

Surveillance Plan for Invasive Plants and Animals

2021

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Euri Creek Stock Route – North of Bowen

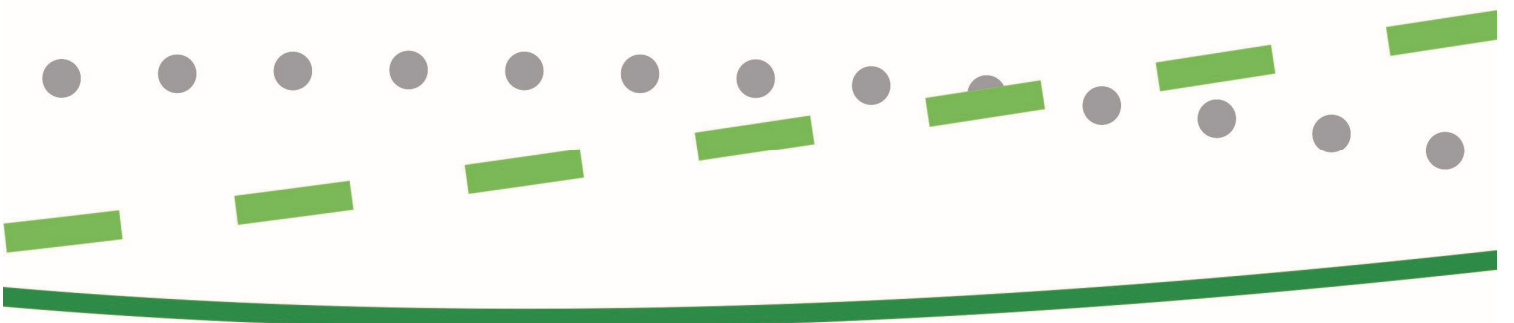


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Document Control

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1. Introduction

Pest plants and animals can impact on our environment, economy and social values. Biosecurity Queensland state that the “aim of surveillance is to detect pests before they become established in Australia and threaten our agriculture and our environment”. According to Biosecurity Queensland, “many plant pests have the potential to cause serious economic and social problems for Queensland’s communities”, and Biosecurity Queensland minimises the risk through surveillance, early detection, eradication and containment programs for serious pests.

The FAO state that a well-managed, coordinated and resourced pest surveillance system increases the likelihood of an organisation finding pests earlier after introduction, and to take appropriate action. The Australian government equally draws attention to the need for surveillance programs stating that if “left untreated, exotic plants and pests have the potential to cause major human, environmental and economic impacts”.

The Queensland Biosecurity Strategy (Biosecurity Queensland 2016), mentions that there are 1400 species of ‘weed’ in Queensland, with new species being established each year. The Whitsunday Biosecurity Strategy lists some 75 priority weeds and 12 priority animals. The Whitsunday Regional Council is aware of a number of invasive plants which occur outside of the regional council area but are not currently found in the Whitsunday’s. Invasive plants such as Siam weed (*Chromolaena odorata*) are found in the North Queensland, but have not yet been found in the Whitsunday region. Equally, invasive animals such as the red ear slider turtle (*Trachemys scripta elegans*) and fire ants (*Solenopsis invicta*) have not been detected in the Whitsunday region at this point in time.

The Whitsunday Council has limited resources and needs to allocate human and financial resources prudently to maximise outcomes. The development of a pro-active plant and animal Surveillance Program to detect new pest plant and animal incursions is an additional, un-funded action. The Whitsunday Council recognises the importance of having an early detection pest management system, but with limited funds the Surveillance Program will need to be conducted at a small scale and be highly targeted at selected assets and for selected target pests.

The purpose of this Plan is to outline the proposed Whitsunday Regional Council Pest Surveillance Program. The objectives of this Plan are to:

- Describe the important economic and environmental assets in the region which need to be protected from declared invasive plants and animals (pests).
- Identify, analyse and prioritise the pathways of declared biosecurity matters into the region (Describe the pathways methods of pest transfer into the region).
- List the proposed pests which will form part of the Pest Surveillance Program.

This Surveillance Program will apply to the Whitsunday Regional Council area (Figure 1). This Surveillance Program will only focus on declared pest plant and animals under the *Queensland Biosecurity Act 2014* and local laws of Whitsunday Regional Council not plant pathogens and disease.

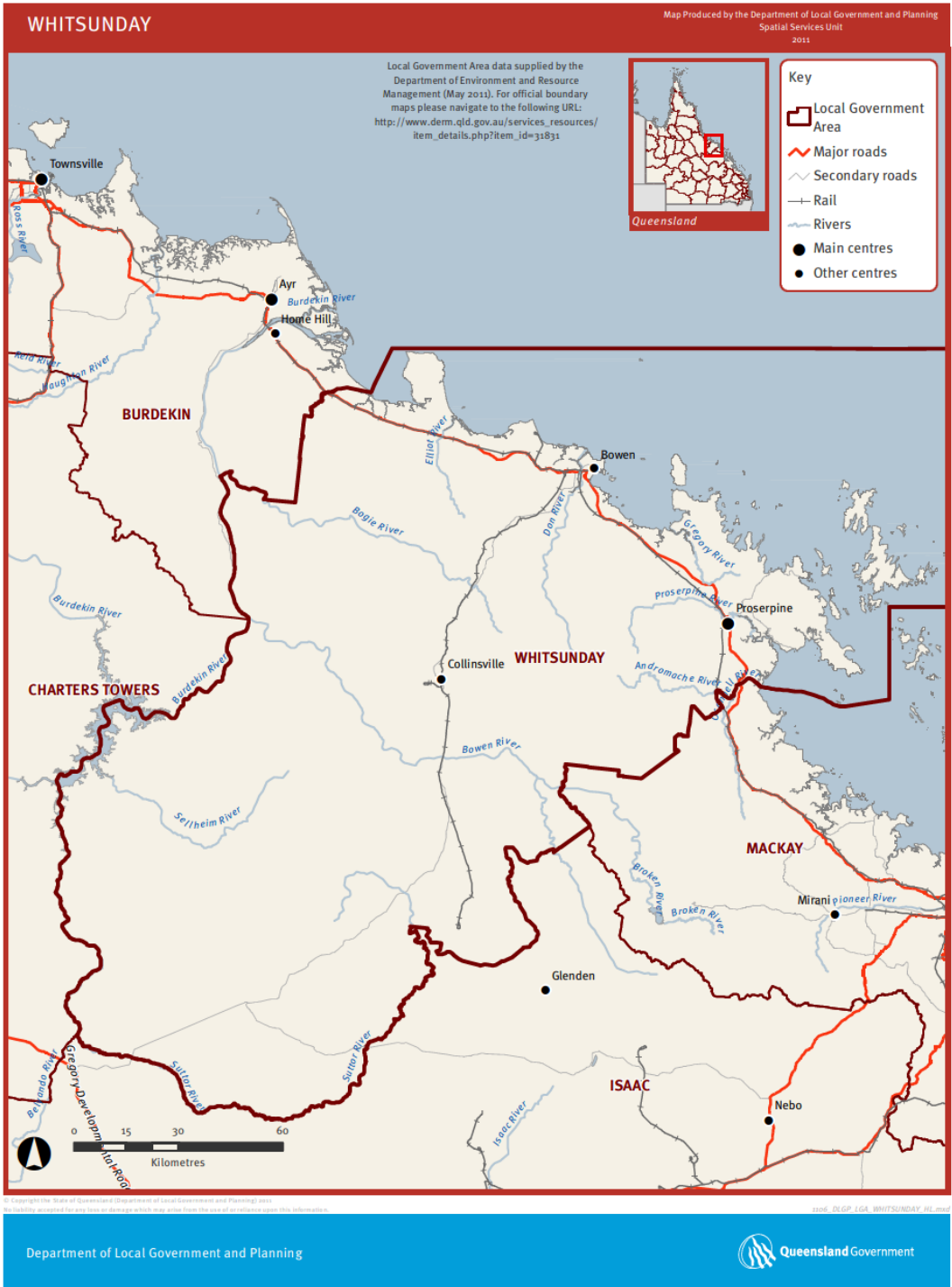


Figure 1: Whitsunday Regional Council area.

2. Background

2.1 What is a Pest Surveillance Program?

Pest surveillance programs are designed to detect the early stages of pest incursions into an area. Pest surveillance activities may include conducting surveys of targeted areas, collecting samples and interviewing people and businesses. The surveillance activities are often targeted with specific objectives to protect specific vulnerable assets.

2.2 Legislation and Policy

The main legislation which guides pest management in the Whitsunday region is the *Queensland Biosecurity Act (2014)*, and the Whitsunday Regional Council Local Law No. 3 Community and Environment (2014). The Queensland government has introduced the *Queensland Biosecurity Act 2014* to guide the management of invasive plants and animals.

The *Biosecurity Act 2014* introduces the concept of the general biosecurity obligation (GBO), which is an overarching obligation that requires all persons who deal with biosecurity matter to take all reasonable and practical measures to prevent or minimise the risk posed by the biosecurity matter. The GBO encourages all relevant parties to take a proactive role in preventing, managing and addressing biosecurity risks that relate to them.

The *Biosecurity Act 2014* also introduces prohibited and restricted biosecurity matter. Prohibited matter is not currently present in Queensland and is prohibited because there are reasonable grounds to believe it could have significant adverse effects if introduced to the state. Restricted matter is found in Queensland and may have an adverse effect if restrictions are not imposed. Restricted matter is assigned category numbers from 1-7 based on its characteristics and the risk it poses. Pest plants and animals can be attributed to more than one pest category.

The *Biosecurity Act 2014* (the Act) provides for the establishment of biosecurity programs. Surveillance programs are directed at any of the following—

- a) monitoring compliance with the Act in relation to a particular matter to which the Act applies;
- b) confirming the presence, or finding out the extent of the presence, in the State or the parts of the State to which the program applies, of the biosecurity matter to which the program relates;
- c) confirming the absence, in the State or the parts of the State to which the program applies, of the biosecurity matter to which the program relates;
- d) monitoring the effects of measures taken in response to a biosecurity risk;
- e) monitoring compliance with requirements about prohibited matter or restricted matter;
- f) monitoring levels of biosecurity matter or levels of biosecurity matter in a carrier.

The Queensland Weed and Pest Animal Strategy (DAFF, 2016) identified a number of desired outcomes. The desired outcomes listed in the Strategy need to be reflected in the local government Biosecurity Plans. The desired outcomes are:

- Desired outcome 1: Prevention and early intervention
- Desired outcome 2: Monitoring and assessment
- Desired outcome 3: Awareness and education
- Desired outcome 4: Effective management systems
- Desired outcome 5: Strategic management framework and management
- Desired outcome 6: Commitment, roles and responsibilities

2.3 Whitsunday Biosecurity Plan

In 2016, the Whitsunday Regional Council developed the Whitsunday Biosecurity Strategy. One of the desired outcomes in the Biosecurity Strategy is prevention and early detection. The objectives for the prevention and early detection were:

- 1) Surveillance plan and management actions are in place to prevent pest species introduction into Whitsunday Regional Council (WRC) LGA.
- 2) Pest surveillance programs are developed and implemented to identify and record pest species which are categorised as “under surveillance, eradication and containment.
- 3) The community have good knowledge on invasive plants and animals (pest species knowledge).
- 4) WRC is involved in regional eradication programs.

The actions listed to implement the Prevention and early detection outcomes are listed in Table 1.

Table 1: The prevention and early detection actions.

| Action No. | Action Description |
|------------|--|
| 1.1A | A strong relationship is developed between WRC and government Departments to develop pest prevention protocols |
| 1.1B | Pest species prevention protocols are promoted with key Stakeholders |
| 1.1C | A regular Surveillance Program of major transport corridors is developed for pest species |
| 1.1D | Regularly communication with neighbouring LG's regarding new pest incursions |
| 1.1E | Nurseries are regularly monitored to prevent landholders selling, supplying or keeping declared plants |
| 1.1F | All locations that keep pests under a permit are monitored |
| 1.1G | Funding groups are lobbied for the construction of public wash down facilities |
| 1.1H | WRC investigates equipment modification to improve weed hygiene practices (i.e. slasher blowers, covers, etc.) |
| 1.1I | Sugarcane harvesters are washed down or blown down between farming entities |
| 1.1J | Horticultural machinery is washed down before moving into other horticultural districts. |
| 1.2A | Regular surveillance programs are undertaken across the region that target <i>Under Surveillance Pest Species</i> (identified in the Strategic Program (Pest Species)) |
| 1.2B | Processes are in place to consistently and accurately report new <i>Under Surveillance Pest Species</i> infestations |
| 1.2C | A <i>New Pest Species Rapid Response Procedure</i> is developed for new pest incursions which outlines Stakeholders roles and responsibilities |
| 1.3A | WRC incorporates <i>Under Surveillance Pest Species</i> into the <i>Pest Species Awareness and Extension Program</i> |
| 1.3B | Horticultural growers have access to relevant pest information |
| 1.3C | Urban and rural residential land owners receive information on small crop and tree crop pests. |
| 1.3D | Landholders outside of agricultural industries have access to pest management information. |

2.4 Whitsunday Pests

The Whitsunday Regional Council has included a list of priority (important) pest plants and animals in the Whitsunday Biosecurity Strategy. The top 10 priority weeds are listed in Table 2. The pest plant species which are listed as important but are not currently found in the Whitsunday region are listed in Table 3. The pest animal species which are listed as important but are not currently found in the Whitsunday region are listed in Table 4.

Table 2: The top 10 priority weeds.

| Common Name | Scientific Name | Present in Whitsunday Region | Priority |
|--------------------------------|---|------------------------------|----------|
| Siam weed | <i>Chromolaena odorata</i> | No | 1 |
| Mimosa pigra | <i>Mimosa pigra</i> | Yes | 2 |
| Leucaena | <i>Leucaena leucocephala</i> | Yes | 3 |
| Lantana | <i>Lantana camara</i> | Yes | 4 |
| Itch grass | <i>Rottboellia cochinchinensis</i> | Yes | 5 |
| Prickly acacia | <i>Acacia nilotica (Vachellia nilotica)</i> | Yes | 6 |
| Navua sedge | <i>Cyperus aromaticus</i> | No | 7 |
| Chinee apple | <i>Ziziphus mauritiana</i> | Yes | 8 |
| Rubber vine | <i>Cryptostegia grandiflora</i> | Yes | 9 |
| Hymenachne | <i>Hymenachne amplexicaulis</i> | Yes | 10 |

Table 3: Plants for surveillance.

| No. | Common Name | Scientific Name | Present in Whitsunday Region | Priority |
|-----|-----------------------------|---|------------------------------|----------|
| 1 | Siam weed | <i>Chromolaena odorata</i> | No | 1 |
| 2 | Navua sedge | <i>Cyperus aromaticus</i> | No | 7 |
| 3 | Miconia | <i>Miconia sp</i> | No | 16 |
| 4 | Cabomba | <i>Cabomba caroliniana</i> | No | 29 |
| 5 | Kyasuma grass | <i>Cenchrus pedicellatus</i> | No | 45 |
| 6 | Grey Willow | <i>Salix spp. other than S. babylonica S. x calodendron, S. x reichardtii and S. chilensis syn. S. humboldtiana</i> | No | 69 |
| 7 | Mimosa | <i>Mimosa pigra</i> | Yes | 2 |

Table 4: Animals for surveillance.

| No | Common name | Scientific name | Present in Whitsunday Area | Priority |
|----|------------------------------------|-------------------------------|----------------------------|----------|
| 1 | Feral Deer (Russa) | <i>Cervus timorensis</i> | Yes – low numbers | 8 |
| 2 | European Carp | <i>Cyprinus carpio</i> | No | 4 |
| 3 | Yellow Crazy Ants | <i>Anoplolepis gracilipes</i> | Yes | N/A |

(Note: Yellow Crazy Ants were initially found at Shute Harbour in May 2019, hence no priority listed in Biosecurity Plan)

2.5 Pathways (Vectors) for Pest Movement

Weeds can be found almost everywhere in Queensland (Figure 2). The greatest number will generally be found where there is a high level of disturbance created by human activity, or along weed carrying pathways. The more common methods for pest plants and animals to be transported between places are:

- Water
- Wind
- Earth moving
- Vehicles
- Other animals – e.g. birds, feral pigs
- Humans (ex: cha-om- a plant used for food which is traded or bought and sold)
- Livestock movement

Pest plant can be introduced to an area through the following locations and businesses:

- Commercial and wholesale nurseries
- Farmer's markets/other community markets
- On-line sales eg. Gumtree, Facebook
- Earthmoving businesses
- Quarries
- Landfills
- Stockyards
- Wash down facilities
- Recreational fishing spots
- Camping sites
- Tracks and trails

Pest animals can be introduced to an area through the following vectors:

- Earthmoving equipment – pest ants
- Quarries – pest ants
- From urban areas – pest dumping in rural areas.
- Movement of ornamental plants carrying invasive ants eg. new residents to region from elsewhere

A list of locations which should be inspected as part of this Surveillance Program are listed in the appendix.

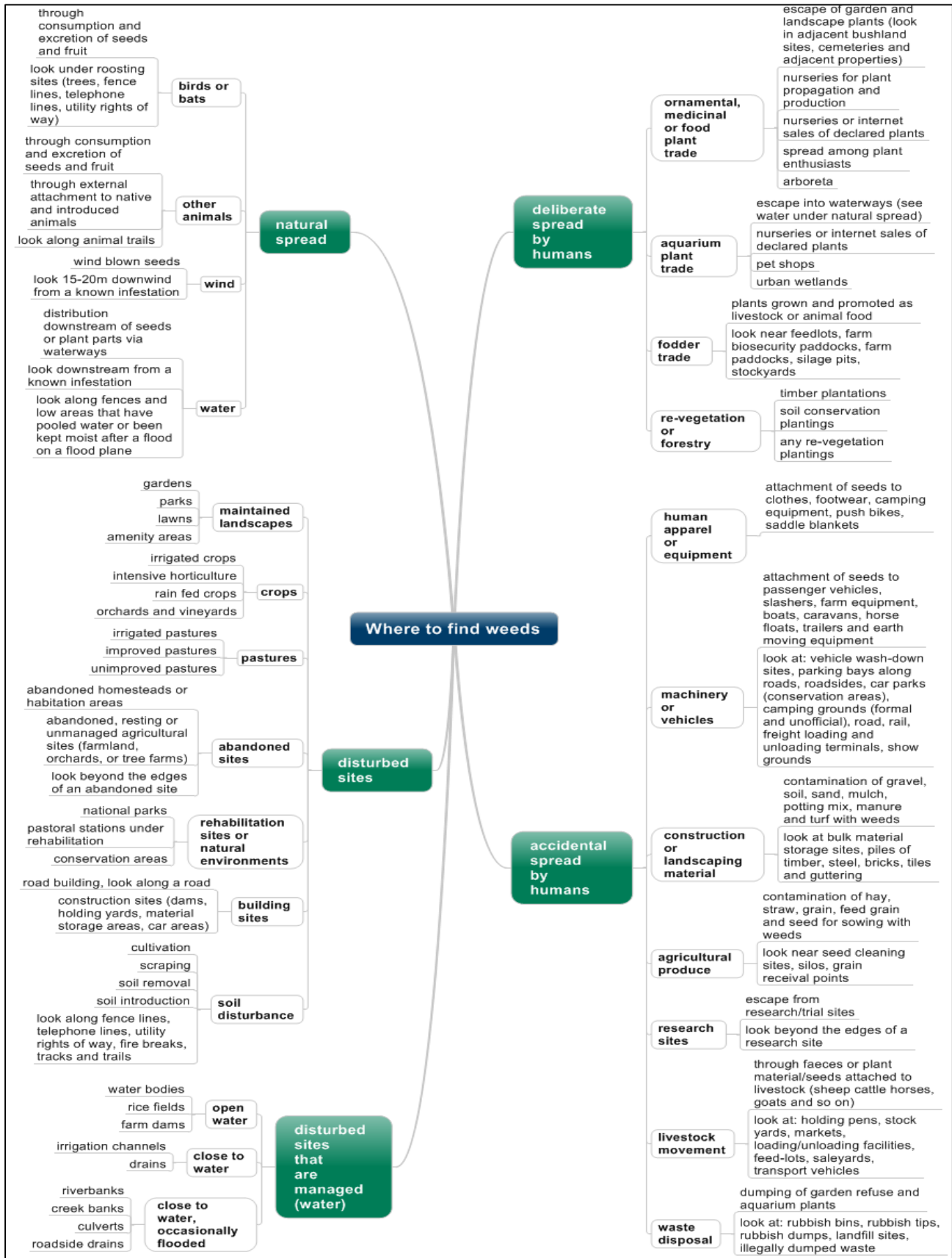


Figure 2: Where to find weeds in QLD (Coleman et al., 2008).

2.6 Important Whitsunday assets

Pest plants and animals can impact on the productivity of land and how humans interact with land and water assets. Pest ants can reduce the areas which people can use for tourism and recreation. Pest animals can impact on farm produce reducing farm income.

The Whitsunday Region assets which are at risk of being impacted by pest plants and animals include:

- Economic
 - Agriculture
 - Horticulture
 - Cropping – sugarcane
 - Grazing
 - Tourism
- Environment
 - Remnant vegetation
 - Endangered ecosystems
 - Wetlands
 - Riverine areas
 - Great Barrier Reef islands?
 - Protected areas including national parks
- Social
 - Recreational opportunities

3. Pest Surveillance Program

3.1 Goals and Objectives

The goals and objectives for the Whitsunday Regional Council Pest Surveillance Program are listed in Table 5.

Table 5: The goals and objectives of the Whitsunday Pest Surveillance Program.

| No. | Theme | Goal | Objective |
|-----|-------------------------|---|---|
| 1 | Prevention | To prevent new pest plant and animals establishing in the Whitsunday Region | Management actions are in place to prevent pest species introduction into WRC LGA |
| 2 | Prevention | To develop pest surveillance programs | Pest surveillance programs are developed and implemented to identify and record pest species which are categorised as “under surveillance, eradication and containment. |
| 3 | Education and awareness | To improve the community’s knowledge of pests | The community have good pest species knowledge |
| 4 | Treatment | To treat new pest incursions | WRC is involved in regional eradication programs |
| 5 | Reporting | To report pest surveillance results | To develop an annual report for the pest surveillance program |

3.2 Pest Surveillance Program

The Whitsunday Pest Surveillance Program will include target pests and target locations. The targeted Surveillance Program will target priority locations which may be the source of pest plants and animals and locations which are recognised as environmentally significant assets. The list of surveillance locations are listed in the appendix. The list of actions to implement this Plan are shown in Table 6.

It is proposed that the sites are inspected twice a year. The target inspection timing will be March/April at the end of the wet season and in November/December at the start of the wet season.

Table 6: List of actions.

| No. | Theme | Action |
|-----|-------------------------|---|
| 1 | Prevention | Review pest plants and animals to target as part of the surveillance program |
| 2 | Prevention | Identify important assets to protect as part of the surveillance program |
| 3 | Prevention | Develop a pest surveillance inspection schedule |
| 4 | Education and awareness | Develop a fact sheet to deliver to surveillance inspection businesses alerting them to the inspection program and target pest plants and animals. |
| 5 | Education and awareness | Develop a program/project where residents can use social media and apps to assist with the identification of pests. |

3.3 Roles and Responsibilities

The roles and responsibilities of the Whitsunday Region Pest Surveillance Program are listed in Table 7.

Table 7: The roles and responsibilities of stakeholders.

| No. | Task | Council Staff | Biosecurity Queensland | Community / Residents |
|-----|--|---------------|------------------------|-----------------------|
| 1 | Identify target pest plants and animals in the field | ✓ | ✓ | ✓ |
| 2 | Identify and endorse target surveillance locations | ✓ | ✓ | |
| 3 | Review Pest Surveillance Program | ✓ | ✓ | |
| 4 | Conduct pro-active inspections | ✓ | | |
| 5 | Develop annual surveillance report | ✓ | | |

3.4 Review and Evaluation

The Whitsunday Region Pest Surveillance Program will be reviewed as part of the Whitsunday Biosecurity Strategy every four years. New pest plants and animals can be added to the Surveillance Program as needed.

4. Conclusion

The Whitsunday Regional Council has developed a pro-active Pest Surveillance Program. The purpose of the Surveillance Program is to detect early incursions of restricted and prohibited pests in the region. The Surveillance Program will be targeted to the inspection of sites which have a higher likelihood of weed and pest animal introductions. The Pest Surveillance Program will have 25 inspection sites.

5. References

Biosecurity Queensland, 2015. Queensland Biosecurity Strategy 2018-2023. Biosecurity Queensland, Brisbane.

Coleman. M.J., Sindel, B.M, van der Meulen, A.W. and Reeve, I.J., 2008. The Risks Associated with Weed Spread in Australia and Implications for Natural Areas. *Natural Areas Journal*, 31(4):368-376

Department of Agriculture, Fisheries and Forestry 2014. *Biosecurity Act 2014*. Queensland government, Brisbane.

FAO, 2015. Plant Pest Surveillance. International Plant Protection Convention (IPPC), Viale delle Terme di Caracalla, 00153 Rome, Italy.

6. Appendix

6.1 List of Environmentally Sensitive Assets

| No. | Theme | Location | Risks |
|-----|------------|------------------------|-------------------|
| | Ecosystems | Proserpine Wetland | Weeds and Animals |
| | | Caley Wetland | Weeds and Animals |
| | | Conway National Park | Weeds and Animals |
| | | Dryander National Park | Weeds and Animals |

6.2 List of Surveillance Locations

| No. | Theme | Location | Inspection Address | Risks | Easting | Northing |
|-----|-------------------------------|---------------------------------------|---|--------------|---------|----------|
| | Nurseries | Plants Whitsunday | Shute Harbour Road, Cannonvale | Weeds | 673040 | 7752930 |
| | | Carbon Nursery | Shute Harbour Road, Cannonvale | Weeds | 674430 | 7754837 |
| | | Whitpro Nursery | Paluma Road, Cannonvale | Weeds | 674410 | 7756320 |
| | Quarry | Wrc Foxdale Quarry | Foxdale Quarry Road, Proserpine | Weeds & Ants | 663400 | 7747400 |
| | | Whitsunday Quarry | Shute Harbour Road, Cannonvale | Weeds & Ants | 669350 | 7748840 |
| | Earthmoving | Warrens Transport Depot | Proserpine | Weeds | 666140 | 7743100 |
| | | Berry Excavation Depot | Myrtle Creek | Weeds | 665840 | 7746630 |
| | | Paddells Earth Moving | Collinsville | Weeds | 587840 | 7725960 |
| | | Bowen Earth Moving | Richmond Road, Bowen | Weeds | 628220 | 7788080 |
| | | Bowen Council Depot | Richmond Road, Bowen | Weeds | 628060 | 7788020 |
| | Sensitive Environmental Areas | Proserpine Wetland | The Landing Road, Glen Isla | Weeds | 671970 | 7740990 |
| | | Conway National Park | End of Brandy Creek Road, Cannon Valley | Weeds | 676439 | 7750136 |
| | | Proserpine River | Spruces Crossing | | 655930 | 7749970 |
| | Landfill Facilities | Kelsey Creek Landfill | 139 Kelsey Creek Road, Proserpine | Weeds & Ants | 662000 | 7744800 |
| | | Cannonvale Transfer Station | Carlo Drive, Cannonvale | Weeds & Ants | 674780 | 7756280 |
| | | Bowen Landfill | 908 Bowen Developmental Road, Mt Coolon | Weeds & Ants | 620200 | 7779700 |
| | Wash Down Facilities | Collinsville | Darby Munro Park | Weeds | 588620 | 7726900 |
| | | Proserpine Dam X 2 | Lake Proserpine | Weeds | 643760 | 7746580 |
| | Recreational Fishing Areas | Proserpine Dam | Lake Proserpine | Weeds | 643760 | 7746580 |
| | | Don River | Yasso Point | Weeds | 628244 | 7791567 |
| | | Mullers Lagoon | | | 630580 | 7787990 |
| | Camping Sites | Proserpine Dam | Lake Proserpine | Weeds | 643750 | 7746000 |
| | | Collinsville Showgrounds | Collinsville | Weeds | 588360 | 7726840 |
| | | Bowen Showgrounds | | Weeds | 628540 | 7788650 |
| | | Proserpine Showgrounds | | Weeds | 663620 | 7742600 |
| | Tracks and Trails | The Great Whitsunday Walk | Cannonvale | Weeds | 678752 | 7757596 |
| | | Mt Rooper Circuit And Swamp Bay Track | Airlie Beach – Shute Harbour | Weeds | 684960 | 7755890 |
| | | Cedar Creek Falls | Proserpine – Conway | Weeds | 678360 | 7742350 |
| | | Kingfisher Circuit | Brandy Creek | Weeds | 676439 | 7750136 |
| | Roads | Guthalungra Truck Stop | Guthalungra | Weeds | 588160 | 7796810 |
| | | Lethebrook Truck Stop | Lethebrook - Proserpine | | 669060 | 7731580 |

6.3 Surveillance Program Schedule

(extract)

| Season = annual | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------|---------------|--------------------|----------|-----------------------------------|---|---|---|-----|---|---|---|-------|---|---|---|--------------------------------|---|-----|---|------|---|---------------------------------|---|--------|---|-----------|---|---|---|---|
| Title: WRC pest inspection schedule | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Version: 1-04-20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * The purpose of this schedule is to describe the pest surveillance location and timing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Location | Suburb | Time Required (Hr) | Priority | Jan - Feb - March (First Quarter) | | | | | | | | | | | | Apr - May - June (2nd Quarter) | | | | | | July - Aug - Sept (3rd Quarter) | | | | | | | | |
| | | | | | Jan | | | | Feb | | | | March | | | | April | | May | | June | | July | | August | | September | | | | |
| | | | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 |
| Nurseries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Plants Whitsunday | Cannonvale | 0.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Carbon Nursery | Cannonvale | 0.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quarries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Concil foxdale quarry | Proserpine | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Whitsunday quarry | Cannon Valley | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

The schedule is a separate operational document which will implemented on an annual basis.

6.4 Inspection Checklist

| | |
|----------------------------|----------|
| Location: | |
| Date: | |
| Inspection Officer: | |
| Target Pests: | |
| Results: | |
| Pest Plants: | Yes / No |
| Pest Animals: | Yes / No |
| Comments: | |

6.5 Annual Report Template

The Whitsunday Region pest surveillance report:

| Item | Number |
|---|--------|
| Number of inspections of nurseries | |
| Number of quarry inspections conducted | |
| Number of earthmoving inspections conducted | |
| Number of new pest plants discovered | |
| Number of new pest animals discovered | |