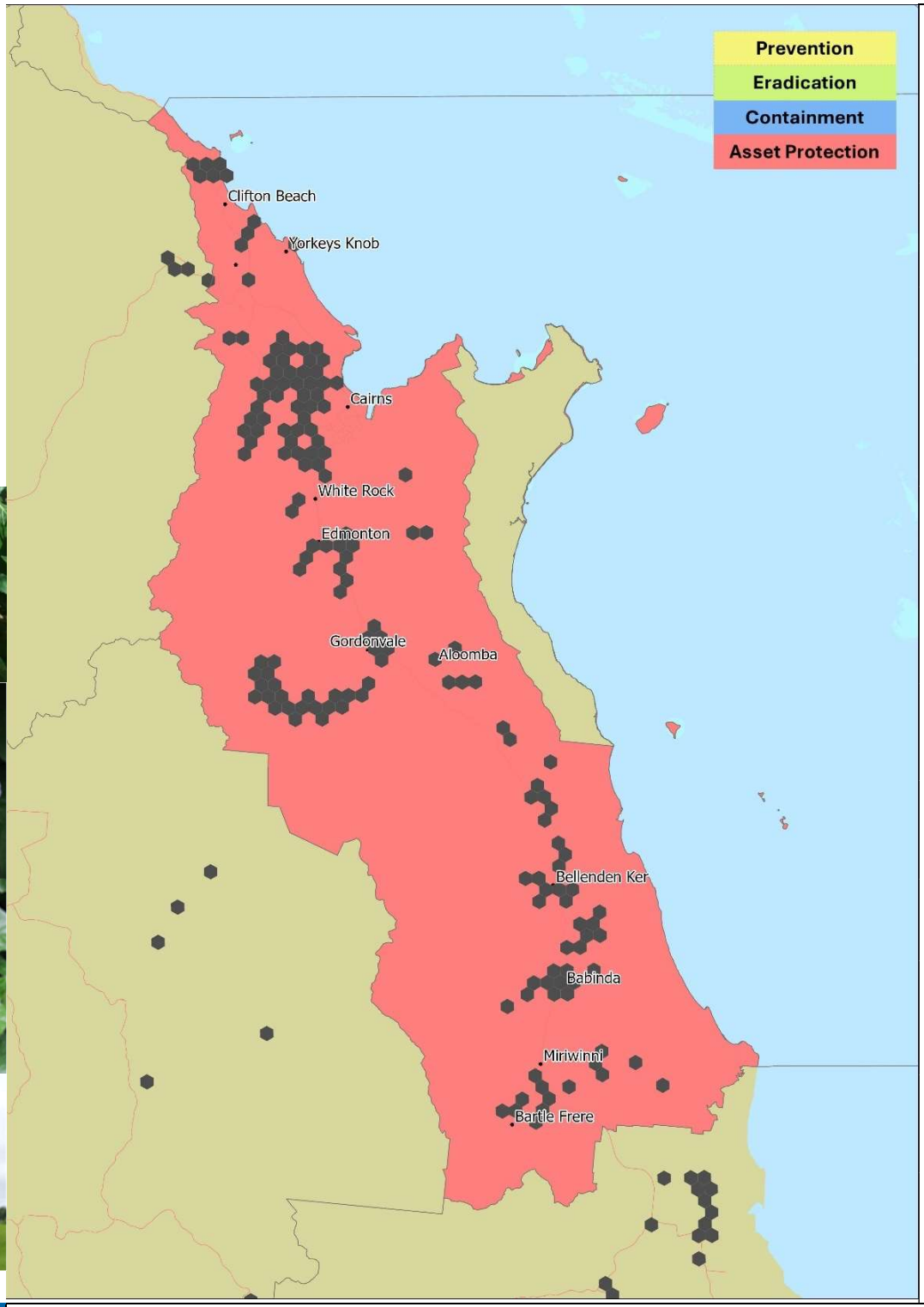
Thunbergia; Blue (*Thunbergia grandiflora syn laurifolia*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	A rapidly growing vine which forms significant underground tubers. The lavender-blue trumpet shaped flowers are identical, but the leaves may vary. Leaves form a choko-like shape to an oval shape with a narrow-pointed tip. There is some dispute if *T. grandiflora* and *T. laurifolia* is different species based on similarities, and historically some specimens labelled as *T. laurifolia* are now considered to be *T. grandiflora*. Minor differences do exist between the two but the extent of this can vary. For biosecurity considerations the differences are marginal.
Distribution	Infestations occur in scattered but localised infestations throughout the entire Cairns region particularly on forest edges, waterways and disturbed areas. The heaviest infestations occur in the Little Mulgrave area. Significant infestations can also be found in Edge Hill, Whitfield, Babinda and the Russell River Catchment.
Impacts	Thunbergia climbs and smothers native vegetation, killing and often pulling down mature trees with the weight of the vine. Dense infestations can prevent the recruitment and growth of native vegetation. In urban areas it can smother fences, damage buildings and degrade remnant vegetation in reserves and along waterways.
Key Projects	A council control program is underway on many of the known infestations in priority areas. Council is focusing first on upstream infestations in public areas. As of publication, Council has implemented a Biosecurity Prevention and Control Program including this pest. Herbicide assistance is available to manage private land infestations, if strategically beneficial.
Background	The main method of spread for Thunbergia is through the sharing of plants between gardeners. It is an offence under the Biosecurity Act to move, share, give away or sell this plant. Because it often grows on the banks of creeks and rivers, Thunbergia may be spread during floods and cyclones, or during clean-up work afterwards. Targeted treatment of upstream properties before downstream infestations is the most effective way to manage Thunbergia on a catchment scale. Mechanical removal of small infestations is possible but costly and destructive for larger infestations. For effective management for all methods, repeat treatments are required to ensure underground tubers do not re-establish or to identify missed tubers/fragments. There are native Thunbergia species and nursery species not generally considered weeds. 
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed. Tubers can take several months to completely die and decompose.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.



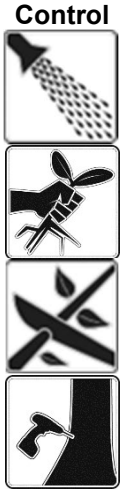




Biosecurity Act Restricted matter category

3
Do not distribute

Control



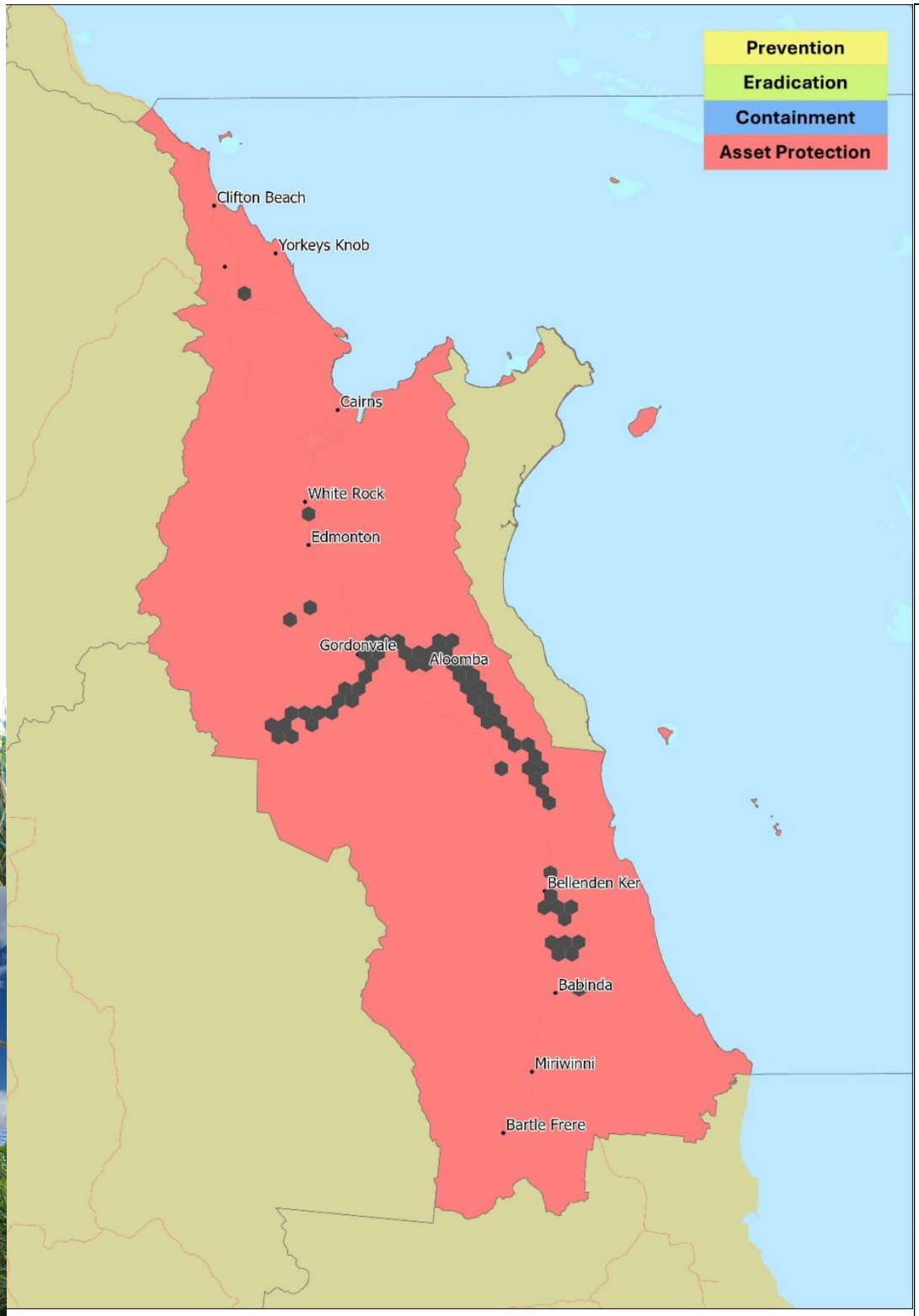
Spread

Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas. Make sure garden and green waste is disposed of at your local transfer station or processed on site. Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Maintain weed free areas. Identify high value assets and protect them from impacts where possible. Treat isolated infestations with high a risk of spread. Ensure any machinery or vehicles moving from known infestation areas are free from plant material and soil. Make sure garden and green waste is disposed of at your local transfer station or processed on site. Consider revegetation of open areas post treatment (without canopy cover), as a practical means to reduce reinfestation. When trees are being strangled, identify trees worth saving and likely to survive and treat with that in mind. Trees unlikely to survive post vine removal or already dead need to be managed with that in mind. Will they fall or is it worth foliar spraying pest vines instead? Some varieties of Thunbergia are known to seed in the region. If this is the case, follow-up treatment to remove seedlings rather than just targeting the tubers will be required. Report any suspected outbreaks or detections to Cairns Regional Council on 1300 69 22 47. Council can potentially provide assistance and a treatment demonstration depending on circumstances. Effective herbicide treatment is substantially more efficient than physical removal. Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Elephant Grass (*Pennisetum purpureum*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	Elephant Grass is a clump-forming perennial grass that can reach heights of up to 4m. Its leaves are pale green, measuring up to 4cm wide, and feature a prominent midrib that narrows to a fine tip. The large flower heads can vary in colour from yellow to purple and may extend up to 30cm in length, with delicate bristles along the spike. While Elephant Grass resembles sugar cane, it has narrower leaves and does not attain the same height, as sugar cane can grow up to 6m tall.
Distribution	Elephant Grass has become naturalized throughout northern Queensland. It is frequently found in coastal regions of Queensland and New South Wales, often growing wild along roadsides. Specific mapping of this pest is still scarce, but this pest is common throughout the region.
Impacts	Elephant Grass can form bamboo-like, densely tufted clumps which become invasive in bushland vegetation.
Key Projects	Given the spread and level of infestation across the region, no significant projects are currently primarily targeting this pest. It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as apart of other projects.
Background	Elephant Grass is native to Africa and was introduced to Australia as livestock forage. It is also utilized as an ornamental and structural landscaping plant, commonly planted as a windbreak, and is still recommended as a highly productive tropical forage grass. However, it is considered an environmental weed in disturbed areas. As an opportunistic weed, Elephant Grass can thrive in disturbed environments, often outcompeting native vegetation. In northern Queensland, it has become naturalized, and there is concern that these infestations could eventually replace native plant species. It is advisable to avoid ornamental plantings of elephant grass altogether, and existing forage plantings should be managed or removed. Additionally, unmanaged forage plantings that are not grazed can contribute to the spread of infestations.
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.



Environmental Weed

General Biosecurity Obligation (GBO) applies

Control

Spread

Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Ornamental plantings of Elephant Grass should be avoided in all cases, and existing forage plantings should be managed or removed.

Elephant grass can be grazed or dug/dozed out.

Some herbicides are available under general use off label permits to target environmental weeds including Elephant Grass.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

Giant Sensitive Plant (*Mimosa diplotricha prev. invisa*)

Risk Category	High
Recommended Management Objective	Asset Protection
Description	A shrubby or sprawling annual that has four-angled branches with a line of sharp, often with hooked prickles along the angles. Giant Sensitive Plant (GSP) produces small pale pink, fluffy and ball-like flowers. It generally grows as a scrambling shrub and is more upright than common sensitive weed. Seed pods are thorny and clustered.
Distribution	A weed of roadsides, cane fields, wetter pastures and riverbanks. Giant Sensitive Plant has a limited distribution in the Cairns region, but infestations can be found around Babinda and Mt Peter.
Impacts	Giant Sensitive Plant can choke cane, other crops and grasslands causing loss of crop and pasture production. It has a very long seed longevity (30+ years). Plants as small as 10cm can develop seed.
Key Projects	An effective bio-control agent, a psyllid which predates on growing tips of the plant, has proven to be successful in reducing infestations.
Background	Giant Sensitive Plant seeds are often spread via vehicles, machinery, stock or contaminated hay and raw materials. Hay from clean sources should be sought to prevent accidental introduction. Roadsides should be monitored in growing season to detect any new outbreaks. Stock should be spelled for 7 days prior to be released to drop any ingested seed. Taking care to clean down vehicles and avoiding infested areas altogether are useful strategies to prevent spread. Because of long seed life of GSP it is imperative to reduce the seed set and production by controlling known sites with an integrated approach using biocontrol, herbicide and pasture competition. Ensuring adequate buffers are maintained between active (growing) and dormant (seeds in soil) infestations will reduce likelihood of spread along watercourses and roadways. There are two biocontrol agents, the GSP psyllid which attacks growing tips, and a stem-spot fungus. Populations of psyllid should be checked between November to April to ensure they are active. Follow up biocontrol with slashing and herbicide immediately after the wet. In very hot and humid conditions the stem-spot fungus will also reduce the production of flowers and seeds. Cultivation and slashing prior to seed development can be used to control plants in intensive production areas and pastures. Maintaining weed hygiene measures including holding stock for 7 days prior to movement and machinery and implement clean-down can help to reduce spread to new locations.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.

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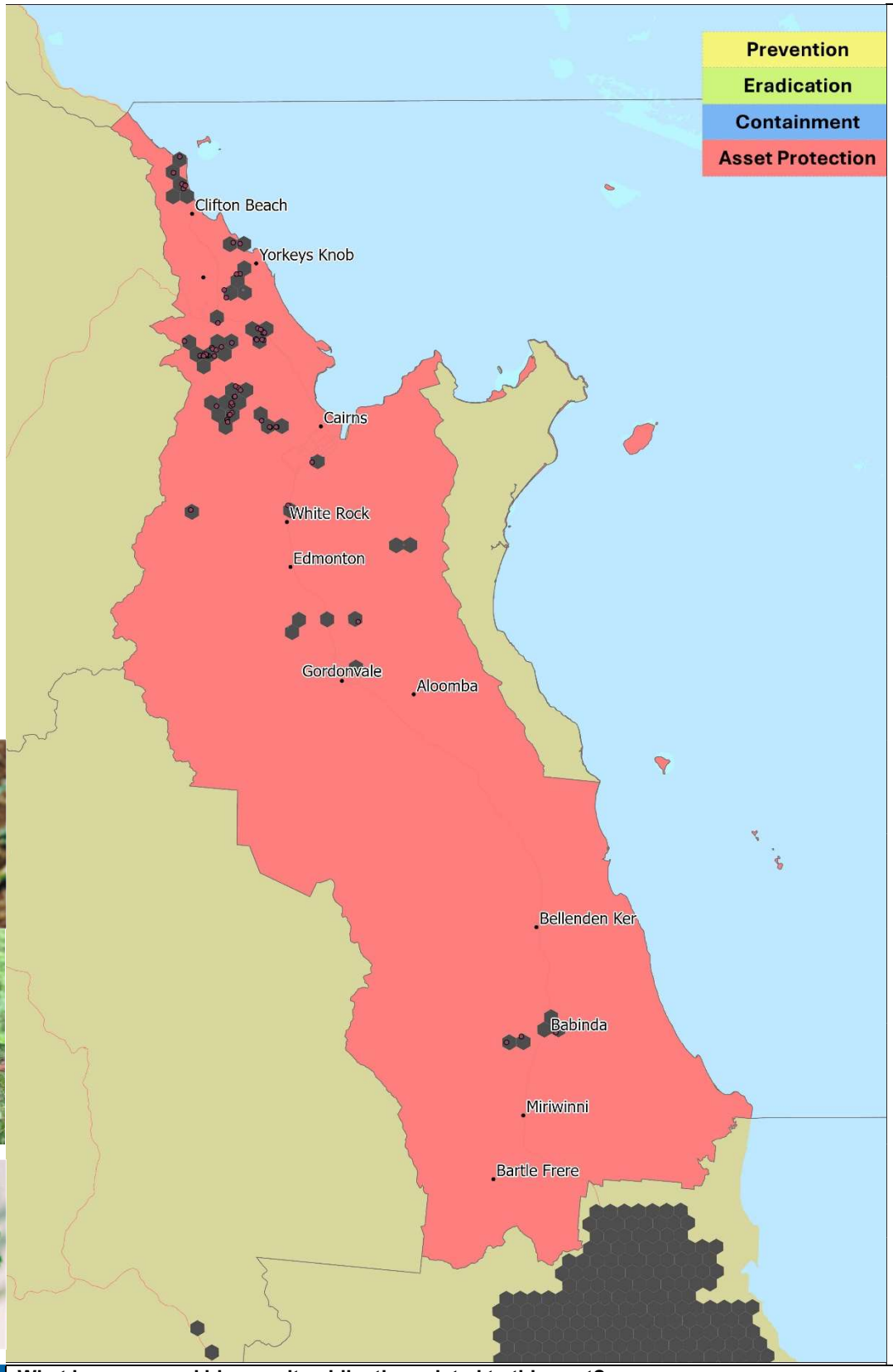
Cairns REGIONAL COUNCIL

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Ensure best practice weed hygiene measures are in place to reduce risk of spread to new locations. Maintain weed free areas. Identify high value assets and protect them from impacts where possible. Promoting healthy pastures through stocking rates and liming will assist to reduce the vigour and germination of Giant Sensitive Plant.

Cattle should be held or at least 7 days prior to moving from infested areas to allow seed to pass.

Seek advice prior to works in vicinity of known locations. Do not move or accept plant material or soil unless you are sure it is from a clean source. Contact Cairns Regional Council on 1300 69 22 47 to report any suspect plants.

Maintaining healthy pasture and ground cover will assist in the management of GSP. Restricting stock and machinery movement to and from infested areas is essential to reduce spread to new locations.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Para Grass (*Urochloa mutica*)

Risk Category	High
Recommended Management Objective	Asset Protection
Description	Para Grass is a perennial grass up to about 1 m tall. The stems are hollow and robust, creeping in a prostrate growth habit. Stems stand erect towards the ends and sprout new roots wherever the nodes touch the ground. Leaf blades are hairy and dark green in colour. They are usually up to 15 cm long and less than 1 cm wide, tapering to a long, fine point. The leaf sheaths are also hairy, particularly where they join the stem. Flower heads are up to 18 cm long and are made up of several spikes, each about 5 cm long. Seeds cluster thickly along each of these spikes.
Distribution	Para Grass is a common weed in many sugarcane growing areas and wet areas in the region. Heavier infestations occur in the southern catchments. Specific mapping of this pest is still scarce, but this pest is common throughout the region.
Impacts	Para Grass can be a very aggressive invader, particularly in low-lying un-grazed areas and in sugar cane crops. Para grass is often found in wet situations, especially drains, but will also grow in deep soils in non-swampy areas. The ability to thrive in wet areas highlights this species as a potential threat to natural wetland ecosystems. Native plants are significantly displaced by the vigorous growth of this weed. Para grass also invades areas of disturbed remnant vegetation on suitable soils. 
Key Projects	Given the spread and level of infestation across the region, no significant projects are currently primarily targeting this pest. It is one of a suite of widespread weeds that are generally managed as part of protecting key environmental areas impacted or as apart of other projects.
Background	Para Grass is a common weed in many sugarcane growing areas. It has been used in tropical locations as a fodder species, especially as a ponded pasture in beef production. 
Biosecurity obligations and legal requirements	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

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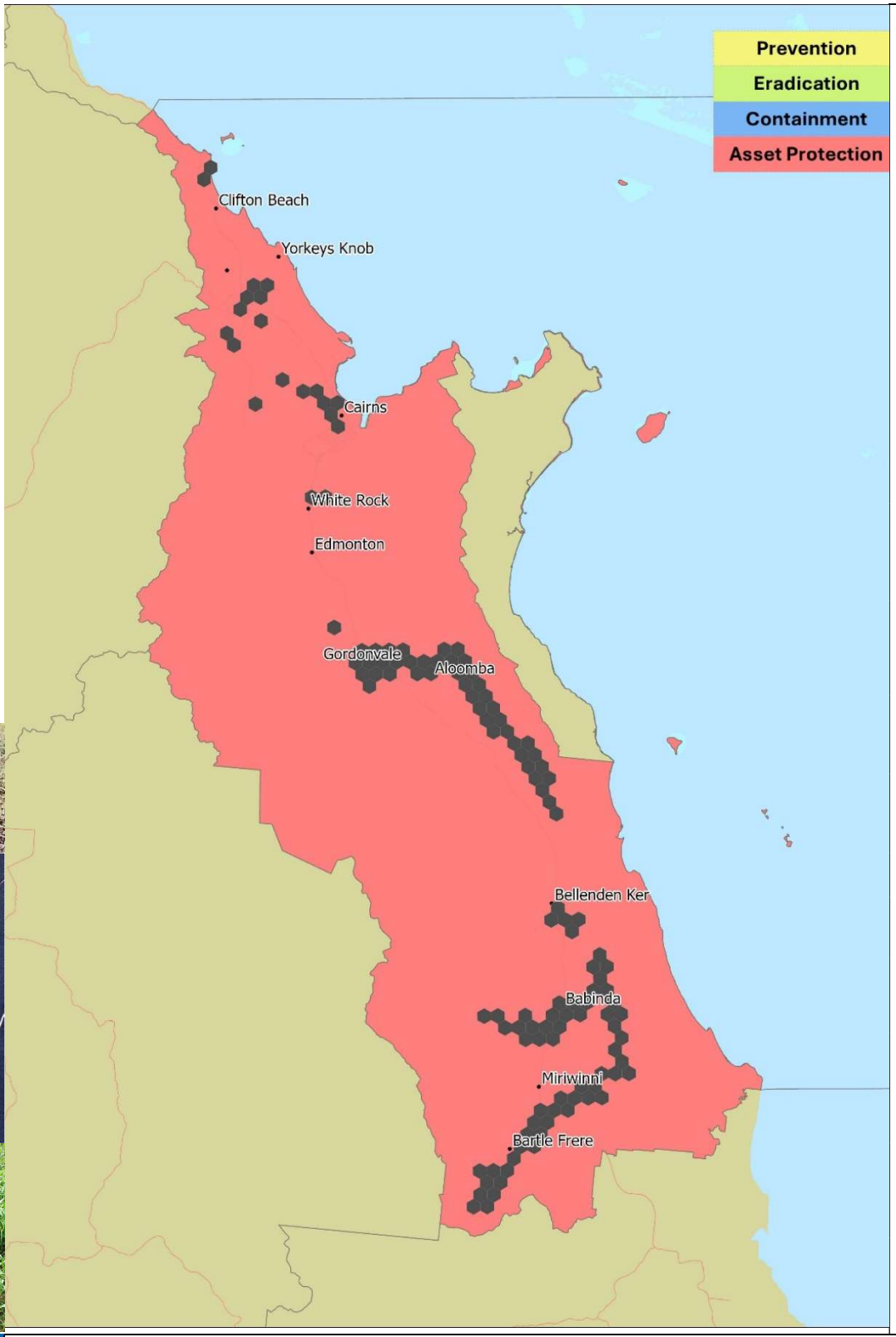
Biosecurity Plan
2025 - 2030



Environmental Weed

General Biosecurity Obligation (GBO) applies

Control

Spread

Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Grazing para grass prevents it dominating other vegetation.

If treating para grass in an aquatic situation, be sure to only use products registered for that particular use. Not in waterways deeper than 60 cm.

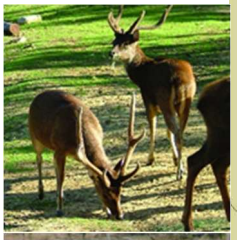
Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods. If alternate treatment methods are required, consult with Biosecurity Officers.

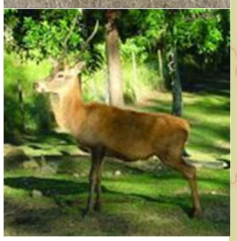
Deer; Feral (Red, Rusa & Fallow) (*Cervus timorensis prev. Rusa timorensis, C. elaphus, & Dama dama. Rusa unicolor prev. Cervus unicolor*)

Risk Category	Very High
Recommended Management Objective	Eradicate
Description	Rusa (*Cervus timorensis*) are the main pest deer known in the Cairns region. Historically other pest deer in the region has included Red Deer (*Cervus elaphus*), Fallow Deer (*Dama dama*) and Sambar Deer (Rusa unicolor). There are also hybrids of these species recorded. Refer to QLD Gov.'s Pest Fact Sheets for differences between deer species. Generally, antlers and skin colouration are sufficient to identify between species, but behaviour, scat and calls can also be used.
Distribution	Feral Deer are found at multiple locations throughout the south of Cairns. The largest infestation is in the East Russell area. Other small infestations are known and are thought to be less than 6 animals at each location, notably Bellenden Kerr. Rusa is currently thought to be the only known species of deer in the region, historically and recently other species were known, but no reports or observations have been reported in the last few years. Deer are considered a "cryptid" species in that they are difficult to detect and know the full population/ numbers. Detection can be particularly difficult in rainforest areas.
Impacts	Feral Deer have a wide range of impacts including posing a traffic hazard, harassment of domestic stock, competition for pasture, and damaging crops and gardens. They can have a range of environmental impacts from grazing/browsing sensitive vegetation, contribute to erosion, to competition for resources. Feral Deer may carry diseases of livestock.
Key Projects	Council has actively been addressing known Feral Deer populations across multiple locations, with monitoring and management activities ongoing including drone surveillance, luring, trapping, fencing and ground shooting.
Background	Feral Deer can be costly and complex to manage in forested and peri-urban situations due to their ability to cover large areas and traverse rugged terrain. The most effective strategy for preventing the impact of Feral Deer in the Cairns region is to ensure farmed animals do not escape enclosures, and that further animals are not released into the wild. Cairns Regional Council is actively working to identify the species, extent, and number of all known Feral Deer populations so that effective continued action can be taken. Management actions on individual populations or animals will continue on a case-by-case basis. Generally the minimum escape-proof enclosure for farmed deer or an exclusion fence for Feral Deer is a well-maintained high netting fence or equivalent. An example of an effective deer fence is one that; is 2.1 metres high; has strainers and posts made of heavy-duty material (such as hardwood or metal) set deeply into the ground no more than 9 metres apart; has netting of 17/190/15 or 13/190/30 (for Red deer), supported by well-strained top, bottom and belly wires and pegged securely to the ground; has gates of similar standard and the same height; and has cleared fence lines to minimise the chance of trees falling on the fence. Note that this is an example only and fence construction should be appropriate for the individual circumstances. Trapping has had some success in the region. 1080 poison baiting is not permitted for Feral Deer. Most deer species require a permit or State approval to keep or farm. As soon as deer is not actively being farmed and is in a wild state it can be considered a feral animal. In addition, Sambar deer, a species found in the region, cannot generally be kept or farmed without a permit and is considered a pest. Hybridised deer e.g. a Sambar/Rusa cross, are considered as Sambar, (the species with the higher pest status), and cannot be kept or farmed. It is currently thought that all known Samba Deer have been removed from the region. Some risk remains that isolated or hybridised populations still exist. Current efforts are focusing on establishing confidence that these are eradicated in the region. Actively farmed or kept deer under permit are considered livestock. Reasonable effort must be made to contact an owner for recovery. Contact Council on 1300 69 22 47 for livestock issues or reporting escaped livestock. Suitable fencing is required for keeping or farming deer. Council considers the fence design and construction standard set in the *Feral Deer Management Strategy 2013–18* as suitable guidelines for deer fencing.
Lifecycle	To reduce populations of this pest over time, approximately 40% of the population needs to be removed per year to disrupt increases from breeding. Rusa breeding peaks Jun to Oct, with the males and females generally separating rest of year.
Obligations related to restricted matter	Under the Act you must not move, feed, give away, sell or release this pest into the environment. Penalties may apply. Any Sambar or hybridised Sambar species additionally cannot be kept and must be destroyed. This Biosecurity Plan does not include management of escaped livestock, unless they become unfarmed, (pests). Livestock are managed in accordance with Cairns Regional Council's local laws. For livestock queries contact Council on 1300 69 22 47.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030





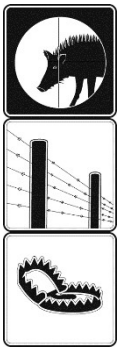
Biosecurity Act Restricted matter category

3 Do not distribute

4 Do not move

6 Do not feed

Control



Eradication; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Speak to Council on 1300 69 22 47 for best practice management advice and discuss the range of assistance options available. Landholders should consider various management solutions including fencing and shooting, dependant on their location and capability.

Fencing requirements are enforceable under Local Law No. 2 (Animal Management) s9 (2) (a) Minimum standards for keeping animals and s29 Duty to provide proper enclosure and prevent animal from wandering.

Deer contained within a deer-proof fence (e.g. on farms or in game parks) are not restricted invasive pests. Any deer not actively being farmed within a deer-proof fence is considered feral or wild and subject to control.

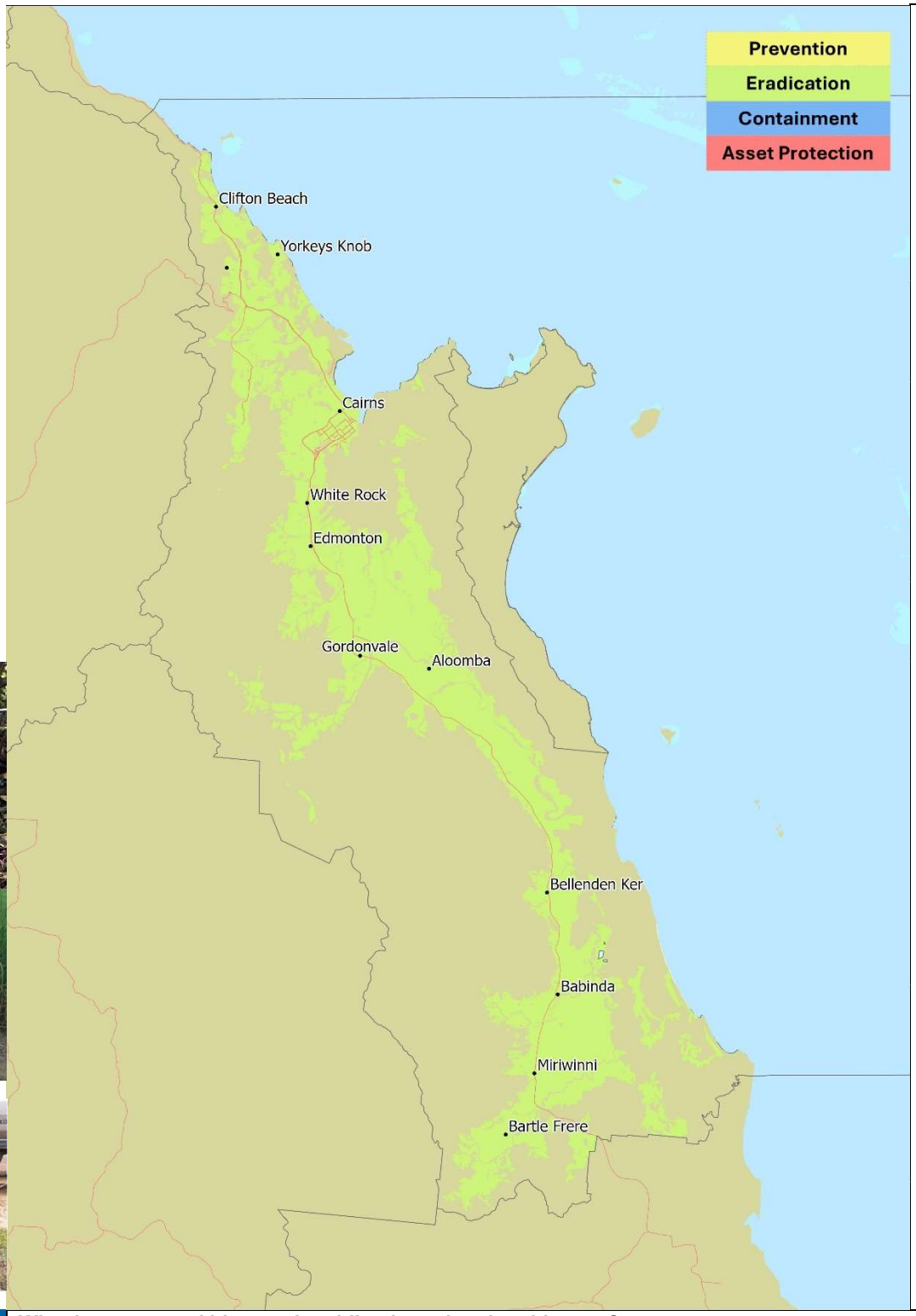
Report any suspected sightings of Feral Deer other than Rusa, to Council on 1300 69 22 47.

Any identified Samba deer or deer hybridised with Samba are to be destroyed. Given the history of Rusa crossing with Samba in the region is visually difficult to identify, any trade of deer species from potentially hybridised herds should be genetically tested before sale and destroyed if appropriate.

Dingo (*Canis familiaris Dingo*)

Risk Category	High
Recommended Management Objective	Eradicate *(when identified as a safety hazard)*
Description	This is specific to Dingoes and not Feral Dogs or Domestic Dogs. Hybrids are currently addressed on a case-by-case basis but are held to Dingo standards for pest management obligations. There are far greater physical variances in Dingoes than commonly thought. Local Dingoes are commonly smaller stature, thinner and can be black through to brindle. Dingoes that are completely white are not unknown. Conversely many reports of Dingoes are received by Council for Domestic Dogs with golden colouration and kelpie like features. Colour should not be treated as a sole good indicator that any animal is a Dingo.
Distribution	Dingoes are widespread in both the agricultural and natural landscapes in the region but tend to be localised on farmland and rainforest areas. In the urban interface, Dingoes are less commonly found than Feral Dogs. Small populations of Dingoes are known throughout the Cairns region.
Impacts	Dingoes generally are considered to have a lower impact than Feral Dogs in the region with different behaviour patterns associated. Generally they are considered less aggressive and more risk averse around livestock and human activity. They can cause stock losses in calving season and can carry parasites and pathogens. Near towns they can cause nuisance and impact on domestic animals. Dingoes will prey on native animals and may assist maintaining healthy populations of animals like Wallabies. In agricultural areas it is commonly thought that Dingoes contribute to rat and other vermin control. People feeding Dingoes has been known to contribute to issues by overcoming reluctance of Dingoes to approach humans. Anecdotally, most encounters are with young males as they move around regions. Peak activity appears to be in August to October.
Key Projects	Council and QPWS addresses Dingo issues on a case-by-case basis and dependant on risk and location.
Background	Dingoes are currently listed under the Biosecurity Act as a *restricted invasive animal*. Recent studies and data have overturned prevailing ‘common’ knowledge that most Dingoes were hybridised significantly with Domestic or Feral Dogs. Secondly, this research has indicated that many animals previously called 'Wild Dogs' are genetically predominantly Dingoes. Data also indicates that hybridisation is rare, with most animals tested being found to be significantly Dingo and any crossing was not recent. Traditional landholders have cultural interests and belief systems seeking protection for Dingoes. A National First Nations' Dingo Forum was held in Cairns September 2023 resulting in a National First Nation's Dingo Declaration calling for changes to Dingo management and in mind of recent research and cultural interest. Dingoes are protected as native wildlife under the Nature Conservation Act and as such are protected in National Parks. However, under the Biosecurity Act, and all other areas, Dingoes are still considered a pest requiring suitable management with biosecurity obligations associated. Currently a rapidly moving research and public policy space. Long term, legislative guidance is expected but nothing is expressly identified at this stage. Regardless of status, under both situations it is an offense to feed Dingoes. If large stock is attacked this is generally thought to be Feral Dogs rather than Dingoes specifically. Anecdotally, Feral Dogs are considered more aggressive and less shy than Dingoes, meaning that Dingoes are considered lower risk. Historically, Feral Dog programs have indiscriminately managed pest dog populations. The preference for management of any problem Dingo populations in the future should be targeted and considerate of new learnings. Best practice procedures for assessing problem Dingoes on a case-by-case basis are in development.
Lifecycle	Dingoes are known to breed for only one season per year, usually April to June. Litter size is generally between 4-6 pups. Any pups sighted earlier than June are likely to be Feral Dogs, not Dingoes. This is not a good indicator rest of year.
Obligations related to restricted matter	Under the Biosecurity Act you must not move, keep, feed, give away, sell or release this animal into the environment. Penalties may apply. This Biosecurity Plan does not include management of straying or problematic Domestic Dogs, (including hunting dogs). These animals are domestic animals and are managed in accordance with Cairns Regional Council’s local laws. For Domestic Dog queries contact Council on 1300 69 22 47.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

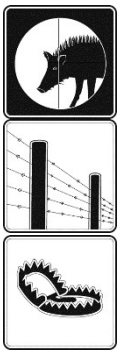
3 Do not distribute

4 Do not move

5 Do not keep

6 Do not feed

Control



Eradication; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Dingoes, when identified as a safety hazard by demonstrated dangerous behaviour, should be removed on a case-by-case basis.

Cage trapping is considered ineffective for Dingoes.

Leg or snare trapping is considered humane, targeted and is the current preferred option in the region for removal of problem identified dingoes.

Broadscale poison baiting is indiscriminate and may impact other unproblematic dingo populations causing additional impacts. Selective baiting may be possible with sufficient management practices but is only practical in some rural areas.

Landholders should consider fencing options or guardian animals as preventative options.

It is illegal under the Biosecurity Act to keep Dingoes without a permit.

Any attacks or aggressive behaviour should be reported to Council or Protected Areas Land Managers, (such as Qld Parks and Wildlife in State parks), depending on location.

Dog; Feral (*Canis familiaris*)

Risk Category	Very High
Recommended Management Objective	Eradicate
Description	Feral Dogs include wild or feral populations of Dogs. This grouping does not include purebred Dingoes or hybrids. Some information below may be relevant to Dingo issues but is largely addressed in its own action plan.
Distribution	Feral Dogs are widespread in both the agricultural and natural landscapes. They also frequently exist on the outskirts of towns and even within urban areas. Small populations of Feral Dogs are known throughout the Cairns region.
Impacts	Feral Dogs can cause stock losses in calving season and often carry parasites and pathogens. Near towns they can cause nuisance and impact on domestic animals. Feral Dogs will prey on native animals and may assist maintaining healthy population of animals like wallabies; however they are known to impact on more vulnerable animals like cassowaries.
Key Projects	Council offers trapping and baiting assistance for Feral Dogs in the region. This is dependent on resources, landholder capability and obligations. In rural areas and for small numbers, on ground shooting by landholders is considered the most effective management strategy, as human scent associated with traps and activity can significantly deter dogs from control areas reducing success.
Background	Feral Dogs have defined home territories but are able to cover large distances when moving to new areas either through competition for resources or by being pushed out of areas by more dominant animals. In urban and settled areas Council will respond to individual issues as they arise on a case-by-case basis. Whilst Feral Dogs are generally not aggressive to people, they may display threatening behaviour such as attacking Domestic Dogs, scavenging or stalking. Domestic pets and poultry are best protected by dog mesh fencing. Fencing also restrains your domestic animals and may assist in preventing other animals such as wallabies or pigs entering your property. Feral Dogs are opportunistic, and scavenging can form a regular part of their diet. Ensuring appropriate security and disposal of domestic rubbish and food scraps will assist to reduce food sources for Feral Dogs. For advice on best practice Feral Dog management and possible assistance, contact Council on 1300 69 22 47. For domestic or escaped dog issues contact Council's Animal Management department on the same number.
Lifecycle	In good conditions Feral Dogs can have two breeding events per year. Any pups sighted earlier than June are likely Feral Dogs, not Dingoes. This is not a good indicator rest of year.
Obligations related to restricted matter	Under the Act you must not move, feed, give away, sell or release this pest into the environment. Penalties may apply. Additionally, Dingo hybrids are not allowed to be kept and are considered Dingoes for the purpose of pest issues. This Biosecurity Plan does not include management of straying or problematic Domestic Dogs, (including hunting dogs). These animals are domestic animals and are managed in accordance with Cairns Regional Council's local laws. For domestic dog queries contact Council on 1300 69 22 47.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030

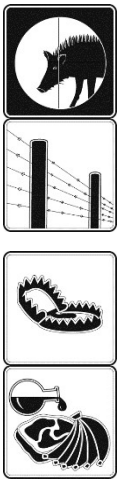
Biosecurity Act Restricted matter category

3 Do not distribute

4 Do not move

6 Do not feed

Control



Eradication; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Cage trapping may be effective but can be difficult to effectively implement.

Leg or snare trapping is considered humane, targeted and is the current preferred option in the region for removal of problem identified Feral Dogs.

Broadscale poison baiting is indiscriminate and may impact other unproblematic dingo populations causing additional impacts. Selective baiting may be possible with sufficient management practices but is only practical in some rural areas.

Ground shooting can be effective in rural areas.

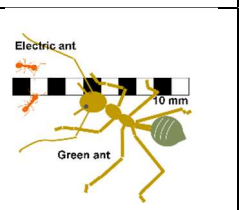
Landholders should consider fencing options or guardian animals as preventative options.

Feral Dogs are a restricted invasive animal under the *QLD Biosecurity Act 2014*. It must not be moved, fed, given away, sold, or released into the environment without a permit.

Fencing your property is the most effective means of reducing the risk of Feral Dogs impacts on domestic pets and poultry. Participating in cluster and good neighbour programs is the most effective means of controlling Feral Dogs in grazing areas.

During baiting or trapping programs notification should occur allowing pet owners to secure animals from harm. Failure to secure animals could lead to fines.

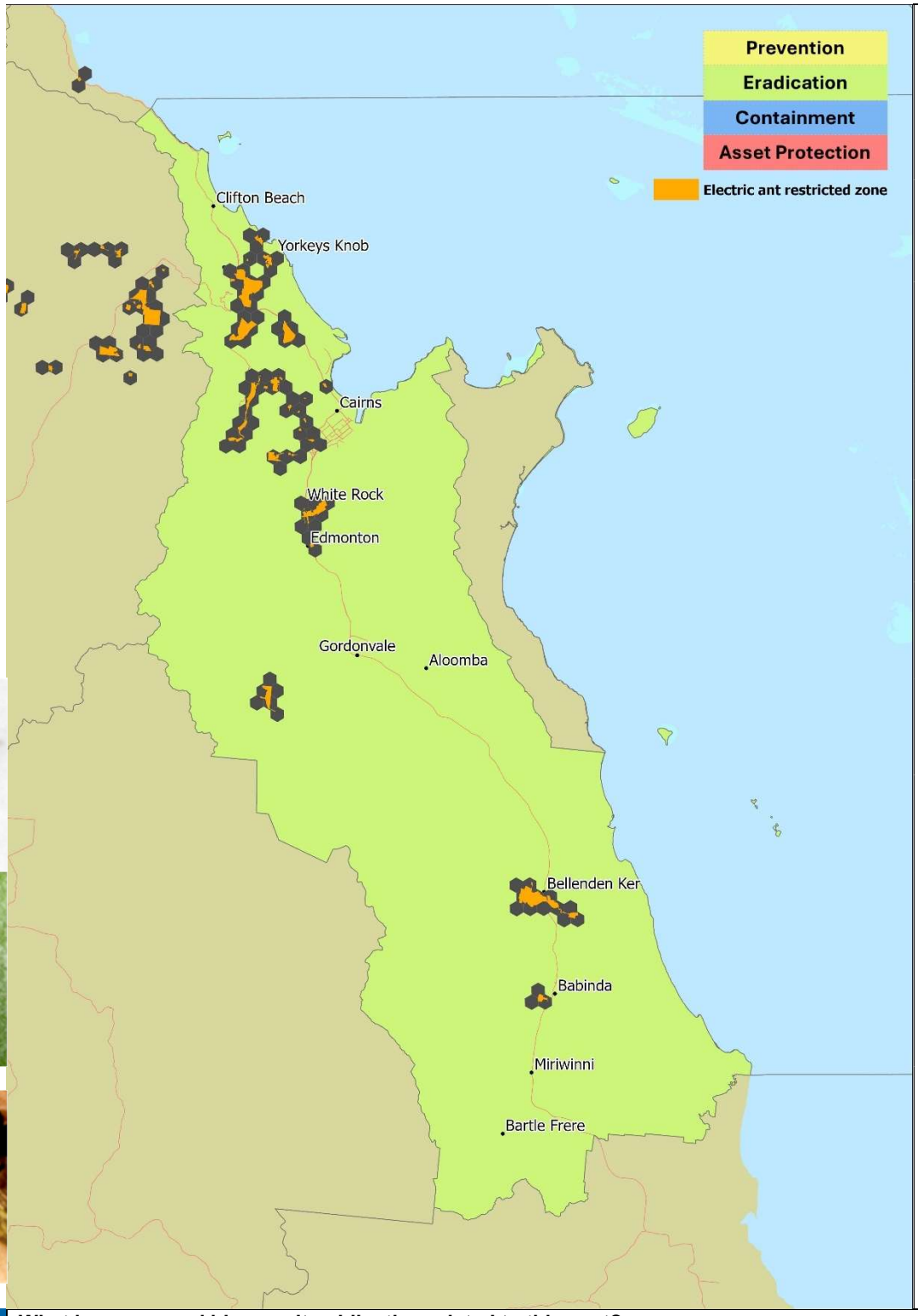
Electric Ant (*Wasmannia auropunctata*)

Risk Category	Very High
Recommended Management Objective	Eradicate* - Has a state or federally funded eradication program.
Description	Electric Ants are very small, about 1-1.5mm long. They are light brown to golden brown in colour, although the abdomen is sometimes darker. They are slow moving in comparison to many native ants and form distinctive foraging lines. They have a powerful, venomous sting. 
Distribution	Electric Ants were first found in the northern beach suburb of Smithfield in May 2006. They are predominantly spread by humans in pot plants, other plant material and illegal dumping of green waste so can be found anywhere there are human interactions. There are active infestations in many of Cairns' northern beaches, city, and southern suburbs, and in Little Mulgrave, Babinda and Bellenden Ker to the south. 
Impacts	Electric Ants are one of the world's worst invasive species. They have a powerful venomous sting and present a significant threat to biodiversity, agriculture, and lifestyle. They are also a hazard to human health with their venomous sting providing a significant danger to sufferers of anaphylaxis.
Key Projects	*All known and unknown infestations within the Cairns Region are the target of the nationally cost-shared National Electric Ant Eradication Program led by Biosecurity Queensland. All suspect ants are required to be reported to Biosecurity Queensland immediately on 13 25 23. Landholder assistance to this program is essential to enable ongoing eradication efforts.
Background	Electric Ants are a notifiable Category 1 pest *under the QLD Biosecurity Act 2014*, and as such, residents and businesses who have found suspect ants have to report them within 24 hours on 13 25 23. Residents within known infestations (restricted zones) cannot move live electric ants or electric ant carriers, such as plants, plant material and soil from their property to anywhere else within or outside of the restricted zone other than to a registered waste transfer station and informing the receiver that they have come from an electric ant restricted zone, without getting a Biosecurity Instrument Permit (BIP) from the Program. Known infestations are regularly treated with various granular pesticide products, depending on where the infestations are. The active ingredients can be either a slow acting toxicant insecticide, or an insect growth regulator (IGR). A gel bait has been developed for use in difficult, wetter areas and other new bait formulations are being trialled. Treatments are undertaken a minimum of one month apart until no more ants are found. All people within FNQ have a general biosecurity obligation (GBO) not to move Electric Ants. The longest recorded movement of Electric Ants was from the relocation of pot plants from Kewarra Beach to Bingil Bay. Most dispersal events occur through the movement of pot plants and plant material less than 5km from the source.
Lifecycle	Queens live for approximately 12 months and lay up to 70 eggs a day. Eggs are incubated for 8-10 days. Larvae develop for 14-16 days. Nymphal stage lasts 13-14 days. Adult workers live for more than 40 days. Males live for several weeks.
Obligations related to restricted matter	The *QLD Biosecurity Act* requires that all suspected sightings of electric ants must be reported to Biosecurity Queensland within 24 hours. Contact BQ on 13 25 23. By law, everyone has a general biosecurity obligation (GBO) to take all reasonable and practical steps to ensure that they do not spread electric ants. Electric ants or carriers must not be moved without a Biosecurity Instrument Permit (BIP), unless taken to a facility that accepts Electric Ant carriers.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Cairns REGIONAL COUNCIL

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

I
Must be reported

Control

Spread

In an Electric Ant Restricted Zone or Biosecurity Zone

What is my general biosecurity obligation related to this pest?

Electric Ants are a notifiable Category 1 pest under the *QLD Biosecurity Act 2014*. New detections are required to be reported to the eradication program within 24 hours. Call Biosecurity Queensland on 13 25 23.

Residents within infestations (restricted zones) cannot move live Electric Ants or Electric Ant carriers, such as plants, plant material and soil, without getting a Biosecurity Instrument Permit (BIP) from the Program.

All people within FNQ have a general biosecurity obligation (GBO) not to move Electric Ants.

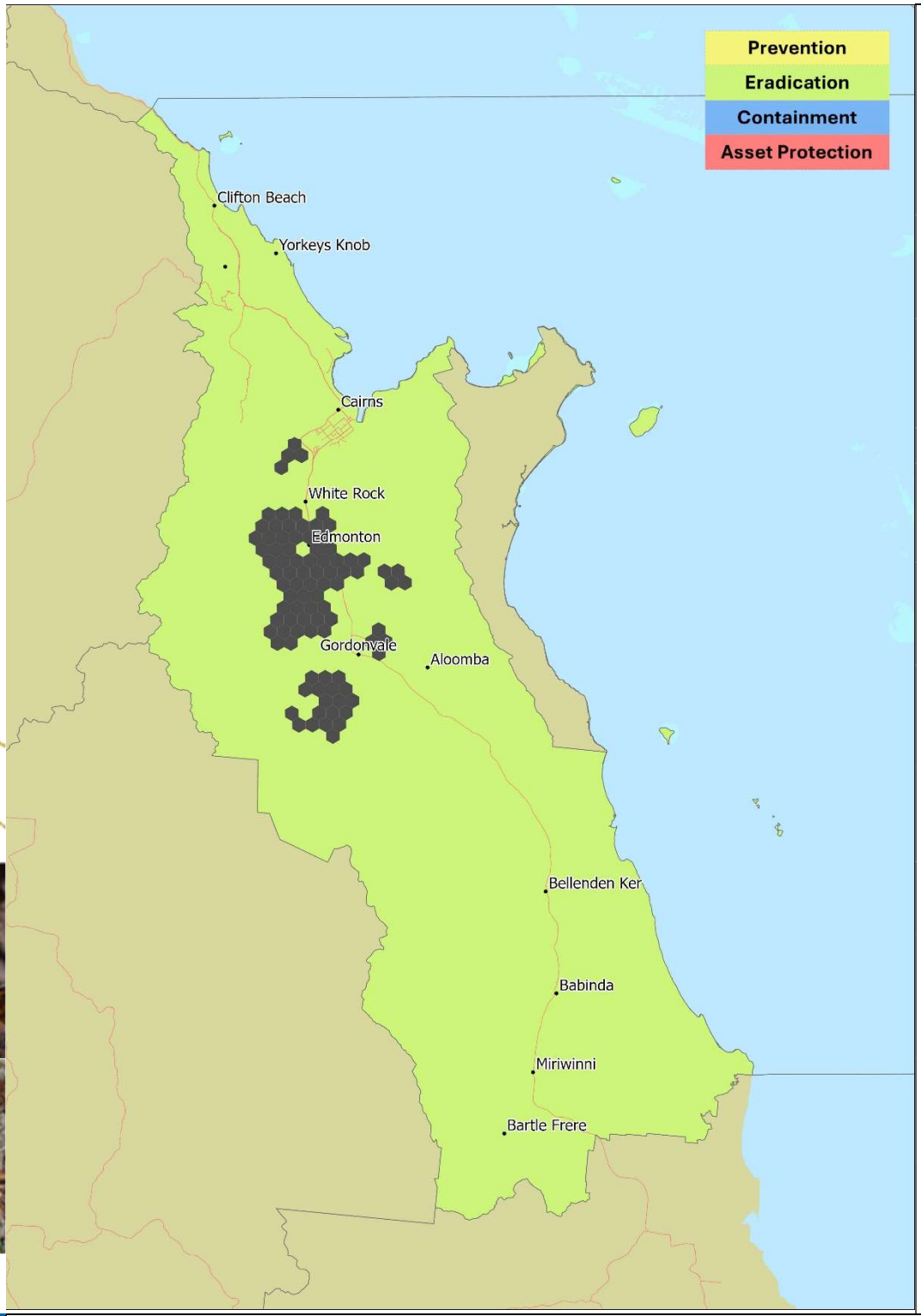
Along with carefully adhering to movement control of potentially contaminated materials and items you can assist the eradication effort by providing clear access to your property for any required survey or treatment operations.

Yellow Crazy Ants (*Anoplolepis gracilipes*)

Risk Category	Very High
Recommended Management Objective	Eradicate* - Has a state or federally funded eradication program.
Description	Yellow Crazy Ants are slender ants, about 4mm long, with long legs, large eyes and very long antennae. Coloured yellow to orange, they have a brown abdomen which may be faintly striped. They move in a distinctly erratic or 'crazy' manner when disturbed.
Distribution	Yellow Crazy Ants were first introduced to Cairns in 2001. They are now found over approximately 2400 ha in numerous infestations south of Cairns between Bayview Heights and Goldsborough, and in Kuranda. The ants have invaded approximately 211ha of the Wet Tropics World Heritage Area. They thrive in a wide range of natural and man-made environments. 
Impacts	Yellow Crazy Ants are one of the world's worst invasive species. They are a significant threat to the biodiversity of the Wet Tropics. In agricultural situations, they can facilitate pests such as aphids and other sap-sucking insects to proliferate, impacting plant health and productivity. They are also a significant hazard to human health and enjoyment of the outdoors.
Key Projects	The Wet Tropics Management Authority operates the Yellow Crazy Ant Eradication Program, which started in 2013. *The Program is currently funded through the Saving Native Species Program by the Australian Government, with matched funding from the Queensland Government.
Background	While the exact origin of Yellow Crazy Ants remains unclear, their current distribution extends through the tropical islands of the Indian and Pacific Oceans, where they are a major pest. This broad distribution is closely linked to human movement activities, such as the movement of cargo ships, and international trade has ultimately assisted them in reaching Australian shorelines. In Australia, Yellow Crazy Ants are now present in several sites throughout Queensland and Arnhem Land. In the Wet Tropics, Yellow Crazy Ant infestations are found in a variety of habitats, including residential areas, sugarcane fields and rainforest. Delimitation surveys are ongoing in the region, and several sites have been declared eradicated. Community and industry are being engaged to help identify Yellow Crazy Ants and are asked to report any additional sightings. In the Wet Tropics, Yellow Crazy Ant queens are not known to disperse by flying. Instead, colonies reproduce by a process called 'budding', in which a queen and a small group of workers walk a short distance to a new nest location. Yellow Crazy Ants also readily disperse downstream along waterways, particularly during flood events. The key mode of dispersal is human –assisted movement. Ants move as stowaways in soil, machinery, building materials, pot plants, and dry or green waste. It is crucial that high-risk waste is treated on site and that any waste is disposed of at your local landfill so it can be monitored and treated if any outbreaks occur. Regular treatments (about three times a year) using ant-specific granular baits have drastically reduced Yellow Crazy Ant numbers in most areas around Cairns. Eradication has been achieved in several areas, with more sites expected to be declared eradicated by 2026.
Lifecycle	• Eggs hatch after 18-20 days • Worker larvae develop in 18-20 days • Pupae of workers develop in 20-23 days, while queen pupae develop in 30-34 days • Total lifespan of a worker ant is approximately 78 - 90 days • Yellow Crazy Ants are most active in dry weather in temperatures over 17°C.
Obligations related to restricted matter	It is a category 3 restricted invasive pest under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. For any related advice, please contact the Wet Tropics Management Authority on 07 4241 0525.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Eradication; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Report any suspect Yellow Crazy Ants to the Wet Tropics Management Authority on 07 4241 0525. If you are unsure of the risk posed on your property, contact the Wet Tropics Management Authority's Yellow Crazy Ant Eradication Program for advice and assistance in treating your waste before transporting it off-site. Dispose of all green waste and other rubbish at your local landfill. Taking your waste to the local landfill allows for the monitoring and treatment of any outbreaks. You can assist the eradication effort by maintaining access tracks, reducing weeds and long grass along creek lines, and providing access to your yard for any required survey or treatment operations. For any further information on Yellow Crazy Ants in the Cairns Region contact: Yellow Crazy Ant Eradication Program - 07 4241 0525, yca@wtma.qld.gov.au.

Horses; Feral (*Equus caballus*)

Risk Category	Medium
Recommended Management Objective	Containment
Description	Feral Horses across the region are physically indistinguishable from domesticated horses and originate from domestic stock that have reverted to a natural existence.
Distribution	There is a known population of horses present in Upper Goldsborough. There are no other known populations in the region.
Impacts	Feral Horses cause soil impaction, erosion, a reduction in or elimination of native grasses, weed spread, increased nutrient loads, sedimentation in waterways and can spread disease. They pose a traffic hazard along roadsides and damage infrastructure such as fences. The horses have been known to cross into protected parks areas.
Key Projects	Rehoming would be the preferred option if it practically can be achieved. Some discussion has occurred in community regarding.
Background	The definition of horses as a pest is largely dependent on whether the animals are being husbanded (livestock) or living in a wild state independent of agricultural systems or domestic intervention. The consideration as an invasive animal is also dependent on context such as land tenure, land use and the cultural perceptions of landholders. Horses have no category specific requirements or designation, any action as a pest would be per the GBO. Introduced to the area as early as 1918, but potentially as late as the 60s. Multiple landholders and stock introductions may be the origin. with detail uncertain. Historically, some have been taken for local use. There is some community interest in the horses as "brumbies" but unless ownership is established the horses are legally unfarmed and can be considered pests. If ownership can be established, then the horses can be actioned as livestock with owner responsibility associated. Any current discussion or potential plans for trapping and rehoming the horses for domestic use are limited by demand as livestock and the costs to achieve, both of which have not been supported so far.
Lifecycle	Generally start reproducing at 4 years old for females, 5 years old for males but both can be earlier. Foaling is generally in spring and summer. One foal every two years appears to be the average in wild conditions.
Biosecurity obligations and legal requirements	Designated generally as livestock, (requirements as a registered biosecurity entity RBE). Otherwise no category specific requirements under the Biosecurity Act. Owners have a responsibility to recover and manage. Any pest obligations would be per the general biosecurity obligation (GBO), in line with risk and activity as practical and reasonable, (see next page).

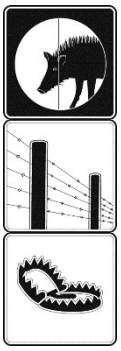
For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan
2025 - 2030

Environmental Pest

General Biosecurity Obligation (GBO) applies

Control



Containment; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
In areas where horses are regarded as an invasive animal, management options can include capture and removal, aerial culling and ground-based shooting. Landholders are responsible for management actions associated.

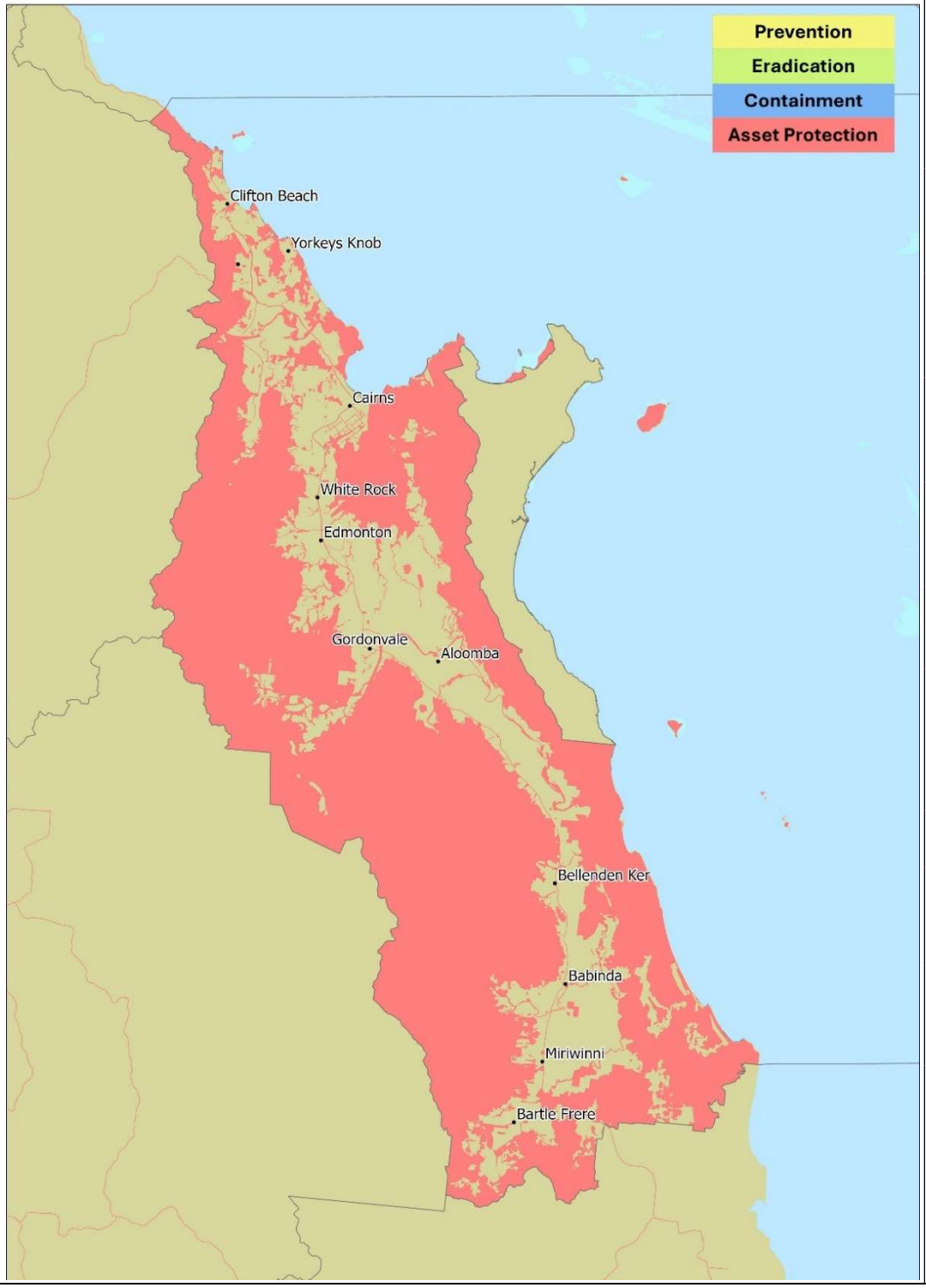
Should private landholders believe that Feral Horses are having a detrimental impact on the environmental character of their landholding, or are responsible for economic losses to agricultural production, and the scale of the problem excludes ground-based controls, assistance may be sought from regional organisations with access to funding streams aimed at pest animal management. This can include Council, NRM groups and Landcare Groups.

Pig; Feral (*Sus scrofa*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	Feral Pigs are usually coarsely haired and coloured black, buff or spotted black or white. They are generally nocturnal and camp in thick cover during the day. Feral Pigs are omnivorous and can range from 5 to 50 square kilometres. Feral Pigs breed year-round if the conditions are suitable often producing two litters a year.
Distribution	Feral Pigs are common and widespread in the floodplains and forests of the entire Wet Tropics region. Feral Pigs occupy most suitable habitat in the Cairns region including farmland, wetlands, riparian areas, forests, reserves and peri-urban areas. Distribution is often seasonal based on the availability of food and water.
Impacts	Feral Pigs damage crops, stock, property and the natural environment. They transmit disease and could spread exotic diseases. They have been identified as a likely vector of Panama Tropical Race 4 (TR4) a disease of bananas, and Japanese Encephalitis (JEV) which has potential for human health impacts.
Key Projects	Council offers trapping and baiting assistance for Feral Pigs in the region, dependent on resources, landholder capabilities and obligations. Council also operates a series of traps along the coast to reduce the numbers of pigs targeting areas of effective prevention, (before movement into target areas). Industry and land managers run a variety of programs and activities targeting this pest.
Background	Feral Pigs are thought to number around 24 million in Queensland and are one the most widespread and destructive invasive animals in the State. Their distribution and impacts are often seasonal and are heavily influenced by the availability of food, water and cover. An individual animal or a small group of pigs can do a large amount of damage in a single night, so it is important to be alert to any early signs of feral pig presence in your area; and to take steps to protect key assets like gardens, crops and vulnerable natural areas. Ensure best practice management actions are in place to reduce food opportunities for Feral Pigs. Pig proof fencing is by far the most effective means of reducing the impacts of Feral Pigs on domestic gardens and small crops. It is also a useful strategy for protecting vulnerable natural areas. A range of control options from shooting, to trapping and baiting are used to control Feral Pigs when required. No individual solution leads to permanent management and Feral Pigs will be an ongoing management issue in the region. In the Cairns region, trapping is the preferred method of pest animal management ahead of poison baiting. This is due to the relatively higher potential for off-target risks to the community, (population and land use), and wildlife (cassowaries etc.). However, 1080 poison baiting as a control method is considered more efficient for large numbers of pest animals. Ground shooting is considered the least effective method for controlling pig populations but can be useful for controlling small populations in limited access areas. Poison baiting is only available in rural agricultural areas. This is for both poison baiting requirements and risk management necessities.
Lifecycle	Peak activity varies with wet season, usually at the start of the year, (Feb.). Residential properties see increased disturbance in the dry season especially following mulching events. Other common movement patterns seem to be driven by disruptions during cane harvesting. To reduce populations of this pest over time, approximately 60% of the population needs to be removed per year to disrupt increase from breeding.
Obligations related to restricted matter	Under the Act you must not move, feed, give away, sell or release this pest into the environment. Penalties may apply. This Biosecurity Plan does not include management of straying or problematic domestic/livestock pigs unless the livestock become unfarmed. These animals are domestic animals or livestock and are managed in accordance with Cairns Regional Council's local laws. For domestic/livestock pig queries contact Council on 1300 69 22 47.

For more information on using this Biosecurity Plan and controls tools, refer to the Cairns Biosecurity Plan available at https://www.cairns.qld.gov.au/ and customer service centres.

Biosecurity Plan 2025 - 2030



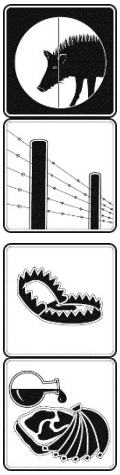
Biosecurity Act Restricted matter category

3 Do not distribute

4 Do not move

6 Do not feed

Control



Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Ensure best practice biosecurity hygiene measures are in place to prevent spread of other biosecurity matter when controlling, trapping or hunting pigs. Residents in rural areas should consider various management solutions including fencing, shooting, baiting and trapping, dependant on their location and capability. Residents in urban areas should consider temporary fencing, alternatives to mulching or garden arrangements and trapping. Speak to Council on 1300 69 22 47 for best practice management advice and discuss the range of assistance options available. To be eligible for assistance, residents or community groups must be able to: Give permissions for activity and entry consent requirements on the land on which the problem persists. Failing that, the land in question must be accessible land where permissions can be arranged. Be able to monitor any traps placed on land for humane requirements and to monitor against off-target native wildlife capture. In agricultural areas, be ready and willing to destroy and/or dispose of any trapped pest animals if practical and reasonable to do so. Farms are expected to have capability for managing pigs on property, but some form of assistance may be possible depending on practicalities and situation. Be on the lookout for any evidence of disease in Feral Pigs or unhealthy-looking pigs and report to Biosecurity Queensland on 13 25 23 or contact the Emergency Disease Watch Hotline on 1800 675 888.

Cat: Non-domestic (*Felis catus*)

Risk Category	Very High
Recommended Management Objective	Asset Protection
Description	Non-Domestic Cats originated from Domestic Cats and have a lengthy history of adapting to the Australian environment. While they resemble Domestic Cats, they tend to be larger, especially in the head and shoulder areas. Their fur is typically short and comes in various colours. Males can weigh as much as 6 kg, while females can reach up to 4 kg. These cats are primarily nocturnal, being most active during the night.
Distribution	Non-Domestic Cats are present in all areas of mainland Australia and many islands. Recent studies have identified Non-Domestic Cats in significant numbers, in all surveyed areas of the Wet Tropics Bioregion. This includes mountain ranges and wetter areas not traditionally thought of as suitable habitat.
Impacts	Non-Domestic Cats consume a wide range of small to medium-sized prey, including birds, reptiles, amphibians, mammals, marsupials, fish, and insects, significantly affecting native wildlife. They compete directly with native carnivores and can carry Toxoplasmosis, which poses a threat to marsupials. Additionally, Non-Domestic Cats often scavenge in urban areas and may hunt domestic pets and poultry.
Key Projects	Due to the lack of effective management tools, Non-Domestic Cats are typically not controlled on a landscape scale. Instead, they are primarily addressed through species recovery programs and the protection of important environmental assets. QPWS has extensively investigated management options within the Wet Tropics Bioregion and is continuing to investigate distribution, behaviour and management. Local QPWS Officers are considered the experts at this time.
Background	Commonly referred to as Feral Cats, the preferred terminology of Non-Domestic Cat is on the basis of clearly delineating when cats are actionable as pests or not. Non-Domestic Cats are unowned and the basis of listing in the Act; feral is less clearly specified. Although there is no coordinated management in place, various control methods can be implemented at a local level, such as shooting, trapping (using cage and leg-hold traps), limiting access to food sources, and promoting responsible Domestic Cat ownership (including desexing and keeping cats indoors, or within a yard enclosure). It is advisable to use an integrated management approach that combines several of these strategies on a case-by-case basis. Non-Domestic Cats pose a significant threat to all native wildlife, and special attention is needed in areas with critical biodiversity assets. They can capture prey weighing up to 3 kg but more frequently hunt small mammals, marsupials, reptiles, and birds. Non-Domestic Cats have been linked to the extinction of several Australian mammal and marsupial species and are found in over 99% of Australia.
Lifecycle	Males mature at 12 months; females mature at 7 months. Possibility for 2-3 litters of 2-7 kittens annually. Non-Domestic Cats have an average lifespan of 5 years. Breeding season considered locally to be in September. To reduce populations of this pest over time, at least 57% of the population needs to be removed per year to disrupt increase from breeding.
Obligations related to restricted matter	Under the Act you must not move, feed, give away, sell or release this pest into the environment. This includes releasing or dumping of Domestic Cats. Penalties may apply. The definition of a Non-Domestic Cat includes Bengal Cat hybrids derived from *Prionailurus bengalensis x Felis catus*. Any other species of cat is prohibited in Queensland and must be reported within 24 hours to Biosecurity Queensland on 13 25 23. This Biosecurity Plan does not include management of straying or problematic Domestic Cats. These animals are domestic animals and are managed in accordance with Cairns Regional Council's local laws. For Domestic Cat queries contact Council on 1300 69 22 47.

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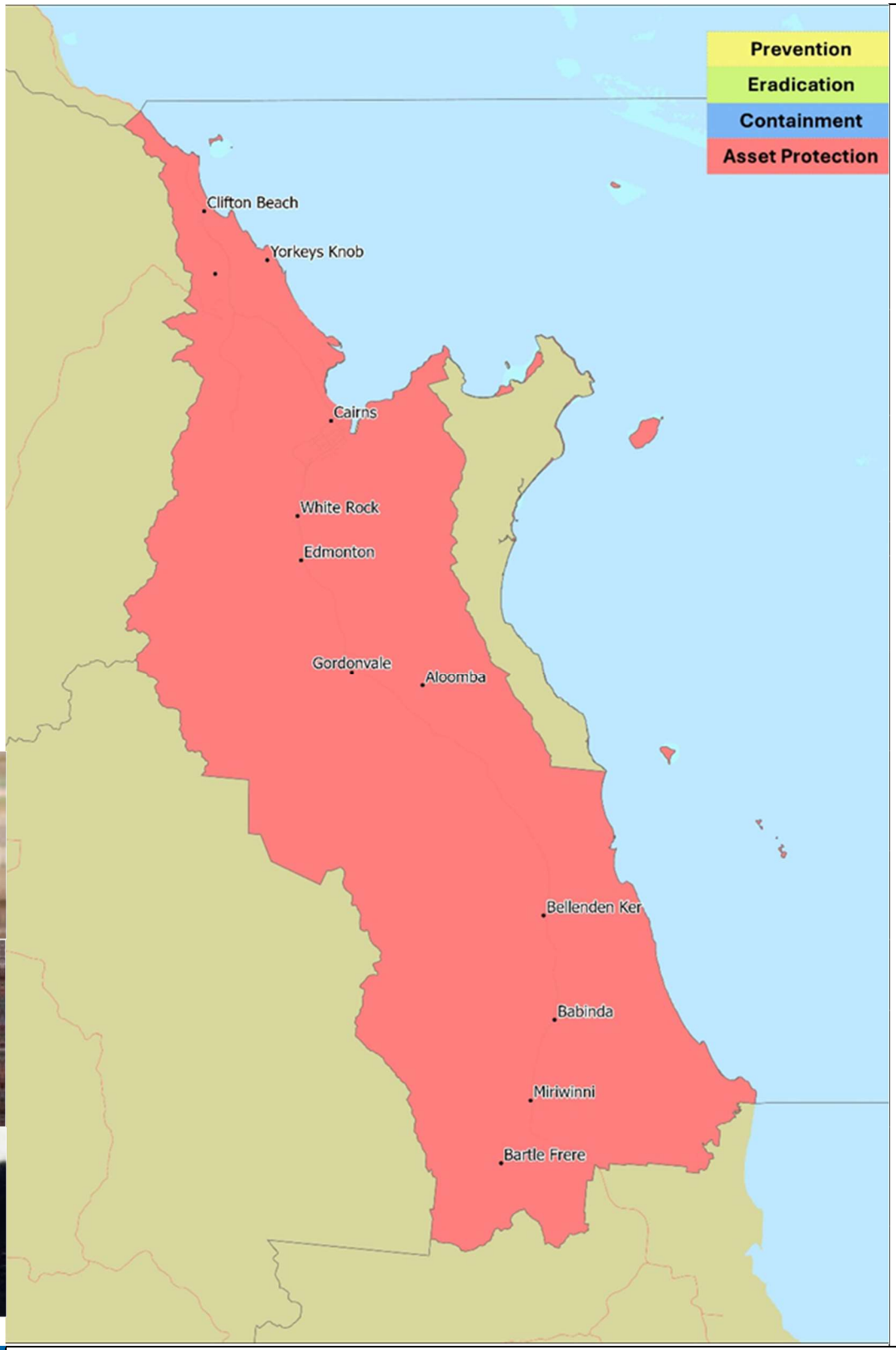
Biosecurity Plan 2025 - 2030



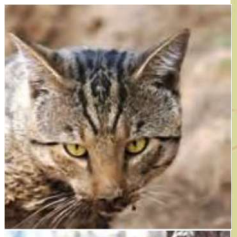
Biosecurity Act Restricted matter category

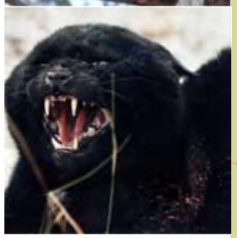
3 Do not distribute

4 Do not move

6 Do not feed

Control





Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** As a result of the lack of broad scale management options for the control of Non-Domestic Cats (i.e. baiting programs), there is currently no coordinated management programs active within the Cairns local government area. Despite this, a range of management options that can be applied at a local level do exist and these include shooting, trapping, restricting access to potential food sources such as dump points and responsible Domestic Cat ownership, (de-sexing, keeping cats confined etc.). From a cost effectiveness and efficacy standpoint, cage trapping is one of the most effective strategies. Integrated management utilising a number of these methods is recommended.

Leucaena (*Leucaena leucocephala*)

Risk Category	Very High
Recommended Management Objective	Asset Protection - Not considered a priority for action in the region but has been included for information purposes due to community interest.
Description	Leucaena is a shrub that can reach a height of approximately 6m. Its leaves are around 25cm long and are bipinnate, featuring dull, greyish-green leaflets. The flower heads are spherical and creamy yellow, situated on short stalks measuring about 5cm in length. The flattened pods, which can grow up to 15cm long, appear in dense clusters, with each pod containing roughly 20 flat, glossy-brown seeds that disperse when they mature.
Distribution	Leucaena has invaded many disturbed sites and creek lines in the region.
Impacts	Established stands of Leucaena form dense thickets, hindering the movement of wildlife and excluding all other plants. These thickets can also decrease visibility along roadsides. Horses have been known to lose hair if too much is eaten.
Key Projects	Council has recently implemented a conditional local declaration in mind of recent industry efforts to increase available tropical varieties in the region. This is specifically targeted at Leucaena that is unfarmed or not managed per best agricultural practices to prevent further invasion of landscapes.
Background	Leucaena has been planted for fodder in many tropical areas of the world, including Queensland where an introduced bacteria (rumen inoculum) prevents ruminant problems, (a toxic amino acid is found in Leucaena). Unless it is heavily grazed or otherwise controlled, it can rapidly spread to adjacent areas. Recently, new varieties, considered sterile have become available that are Psyllid resistant and more suitable for the Tropics. Compliance capability related to Leucaena's local declaration is intended to be used primarily to prevent new infestations from poor land practices allowing new varieties into the region. This is on the basis that existing varieties in the landscape are highly difficult to manage when established. Isolated infestations impacting sensitive areas may also be considered an appropriate target if practical inroads and follow up management can be reasonably implemented. Leucaena seed can last over 20 years. Any management targeting removal from a site needs to consider ongoing monitoring of the site. Seeds germinate readily, so seedbank exhaustion is a viable management strategy. Established pest stands of Leucaena can be difficult to manage and the scale of infestation in the region leaves management dependant on significant resourcing. Individual plants are relatively easy to treat.
Biosecurity obligations and Local Law requirements	Council has locally declared this plant as a pest. As such, properties can be searched and directions requiring specific action may be given to landowners for this pest. This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

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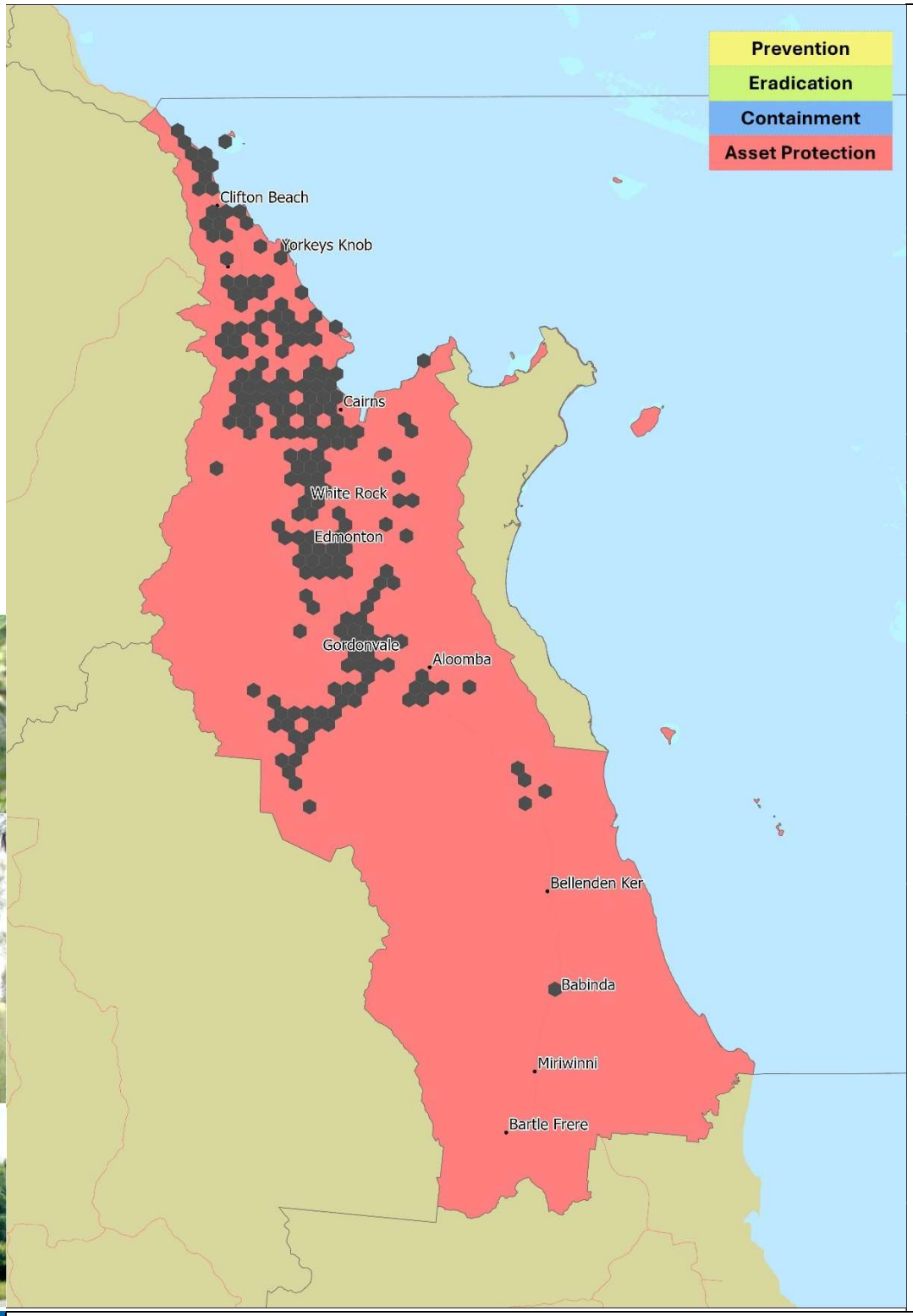
Biosecurity Plan 2025 - 2030



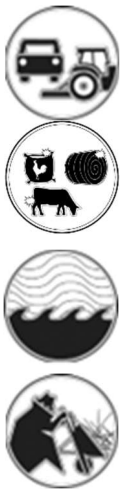
Local Laws apply

Must not propagate

Must not sell or supply

Control

Spread



Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Effort should target preventing new infestations as a priority.

Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Small individual plants can be manually removed, taking care to remove the roots.

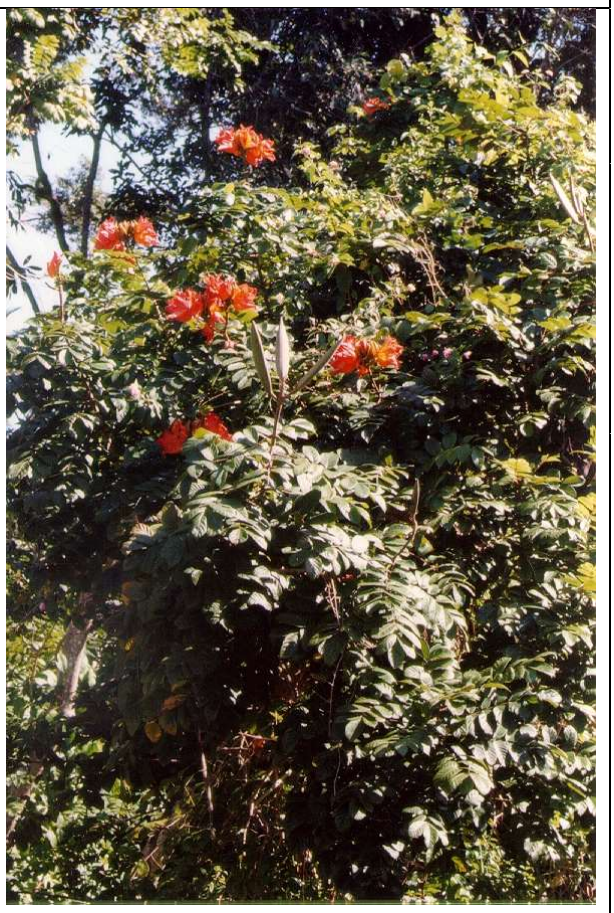
Control possible with grazing before it grows out of cattle's' reach, but on larger specimens or infestations, this option will probably not be feasible. Limit cattle movements post grazing to prevent further spread.

Effective herbicides are available but long-term management of the seed bank is required.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

African Tulip Tree (*Spathodea campanulata*)

Risk Category	High
Recommended Management Objective	Asset Protection - Not considered a priority for action in the region on this basis, included for information purposes due to community interest.
Description	African Tulip is an evergreen tree to 24 m. It has broadly oval shaped leaves with distinctive veins. Leaves are bronze coloured when young turning glossy green as they mature. Flowers are a large orange to red with frilled yellow margins on the petals. Seeds can wind, water or bird dispersed and form in elongated pods up to 20cm long.
Distribution	African Tulip is relatively common in urban areas, near houses and along creek lines and waterways in the region. Dense infestations occur in some locations.
Impacts	African Tulip can form dense woody thickets. Having a range of dispersal methods means that it can colonise intact native vegetation and reach remote locations. It suckers readily when disturbed making it challenging to control. The flowers are toxic to native stingless bees.
Key Projects	Included in restoration and management works, when projects are located in infested areas. Currently, as of publication, no major projects or treatment is underway. Some Landcare Groups have specifically targeted this pest in recent projects. Some biocontrol projects are in the early stages of investigation.
Background	The African Tulip is native to tropical Africa. It is popular as an ornamental garden tree or street tree in tropical and subtropical parts of Queensland due to its showy, red tulip-shaped flowers. Removing African Tulip can be costly, especially in urban areas to prevent hazard. Herbicide treatment without trunk removal can leave standing highly frangible, hazardous dead trees. Cost of this removal is the major roadblock to more African Tulip management.
Obligations related to restricted matter	It is a category 3 restricted invasive plant under the *QLD Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. Penalties apply. Under the Regulation, suitable disposal may include: • Deep burial, • Transporting to a waste facility securely, • Sealing the matter in plastic and leaving the matter in the sun until any vegetative material being disposed has dried and decomposed.



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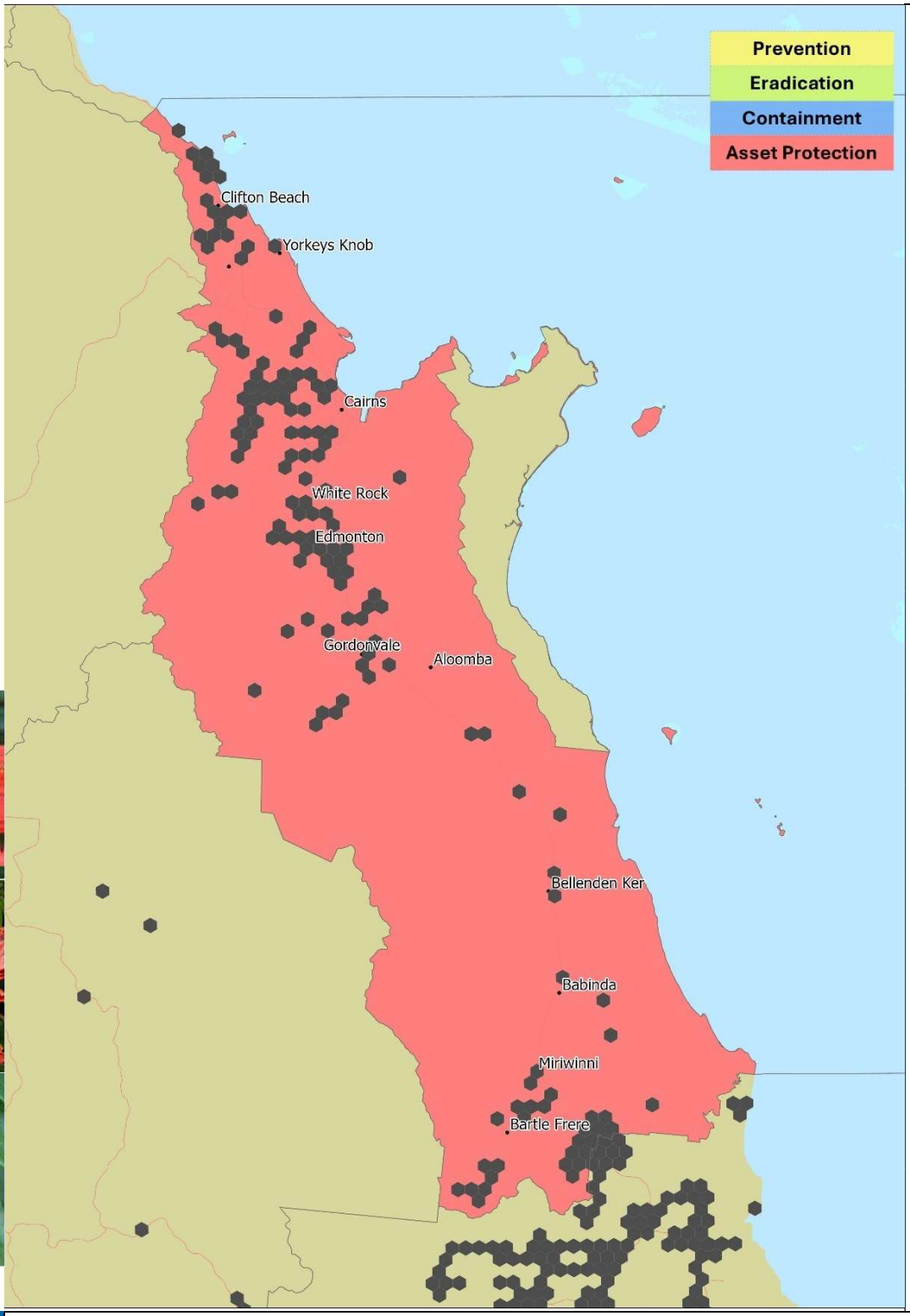
Biosecurity Plan 2025 - 2030



Biosecurity Act Restricted matter category

3
Do not distribute

Control

Spread

Asset Protection; Reasonable and Practical Measures

What is my general biosecurity obligation related to this pest?
Identify and protect key assets such as waterways, woodlands, and sensitive environmental areas when reasonable and practical action can be taken to protect those areas.

Waterways and plants around settlements should be treated annually to prevent spread to adjoining environmentally sensitive areas.

Ensure machinery are free from seeds and plant material prior to beginning works or moving to new locations. You are responsible to ensure materials or products leaving your property are free from seeds or plant material.

Choose appropriate and non-weedy shade trees for use in gardens and farms. Be on the lookout for African Tulip's distinctive orange flowers and control before dense infestations develop.

Refer to QLD Gov.'s Pest Fact Sheet for additional details and effective control methods.

Common Myna; Indian Myna Birds (*Acridotheres tristis*)

Risk Category	Negligible - Not considered a priority for action in the region on this basis, included for information purposes due to community interest.
Recommended Management Objective	Asset Protection
Description	The Indian Myna is medium-sized, brown with a glossy black head, neck and upper breast; bright yellow bills, eye skin, legs and feet; and an upright posture. They are sometimes confused with native noisy miners (*Manorina melanocephala*); however, native noisy miners are grey rather than brown in colour and have flesh-coloured legs rather than the bright yellow legs of the Indian Myna.
Distribution	Indian Mynas prefer areas that have been heavily disturbed by human activities and are currently common across all urban areas in Cairns.
Impacts	Where there is favourable habitat, Indian Mynas: • reduce the breeding success of some native parrot species—Indian Mynas compete aggressively for nesting hollows and can evict native parrots from nest boxes or tree hollows and even kill eggs and chicks • compete for tree hollows with other native wildlife (e.g. possums and gliders)—Indian Mynas can kill small mammals and remove sugar gliders from tree hollows • act as a potential reservoir for diseases that affect native birds (e.g. avian malaria) • damage fruit, vegetable and cereal crops • spread weeds such as Lantana (*Lantana camara*) • form large communal roosts in suburban areas—this generates noise complaints • cause dermatitis, allergies and asthma in people by nesting in the roofs of houses—Indian Mynas carry mites and lice that can affect humans, and nests built in roofs are a possible fire risk. In the region, there is a small number of reported cases of attacks associated with Indian Myna breeding.
Key Projects	Cairns Remove Indian Mynas Inc. (CNSRIM) is a community organisation formed to reduce impacts to native wildlife. Partnered with the Cairns Men's Shed, building and selling traps to the public. www.cnsrim.org.au 
Background	Historically, Council had supported CNSRIM and trapping projects in conjunction with the Men's Shed. Changes to humane destruction requirements and availability of Vets able to be recommended for destruction has reduced advice that can be provided. For current humane destruction best practice methods check the National Pest Smart website as this space is developing, (https://pestsmart.org.au/).
Lifecycle	Indian Mynas lay two to five blue/ turquoise eggs up to twice a year. They will build and defend several nests at a time (although only one will hold eggs). The egg colour is distinctive as no native 'hollow-nesting' birds lay blue/ turquoise eggs.
Obligations related to restricted matter	This is not a prohibited or restricted invasive pest under the Act. However, The *QLD Biosecurity Act* requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated when a biosecurity matter, carrier, or activity poses, or is likely to pose a biosecurity risk.

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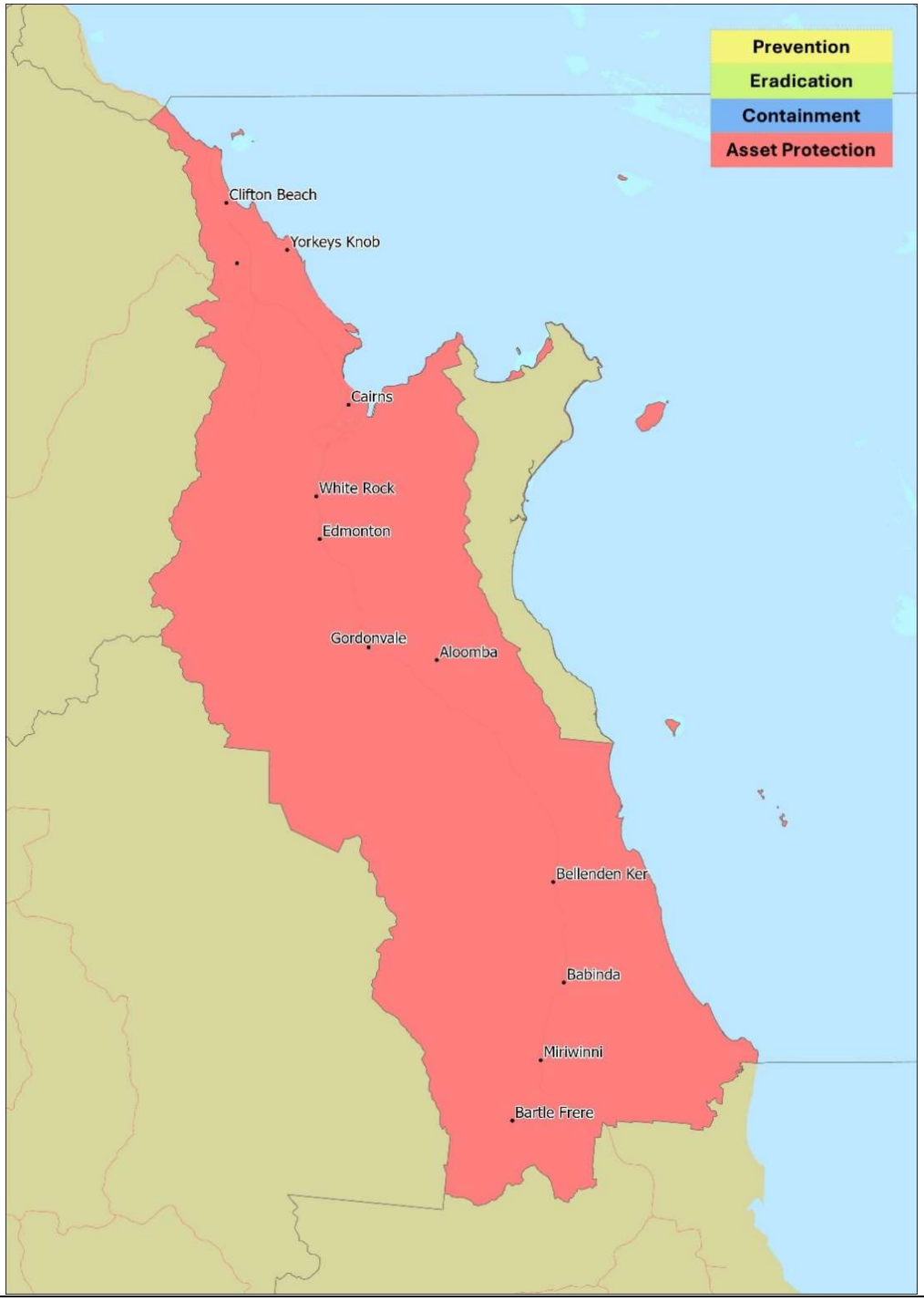
Biosecurity Plan
2025 - 2030



Environmental

Pest

General Biosecurity Obligation (GBO) applies

Control

Asset Protection; Reasonable and Practical Measures	**What is my general biosecurity obligation related to this pest?** Maintain and restore native habitat: Retaining or restoring native habitat will provide an environment more suitable for native species. Planting local native trees and shrubs and reducing lawn areas will also make the environment less attractive to Indian Mynas and encourage native species. Don't provide food sources. Dog food, poultry feed, stockfeed, food scraps and seed put out for native birds can all provide food for Mynas. Feed pets and livestock where Mynas can't access the food and make sure Mynas can't access food scraps. Limit Indian Myna nesting sites. Indian Mynas will build nests in tree hollows, nest boxes, roofs, gutters, exotic trees and the dead fronds of palms. Remove all dead palm fronds promptly. Block holes in roofs and eaves. Wear gloves and protective clothing and remove nests and eggs promptly (i.e. well before hatching). Seal eggs/nests in a plastic bag, freeze, and then place them in a wheelie bin. Any trapping of adults must be in line with humane requirements. Trap designs can be found online but selection must avoid trapping native birds. Some veterinarians may be willing to euthanise caught animals. Currently there are no common practical methods of humane euthanasia that can be broadly recommended.